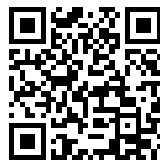
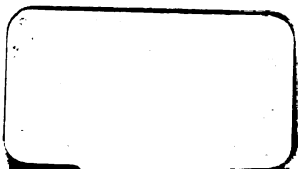

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THE
NAUTICAL MAGAZINE.

THE
NAUTICAL MAGAZINE

AND

Naval Chronicle,

FOR 1849.

A JOURNAL OF PAPERS

ON SUBJECTS CONNECTED WITH

MARITIME AFFAIRS.



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Sir John Barrow Bart

Secretary of the Admiralty from 1812 to 1819.
Governor of the Hudson's Bay Company from 1819 to 1825.
Member of the House of Commons from 1825 to 1830.

THE
NAUTICAL MAGAZINE

AND
Naval Chronicle.

JANUARY 1849.

THE LATE SIR JOHN BARROW,* BART., F.R.S., LL.D.

THE name of the late Sir John Barrow will occupy an honourable place in the list of those highly gifted individuals of whom England is justly proud, and who, by their original genius and energetic minds, have, in their different walks of life, rendered eminent services to their country. The friends of his childhood and youth did not provide him with more than the ordinary means of instruction, but he seized on those means with avidity and industry, and it was his self-education that mainly conferred on him those powers which, when the day of trial arrived, he turned to so good an account.

About the time that Mr. Barrow arrived at the period of manhood he was fortunate in obtaining, through the interest of a friend, a place in the first British Embassy to China. He was thus enabled to put his foot on the first step of the ladder of ambition; but every subsequent step of his advancement in his distinguished career may be fairly said to

* The accompanying essay dedicated to the memory of Sir John Barrow, Bart., who was for forty years Secretary of the Admiralty, will be read with great interest by naval officers, and no less so by others who had the happiness of knowing him. For ourselves, we preserve it in the *Nautical Magazine*, by permission of its author; a liberty to which we might almost establish a right, if we referred to that encouragement which our humble literary labours uniformly met with at his hands. It is from the pen of one who well knew his excellent qualities; but, we cannot allow it to pass by along the stream of time, without adding to it our own humble, but heartfelt tribute of respect for the memory of Sir John Barrow, after many years of official acquaintance with him, in the course of which we learnt to esteem the man for the excellence of the mind, and the amiable qualities of the heart.—ED. N.M.

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have been achieved by himself. His talents and his zeal for the public service, when once known and placed in a fair field for action, could hardly fail of being appreciated and duly fostered by those distinguished statesmen under whom he successively served.

It so happened, that the chiefs of the British Mission to China in 1792, the Earl of Macartney, and the late Sir George Staunton, were, in some respects, not so happily provided with active and talented associates as might have been wished; but in Mr. Alexander, the draughtsman of the embassy, they were fortunate in possessing a very able and diligent artist; and Mr. Barrow, from his various talents, and the zeal and alacrity with which he applied himself to every department of the service, although his own was only a subordinate one, was a host in himself. The authentic account of the embassy, published by the late Sir George Staunton, records many of Mr. Barrow's valuable contributions to literature and science connected with China. This work, therefore, together with his own subsequently published supplemental volume of travels, is ample evidence how well his time had been employed. Had no unpropitious political events occurred to prevent the views and plans of the mission being carried out, it is not too much to say that the able and ingenious men who were employed in it would most probably have effected, by peaceful means, all those improvements in the terms of our intercourse with China which, some 50 years after, have cost us such a painful expenditure of blood and treasure. It was not to be expected that any person of mature age could within the space of a few months overcome all the practical difficulties of such a language as the Chinese; but Mr. Barrow had already begun to converse in it, and he had acquired a complete knowledge of its theory. His papers on this subject in the *Quarterly Review* contain probably the best and most popular account of that singular language and character which was ever presented to the British public.

Although Mr. Barrow ceased to be personally connected with our affairs in China after the return of the embassy in 1794, he always continued to take a lively interest in the varying circumstances of our relations with that empire. On the occasion of the second embassy under Lord Amherst, in 1816, he was of course consulted by the ruling powers; but, unfortunately, although his advice was asked, it was not taken; and in consequence of the injudicious rejection of the proposal which his prophetic sagacity had suggested for getting rid of the vexatious question of the Chinese ceremony, Lord Amherst and his colleagues were compelled to abandon the personal reception of the mission for the sake of preserving the honour and real interests of the English in China, which would have been essentially damaged by the acceptance of the terms upon which it was offered. Mr. Barrow was likewise consulted, and we believe more fairly and confidentially, on the occasion of our recent conflict with China, which, it is to be hoped, has secured our future peace with that country.

Lord Macartney was naturally anxious to secure the aid of such a man as Mr. Barrow in his next public service, his important and delicate mis-

sion to settle the Government of our newly acquired colony of the Cape of Good Hope. Mr. Barrow was entrusted with our first communication with the Caffre tribes, and it would have been well for the public interests if the spirit, judgment, and humanity which he then displayed had more uniformly governed our subsequent transactions with that remarkable race. The two volumes of his History of the Colony, and the unrivalled map with which they are illustrated, made the public at once fully acquainted with the extent, capacities, and resources of that important, but till then little understood acquisition of the British Crown.

There is little doubt that it was the perusal of this valuable work which mainly decided Lord Melville to accept of Lord Macartney's recommendation of a perfect stranger to him, as Mr. Barrow then was, as his second secretary of the Admiralty. It is not our purpose to enter here into the merits of Mr. Barrow's subsequent career for 40 years at the Admiralty. It would be, in fact, nothing less than the history of the civil administration of our navy for the same period. Suffice it to say, that he enjoyed the uniform esteem and confidence of the eleven chief Lords who successively presided at the Admiralty Board during that period, and more especially of William IV., while Lord High Admiral, who honoured him with tokens of his sincere personal regard. Mr. Barrow received the honour of the baronetcy during the short Administration of Sir Robert Peel in 1835; and strong as party feeling ran at that time, not a voice was heard in disapproval of this exercise of the Royal prerogative.

He no doubt held strong opinions on the various national questions upon which the great political parties in this country are divided,—as who does not who has a heart devoted to his country, and a head capable of serving it! But he never suffered any party feeling or bias to interfere with the zealous discharge of his public and official duty; and it so happened, that the most remarkable and active period of his public service at the Admiralty was that during which he was occupied in carrying out those important changes, which have so much improved and simplified the system of the civil administration of the Navy, and which were introduced by Sir James Graham, under a Whig Administration.

Sir John Barrow retired from public life in 1845 in consideration of his advanced years, although he was still in vigorous possession of all the mental and bodily powers required for the due discharge of the functions of his office. In the course of the succeeding three years his vital energies became gradually somewhat weaker, but he seemed on the whole so hearty and so fully in the enjoyment of his faculties, that his friends and relatives entertained no apprehension that his end was so near. The anxiety arising from the death of his lamented son-in-law, Colonel Batty, very probably hastened the termination of his life. He expired suddenly, and without suffering, at his residence in London, on the 23rd November, in the 85th year of his age, and in the midst of the greater portion of his amiable and afflicted family.

He lived to have the gratification of seeing his sons enjoying honourable distinction in the public service; the elder, now Sir George Barrow,

in the Colonial Office, and the next, Mr. John Barrow, at the Admiralty. The latter has been favourably distinguished by having been employed by Sir George Cockburn, to arrange and bring out the existing Regulations and Instructions for the government of the Naval Service, a very laborious as well as important undertaking, his able performance of which procured for him the marked approbation of the Board, as specially recorded in an official minute; and is now at the head of a very important department—the charge of the Records; he is also well known to the public by his talents as an author. He has given us some very pleasing accounts of his travels abroad; and his antiquarian researches at home have brought to light many very curious particulars relative to some of our celebrated naval worthies. His third son, Commander William Barrow, of the Royal Navy, a very promising young officer, died about ten years ago. After having served three years on the East India station, in the command of Her Majesty's sloop *Rose*, and while zealously engaged in the discharge of his duties in the Straits of Malacca, his health unfortunately failed him, and having consequently been invalidated at the Cape of Good Hope, on his passage home, he died there in February, 1838. His youngest son, Mr. Peter, is British Vice-Consul at Caen.

Sir John Barrow had the moral courage to publish, during his lifetime, his own biography, and he modestly states his motives in the following words:—"To trace my progress through the vicissitudes of a life extended beyond the general period of human existence, and, by the mercy of God, without any painful suffering from accident or disease, has been my object, more with a view of benefitting my children and theirs, by the example it holds forth of industrious habits, than with any other."—Page 488. We are sure the public have been thankful to him, for this interesting addition to his already numerous publications, and will wish that other eminent men, whose career has been similarly distinguished, and similarly worthy of imitation, may follow his example.

We have said nothing yet of his various other works, whether published in his own name, or anonymously inserted in various Reviews, chiefly the *Quarterly*; because they are already well known to the public, and speak for themselves. During a long series of years, whenever an article illustrative of science or enterprise appeared in the *Quarterly*, the public at once recognised the hand from which it proceeded, and valued it accordingly. He had, indeed, not only a remarkable facility in composition, but, what was of still more importance, that of detecting, sifting, arranging, and applying all those dispersed and often obscure materials which were essential to the elucidation of his subject, but, which, however important in themselves, had been, in their crude state, almost unknown and valueless. He was, however, surprised, when his Publisher, Mr. Murray, presented him with ten portly and handsomely-bound volumes, containing the Essays of his own composition, selected from the *Quarterly*, and comprising at least one-fourth part of that Periodical, as it then existed.

It is impossible, even in this brief Memoir, to pass over altogether without notice one remarkable feature of Sir John Barrow's official life,—

his advocacy and promotion of the several Polar Expeditions. Although it is absurd to impute the direct responsibility for these expeditions to any other quarter than the several Administrations during which they were undertaken, there can be no question but that these enterprises originated in Sir John Barrow's able and zealous exhibition, to our Naval Authorities, of the several facts and arguments upon which they might best be justified and prosecuted as national objects. The anxiety just now beginning to prevail respecting the fate of Sir John Franklin and his gallant companions, throws at this moment somewhat of a gloom on this subject; but it ought to be remembered that, up to the present period, our successive Polar Voyages have, without exception, given occupation to the energies and gallantry of British seamen, and have extended the realms of magnetic and general science, at an expense of lives and money quite insignificant, compared with the ordinary dangers and casualties of such expeditions, and that it must be a very narrow spirit and view of the subject which can raise the cry of "Cui bono," and counsel us to relinquish the honor and perils of such enterprises to Russia, and the United States of America!

We cannot close this brief Memoir of Sir John Barrow more appropriately than by the following pleasing extract, abridged from the account of his decease in the *Ulverston Advertiser*, a provincial journal published in his native district in Lancashire:—

..... "Sir John never forgot the spot that gave him birth. By his will, the annual subscriptions which he had been in the habit of contributing for a long series of years to the support of the school in which he was educated, is to be continued, and his cottage at Dragley-beck given over in perpetuity to Trustees, that the rent may be appropriated to the education of the poor at the same school.

"His memory will long survive, and his example be held up for imitation by all who derive their birth or education from the same locality. The name of *Sir John Barrow* is a household word amongst us; although he who bore it is departed, his memory still lingers lovingly about our hearths, and will continue to be cherished by our children's children, through many a generation.

"Sir John having expressly desired that his funeral should be quite private, none will be expected to attend it beside his three sons and grandson, and his old friends, Sir George Staunton, Sir Benjamin Brodie, and the Right Honourable John Wilson Croker, his former colleague and near connection through the marriage of the present Sir George Barrow to a sister of Mrs. Croker. Yesterday being the day of the interment, it was observed at Ulverston by the tolling of the bells of the old church; and a blue ensign, half pole high, waved over the cottage in which he was born!"

The grandson here mentioned is the eldest son of the late Col. Batty, an intelligent young man, who has just taken his Bachelor's degree, and obtained a Scholarship at the London University.

S.

It will be interesting to our readers to know that Sir John Barrow retained all his faculties to the last, that in point of fact, although in the 85th year of his age, he was preparing for the press a supplemental chapter for his Autobiography, giving an account of the several Presidents of the Royal Society, during the long period that he was a Fellow of that body, and of some of the Principal Members of the Club, where he was a constant attendant from the time of Sir Joseph Banks, and in which he always took the greatest delight. This supplemental chapter which he had very nearly completed for publication, will shortly be brought forward by his sons, and will show the extraordinary vigour of his mind at a period of life, which, it is the lot of few to attain.

On the 23rd November, 1848, to the great grief of his afflicted family, the deep sorrow of his numerous friends and acquaintances, and to the regret of the public at large, to whom he was well known from his long official standing, and extensive Literary Works, Sir John Barrow departed this mortal life. He had attended a weekly meeting at the Office of the Palladium, of which he was one of the Directors, as was his usual custom every Thursday, and returned home to his residence (7, New Street Spring Gardens,) between 12 and 1 o'clock to luncheon. He had scarcely seated himself at the table before he fell back gently in his chair, and expired in an instant, with a slight exclamation, and without any apparent suffering beyond the moment. As he said of Lord Howe, so we say of him,—

"In one word, Sir John Barrow* was a man in all the relations of social life."

"INTEGRO VITÆ SCLETERISQUE PURUS."

NOTES ON THE PASSAGE BETWEEN MANILA AND SYDNEY.

Ino, Dartmouth, November 17th, 1848.

SIR.—On a former occasion I forwarded to you a few remarks on my outward passage to Port Philip. The following notes on two passages to and from Manila and Sydney, being a continuation of the same voyage, are at your service.

Left Sydney, May 11th, 1847, for Manila via Torres Straits:—a fresh northerly wind which continued four days, carried me to the eastward of Lord Howe Island and Ball Pyramid. On the 23rd sighted Bird Island on the east end of Wreck Reef, and tested the chronometer. Passed to the eastward of Alert Reef, on the 25th, winds steady, S.S.E. 6 and 7; and on the 26th from lat. 14° S. shaped a course for the Barrier Reef to the southward of Raines Islet. 28th, lat. 12° 8' S., long. 144° 38' E. I had hitherto experienced none of the current setting to the northward which I was led to expect, and shaped a course, W.N.W., to get in between Yules and the Great Detached Reef before dark; and in that case the weather being fine, and the moon near her full, there could be no difficulty in steering round the Great Barrier Reef, south of Raines Islet,

* The Portrait accompanying this number is from the painting by Jackson in the possession of Mr. Murray.

and anchoring for the night. But, at 5h. P.M., sighted the beacon on Raines Islet from the top-sail yard, bearing W.b.N.; at 5h. 30m. hauled to the wind on port tack, wind S.E., heading S.S.W., estimated distance from the beacon twelve miles; at 7h. P.M. still standing on the port tack, night fine and clear, a look-out aloft for the Detached Reefs on the lee bow. I observed from the quarter-deck the water breaking close to to windward; wore round immediately and stood out E.N.E., the edge of the Detached Reef showing itself on our starboard hand very plainly, the ship had been set in by a current, and was entering the deep bay formed on the N.E. part of the detached reef, where *Pandora* entered. Worked to windward under all sail during the night to maintain our position, allowing for a current setting N.b.W. two miles an hour.

At daylight the beacon W.N.W., eight miles, bore away, and at 7h. 30m. A.M., Raines Islet N.b.E. two miles, observed several goats on it while passing. Steered S.W.b.W. eight miles, (the sailing directions which I obtained from the port office at Sydney says W.S.W.) I then steered S.W., and as I observed breakers showing themselves on the lee bow hauled up S.W.b.S. and even S.S.W.; and then had dry sandbanks on the weather bow, which from the southerly course I had been steering, I conjectured were Ashmore Banks. Steered to pass between them and the supposed Middle Banks; and not until I was nearly through I discovered I was steering between the Middle Banks and the dry patches to the northward of them, carrying 20 fathoms*. The weather being hazy Sir Charles Hardy's Islands could not be made out. I afterwards found we had a very strong current setting to the northward, the moon full this day. Hauled up south to sight the east end of Cockburn Reef, but did not see it.

At 3h. P.M. anchored in 10 fathoms, Sir Charles Hardy's Islands in in one S.E., and Cockburn Islands W.S.W.; a good anchorage and smooth water. At daylight weighed and stood in for the reef to sight it. It was bad to make out, scarcely showing itself I suppose from being a high spring tide. I was looking out for the wreck of *Sir Archibald Campbell*, mentioned in the *Nautical Magazine* for 1846, p. 659. It is not very conspicuous, consisting of only two pieces of timber, which I took to be the stem and mizen-mast. Having passed the wreck I was steering along the edge of the reef, carrying 9 fathoms, when suddenly the bottom was observed from aloft. The helm was immediately put up, and the ship in going off gently grazed her keel on a soft coral bottom, never losing her way.

This I consider a very critical part of the passage, and fully agree with your correspondent of 1846, on the necessity of a beacon on the north-west point of this reef; as it is necessary to round the reef pretty close in order to make sure of avoiding a shoal with nine feet upon it, at no great distance from the point of the reef. And I imagine the remains of the *Sir A. Campbell* are thrown farther in upon the reef than represented in the charts. Passed to the northward of a small sandbank

* Masters of ships should not fail to profit by this important observation.—Ed.

and steered west for Bird Islands. The course from abreast of Hannibal Islands to Cairncross by the Admiralty chart is N.N.W., it should be N.b.W. Captain Blackwood's chart published at Sydney is the most correct for this part, but the eye is the only sure guide in this navigation, as from the mutable and strong currents no dependence can be placed on the course shaped from one point to another. Run past Cairncross, and at 6h. 30m. P.M., anchored in 12 fathoms. Shadwell Point N.W.b.W., eight miles. I believe I had less swell here than I should have had under Turtle Island.

At daylight, Tuesday, June 2nd, weighed with a fresh wind E.b.S., and at 9h. when nearly up with Fly Point, had a very strong current setting into Newcastle Bay. Hauled out N.b.E., to clear the point; at 10h. abreast of Cape York and steered off N.W., for the north channel; at noon rounded the north-east point of Wednesday Island, had a very strong tide with us in this channel, I should say 5 or 6 knots. At 1h. P.M. passed the group off rocks of Goode Island about a quarter of a mile distant. I could see nothing of the rock to the northward detached from the reef. The chief mate from aloft saw what he considered to be a shoal about one mile distant and on the line of bearing where the rock is placed.

At 3h. P.M., up with Booby Island, hove to, and visited the Post Office, left letters and entered the ship on the report book, found in the two caves abundance of provisions of all kinds, even to a preserved roast leg of mutton, also water, grog, tobacco, tinder box, &c., with a large frying pan and a sort of kettle! at 4h. returned, up boat and made sail.

From Booby Island had steady breezes E.S.E., 5 and 6 bev, with a current to the westward from 12 to 20 miles daily. Monday, June 7th, 2h. A.M., being off the entrance of the Straits of Samoa, hove to until daylight, found a strong current setting into the straits. Daylight made sail and ran through the straits, carrying a strong current in our favour. This is a fine clear passage, and I think to be preferred to going round to the southward of Rottee; at 4 P.M. abreast the Island of Savu, running along its northern side about five miles distant. 9h. P.M. saw the reflection of a large fire on the east end of Sandalwood Island. June 8th, at daylight running along the south side of Sandalwood Island, about 10 miles distant. This island is very incorrectly laid down in Norie's chart. The eastern point being five miles, and the western point 25 miles to the westward of its true position. The Admiralty chart is correct.

June 9th, at daylight saw the coast of Sumbawa, hauled up for it and ran along its southern shore about five miles distant, very high bold land, except off the points small reefs extend out. At 1h. P.M. hauled round the south-west point and entered the straits of Allas.

The wind falling light ran over to the Lombock side and had a better breeze. Whilst looking out for Laboagee or Bally, observed when nearly past them two barques at anchor in Peejow Bay; hauled up and anchored near them, in 6 fathoms sandy bottom.

This is considered a very safe anchorage and much frequented by the American whalers; it is a better place for refreshment than Laboagee.

Mr. Herder, an Englishman, is the only European resident on this side of the island, by whom I was received with true English hospitality. Mr. H. has frequently gone from thence across the island to Ampanan in eight hours on horseback.

The barques were the *Angelina* of London, and a barque under Dutch colours, but navigated entirely by Arabs. These vessels were loading rice.

Thursday, June 10th, weighed with the sea breeze, S.E., about noon, and ran down the Lombock shore. At 2h. passed Laboagee; it is difficult to make out, but the Rajah's flag is generally flying when a vessel is in sight; a sort of double-Dutch flag. Horsburgh's marks for it are very good.

From 4h. P.M., until 7h. 30m. had a strong tide against us, ship going five knots through the water, and dropping astern by the land; also setting over to the Sumbawa shore, at the same time observed a small boat in with the Lombock shore, to be going a-head fast. Hauled in for that coast, and soon got out of the adverse current. Ships should keep over on the Lombock side of this strait, as they will then have anchoring ground, at a moderate distance from the shore, taking care to avoid a long and dangerous reef, extending out to the S.E., from Reef Islands, which is not marked on some charts. There is a good and safe channel between these islands and Lombock; the Sumbawa side of the strait is steep to. A brig in company with me at the time, got upon the reefs above mentioned, during the night. The water being smooth, she got off the next morning without injury.

June 11th, at noon, Lombock Peak, S.b.E., eighteen miles, calm, a strong current setting to the westward. Passed over the centre of an extensive shoal, marked as "doubtful" in Norie's chart; no bottom, and not the slightest appearance of any danger visible.

June 12th, A.M., light air, S.E. and calms. At daylight, Lombock, S.E., and the Peak of Bally S.b.W. At 10h., saw the Island of Kangelang bearing north; at 11h. the small Island of Urk N.W.; hauled up to pass between them. I made the latitude of Urk $7^{\circ} 10' S.$, both Horsburgh and Norie say, $7^{\circ} 15' S.$; current this day S. $67^{\circ} W.$, nineteen miles: passed between Kangelang and Urk, keeping in mid-channel. When abreast the north end of Urk, saw the breakers on the "Four Brothers" from the top-sail yard, bearing N.W.b.W. $\frac{1}{2} W.$ There appears to be an island on the west coast of Kangelang, and close in with it, and not laid down in Norie's chart. Horsburgh mentions it as forming a harbour, frequented by the Dutch. At 7h. P.M., the north point of Kangelang bore east, steered W.N.W., and at daylight, (13th,) saw the N.E. part of Madura, S.W.b.W., six leagues; passed through a large fleet of fishing canoes, coming out from the land, with one man in each. The canoes were painted white, and had two outriggers.

Monday, June 14th, gentle breezes S.E., fine clear weather; at 6 P.M., saw Pulo Lubeck bearing N.W., passed twelve miles to the southward of it.

June 15th, winds S.E., (4 bcv), a great quantity of leaves, berries,
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and drift-wood floating on the water; saw one very large snake amongst it; water very green, no bottom 20 fathoms. At noon, hauled up north for the centre of the Carimata passage, lat. $3^{\circ} 47' S.$, long. $109^{\circ} 44' E.$, barometer 29.92, thermometer 83° .

June 16th, wind E.S.E. (5 and 6 bcv,) got twilight observations of the stars, and steered a north course, keeping 17 and 18 fathoms. At midnight, 17 fathoms, altered the course to N.W. for Souroutou; at daylight, saw Souroutou, Carimata, and the small islands adjacent; at 10h. hauled round the west end of Souroutou, and steered N.b.W. $\frac{1}{2}$ W. for Direction Islands.

June 17th, winds S.S.E., (4 bcv,) at 6h. A.M., saw Direction Islands N. $\frac{1}{2}$ W. There are two islands, Norie's chart shows only one. Passed four miles to the westward of them. Noon, wind east, veering S.E. towards sunset, lat. thirty-nine miles north, long. 108° east; barometer 29.93, thermometer 83° . The S.E. breeze dying away was succeeded by a light breeze, west, which increased, bringing squally unsettled weather with it.

June 18th, a light breeze, S.E., and increasing with cloudy weather; at 10h. A.M., saw a small island bearing east, which I supposed St. Pierre. If correctly laid down in the chart, it was thirty-five miles distant; it appeared to be thrown up greatly by terrestrial refraction. At noon, West Island, N.E.b.N., wind S.E. (4). Early this morning passed close to an immense trunk of a tree, floating on the water, which might have been productive of serious injury, had the ship struck against it.

June 19th, wind S.E., (2 and 3,) daylight, saw the Great Natunas appearing like several small islands. Kept the ship away for a supposed reef, which turned out to be a shoal of fish. At noon, the extremes of the land N.W.b.W., and N.b.W., lat. $3^{\circ} 17' N.$, long. $108^{\circ} 27' E.$, barometer 30, thermometer 85° ; saw a water-spout to the N.E., the tube or spout of which was transparent, the clouds being visible through it. The upper and lower parts appeared disconnected for some distance from the bottom, where it appeared as a cloud of smoke arising out of the sea; it was about five miles distant from the vessel. Light winds from the eastward, the weather unsettled, current setting the ship to the westward in with the land.

June 20th, light winds from eastward, and calms, currents setting us fast in with the land, a kedge and warp in readiness.

June 21st, light winds S.W., exchanged numbers with the barque *Red Rover*, bound south. P.M., heavy squalls from N.W., with much rain. After the squalls, wind veered to S.W., and fell calm.

June 22nd, light winds west, the Peak in Great Natunas W.b.S.: P.M., a squall as yesterday, but not so severe. The wind afterwards veered to west, and continued a moderate breeze.

June 23rd, moderate breeze west, and blowing weather, thermometer $28\frac{1}{2}$, latitude by short double altitude $6^{\circ} 12' N.$, longitude by the same $109^{\circ} 5' E.$, barometer 29.93. 3h. P.M., squally from N.W., as in the two preceding days, but less severe.

Are these squalls occasioned by the heated land of Borneo drawing in the cooler air from the sea, and so causing a deviation from the regular monsoon? We are now in some measure getting out of its influence.

June 24th, moderate breeze W.S.W., lat. $7^{\circ} 41' N.$, long. $110^{\circ} 6' E.$, barometer 29.95, thermometer 82° ; Prince of Wales Bank, N. $44^{\circ} E.$, thirty-four miles. P.M., brisk westerly breezes, with passing squalls.

June 25th, light airs southerly, and fine weather, lat. $10^{\circ} 12' N.$, long. $110^{\circ} 36'.$

June 26th, light winds S.W. and south, fine clear weather; at 10 A.M., kept the ship off five points, to close with a queer looking object, to leeward. I at first took it for a steamer, afterwards for a disabled vessel; the second-mate for a proa full of men pulling towards us; others for a ship's boat with people waving; in short, the conjectures were various. At noon nearly up with it, lowered the boat and examined it. It proved to be the top of an immense cocoa-nut tree, with one large branch still growing; the branches were about 6 feet above the water. Several birds were perched upon it, which were taken by some on board to be men with white turbans at a distance. I think there are times when this might have been reported as a small island, lat. $11^{\circ} 44' N.$, long. $111^{\circ} 36' E.$

June 28th, about midnight, passed another floating island in the shape of a cocoa-nut tree; the night being fine, and the wind light, heard the noise of the birds upon it, long before we could see it. From this date until our arrival at Manila, had very light winds from N.W. to S.W. Arrived at Manila July 4th, found eight English and five American vessels in the roads, and four stout American ships, which had carried troops and provisions to California. Arrived from thence for their homeward cargoes a short time after my arrival.

I remained in the roads from July 4th to August 3rd, during which time there was much sickness amongst the shipping and one or two deaths. Allow me to mention a few of the precautions which ought to be adopted for the prevention of sickness amongst a ship's crew in a tropical port, which although common-place and simple enough, I fear are not sufficiently attended to. Keep the men from exposure to the sun as much as possible, and have awnings forward as well as aft; prohibit fruit from being brought on board, but under your own knowledge, and the less the better. Never allow the men after working in the hold to come upon deck in the air until they are cool, and then well covered up, and avoid if possible using the water of the country until you get to sea. I attribute it to these precautions being carried out, that I escaped at Manila with only one man off duty for two or three days, while others around me had four or five constantly laid up.

Weighed from Manila roads August 3rd at day-light, and worked out of the bay. The buoy on the St. Nicholas shoals in the centre of the passage has disappeared, and probably some time will elapse before it is replaced. The shoals lay in a line with the arsenal of Cavite and the Corregidor N. $73^{\circ} E.$ and S. $73^{\circ} W.$, and the small rock on the south

side of the entrance called "El Frayle" (the Friar) S. 42° W. true bearings. In going in the Friar should not be brought to the westward of S.W.b.S. until Cavite bears east, you may then steer E.N.E. for Manila.

The best anchorage for ships intending to load at Manila in the south-west monsoon is with the lighthouse on the mole N.E.b.N., 2 miles in $4\frac{1}{2}$ or 5 fathoms. The outset of the river enables the cargo boats to reach the vessels on that bearing, when they would not attempt to go to the vessels farther out, or with the lighthouse bearing more easterly. In the north-east monsoon vessels anchor closer in.

Worked to the southward with variable winds and squally unsettled weather; passed outside the small islands Cabras and Luban intending to pass to the west of Mindoro and Aowr, the Macassa sea; but after contending three days off Point Calavite against a strong current setting to the northward, on Sunday, August 8th, bore up for the Straits of Bernadino, and at 8h. P.M. passed through the channel between Isle Verde and Point Columpan, currents very strong and irregular. Monday, August 9th, light winds south-west, passed to the southward of Marindigue at midnight, and at daylight found myself set considerably to the northward by the current; ship well in with "Cabeza de Borda". 11th and 12th working down the coast of Burias against the current. 12th, 8h. P.M. south point of Burias north-east, calm all night, ship drifting along in a fairway by the current to the eastward, a breeze from the westward. At daylight 13th at 8h. A.M. rounded the north point of Ticoa, a very strong tide or race running in eddies off the north point of this island, run down the eastern coast of the island at a moderate distance; at 1h. P.M. anchored in 12 fathoms abreast the ruins of a fort on the south side of the entrance of Port St. Jacintha. In anchoring here the north point of the entrance should be given a wide berth, as a reef runs out to the southward from the point a large half-a-mile. By not hauling in for the fort until the north side of the harbour becomes visible it will be avoided, the lead is a good guide. To the southward of the entrance and well inshore lies a detached rock, covered at high-water, called Solitario. This is an excellent little harbour in the S.W. monsoon, where a ship might heave down and refit, but she must depend entirely upon her own resources. The naval arsenal and building yard of Sorsogon is only thirty miles distant on the opposite coast. The only produce of St. Jacintha is the Bremina, or vegetable pitch, which is sent to Manila in large quantities. Refreshments might be obtained if a ship could wait for them, as they would have to be brought from the interior. I however, obtained six sheep, two dozen fowls, and a bullock very reasonably.

August 14th, 1h. P.M. weighed with a fine breeze west, and expected to be soon through the straits. As I was told we should have a fourteen hours' tide in our favour, at 8 P.M. entered the narrowest part of the straits between Calantas and Capul, when the tide suddenly turned, and although the ship was going $3\frac{1}{2}$ knots through the waters she was driving rapidly astern towards the rocky islets Naranjos; hauled to the northward, and drove clear of them; at 1h. A.M. the tide appeared to have changed in our favour, stood for the straits again, and when in a fair-way

found the ship to be again rapidly driving towards the Naranjos; the weather for a short time became squally, then calm with heavy rain, the night perfectly dark and the ship unmanageable, in a strong current, driving we know not whither. No bottom close alongside the rocks astern of us, and which would not have been visible until we felt them; this continued for about two hours, the sea breaking upon the decks from the violence of the current: at 3h. A.M. the weather cleared off, found the tide turned, and we had made considerable progress through the straits; in half an hour we were through them. In passing between Capul and Calintan although we had then a four-knot breeze, the ship was almost unmanageable from the violence of the current, which was boiling up in eddies on all sides and breaking on board; the ship's head first looking for one shore and then for the other, the hands bracing the yards about as required to pay her off; but, however, we were driving rapidly through in mid-channel.

This channel should never be attempted in the night or with light winds, as from the want of anchorage it is very dangerous should it fall calm; the flood tide setting down towards the Naranjos with great violence. I have heard of one ship being carried in between them in a calm, and from thence between the south end of Ticoa and Masbate, the violence of the current keeping her clear of the rocks. At 8h. A.M. we passed between Bernadino and Baliquator Islands clear of the straits.

Carried moderate winds until the 21st, on which date passed ten miles west of St. Andrew Islands, and in their neighbourhood first experienced the easterly current spoken of by Horsburgh, August 22nd, lat. $3^{\circ} 30' N.$ long. $132^{\circ} 20' E.$ From the lat of $5^{\circ} 44' N.$ have been set to eastward 85 miles in 27 hours, upwards of three miles an hour, and had no perceptible current afterwards: carried the westerly wind to 24 miles N. lat. and had then light winds from the eastward. August 25th, lat. 0° , long. $133^{\circ} 6' E.$, saw the coast of New Guinea to the southward forty miles distant. 26th, light easterly winds and a current to the westward, twenty-five miles in twenty-four hours; Cape of Good Hope S.W. $\frac{1}{2}$ W., lat. one mile N., long. $132^{\circ} 3' E.$, light, easterly winds and calms: 6h. p.m. the east-end of Waygiou W. $\frac{1}{2}$ S., and Amsterdam Island S.S.E.; steered S.W. fifteen miles, and W.b.S.; which should have taken me in mid-channel: at 2h. 30m. A.M. saw the Island of Waygiou bearing W.b.S., must have had a current from S.W.: 7h. 30m. the current appeared to have changed by the opening of the land. Calm, ship drifting in a fair way to the westward; at noon the east end of Waygiou N. $\frac{3}{4}$ E. lat. thirty-one miles south.

August 28th, calm, ship driving to the westward in mid-channel; King William Island west; the night fine and clear; full moon yesterday: 2h. A.M. abreast King William Island, light breezes, S.E.; hauled up to pass between Pigeon and Fowl Islands; at daylight Pigeon Island W. N.W. 12 fathoms sand, saw the water breaking on the shoals in the neighbourhood of Foul Island. A.M. steering for Fishers Island, a strong tide or current set us so the N.W. off the land. After getting Pigeon Island to bear N.b.E. ships should haul well in for the Battanta shore.

By my not doing so I was set down to the chain of low flat islands to the N.W. of Battanta with a southerly wind, and one day was occupied in working up to Fishers Island, as it is necessary to pass that island pretty close to ensure weathering Pulo Popo, which I afterwards found from a strong current setting N.W. between those islands. Had the canoes off from Battanta shore, built with plank, instead of being hollowed out as usual; the articles of barter which they brought off, consisted of tortoise-shell, mats, small pearls, and beautiful birds. They appeared to put considerable value upon their goods when compared with the other islanders of the east. They appeared also to have had some intercourse with the French; as their constant demand was "Linge, Linge," and soon made us sensible that they wanted shirts or other garments in exchange for the goods. They were very stout and powerful men, and had a profusion of woolly hair of a brownish caste.

At 7h. P.M., well in with Fishers Island, tacked to S.S.W., wind rainy, easterly, and the current running strong to the N.W.

29th, A.M., steered to W.S.W. along the south side of Pulo Popo; at 7h. A.M. saw a large boat apparently well-manned, pulling away to southward, seemingly with a desire to avoid us. Upon our hauling up a few points toward him, he very quietly put up a short stout mast and made sail away from us; as I had no desire to close, kept my course and shewed our colours; he then quickly wore round, and steered N.N.E. shewing a large flag—blue and white, blue and white, stripes horizontal. A strong current to the N.W. here also. The Kanay Islands in Norrie's chart are ten miles in error to the N.W. At noon Pulo Pesang W.b. N. $\frac{1}{2}$ N. The round hummock on the N.W. end of Pulo Popo, N.E. lat. $1^{\circ} 36'$ S. long. by chronometer carried on from 9 A.M. $129^{\circ} 19'$, by bearings of the land $129^{\circ} 15'$ E. August 30th, moderate breezes S.E. found little or no current as we increased our distance from the islands, lat. $2^{\circ} 21'$ S., long. $128^{\circ} 47'$ E. The coast of Ceram in sight from S.E. to S.W.

September 1st, light winds and calms during the last two days, with no perceptible current at a distance of twenty-six miles from the coast; the channel between Ceram and Bonoa open. The north point of Bonoa, is $2^{\circ} 47'$ S. it is laid down in Norrie's chart $2^{\circ} 50'$ S. P.M. a light breeze S.E. The tide or current drawing us rapidly in between Bonoa and Ceram attempted that passage, but at 2 P.M. the wind veered S.S.W. (right down) and blew fresh, bore up and rounded the north point of Bonoa, very erroneously laid down in the chart; could see nothing of the reef which is shown off the north point although I rounded that point pretty close.

Thursday, September 2nd, beat through the channel between Manipa and Bourou without much difficulty, a slight current setting to the northward. Not being able to weather Amblaw ran between it and Bourou and over the position of an extensive shoal, as marked in Norrie's chart; no appearance of any danger visible. There are several large houses on the N.W. part of Amblaw, and apparently very good anchorage in the S.E. monsoon.

September 4th, fresh breezes E.S.E., lat. $7^{\circ} 15' S.$, long. $125^{\circ} 30' E.$ a current to the westward, twenty miles in twenty-four hours.

September 5th, 8h. P.M. saw a bright light on the east end of Ombay. Found a strong current setting to the eastward, as we approached the island, which enabled us to weather the east point without any difficulty, wind E.S.E.; rounded the east point of Ombay at 1h. A.M. about ten miles distant.

September 6th, lat. $9^{\circ} 27' S.$, long. $123^{\circ} 24' E.$, light winds E.S.E., current to the west twenty-five miles. I may now consider myself to have arrived in the open ocean, having been thirty-three days from Manila, (S.W. monsoon,) in close navigation; and, I have been thus particular with this part of my passage, because, at Manila, there was a very great difference of opinion amongst the commanders of vessels trading to Sydney, as to the best route down against the S.W. monsoon; some were in favour of the route down the Celebes Sea, and through the straits of Macassar; while others were for running round the north end of the Phillippines, and so into the Pacific, without loss of time. From my own experience, I should decidedly prefer the route I have already described.

Upon my arrival at Sydney, I found I had passed through the Ombay passage, and into the Indian Ocean, a week before a vessel which left Manila seven days before me; he came down the Celebes Sea, &c. He, however, arrived before me, by keeping at a greater distance from the coast of New Holland. He made the best of his way into $100^{\circ} E.$ long., and had a fresh trade wind; while I skirted the coast at a distance of 300 miles, and had the winds very light. Another vessel which left Manila ten days before me, and passed round the north end of the Phillippines I spoke off Cape Leewin, both of those vessels had the advantage of me in sailing. Passed Cape Leewin 5th of October.

October 16th, at noon, Mount Schank N.b.E. $\frac{1}{2} E.$, lat. $38^{\circ} 10' S.$, standing in N.E.b.E., wind S.E.b.E.; at 3h. P.M., the water having a very shoal appearance, sounded, expecting, from the chart, to have about 20 fathoms, was surprised to find but 7 fathoms, being then about ten miles from the shore; tacked off for one hour, and then stood in again. At 6h. P.M., got several casts of the lead, $7\frac{1}{2}$, $6\frac{1}{2}$, $5\frac{1}{4}$, and $4\frac{3}{4}$, (shoaling quickly); about ship, when round, had 5 fathoms. At the same time, breakers were seen bearing east, distant three miles. The extreme point of Cape Northumberland bearing west; and Mount Schank N. $46^{\circ} W.$; distance of the ship from the shore, abreast of her about five miles. Stood off all night, wind hauling round to N.E.

October 18th, entered Bass Straits; the barometer had fallen since preceding noon '68 of an inch, made me apprehensive of bad weather; but, afterwards found the fall of the mercury was occasioned by the change of the S.E. wind to a fresh land wind, which took us when off the entrance to Port Philip, blowing in hot gusts. When in among the islands, had a fresh breeze from the eastward, thick weather, with small rain for twenty-four hours; ship's position marked on the chart every two hours. Arrived at Sydney, Tuesday, 25th of October.

To the Editor N.M.

J. F. TRIVETT.

STATISTICAL SKETCH OF GRAAFF REINET.—*Cape of Good Hope.*

THE division comprises the first tract of country occupied by the Dutch inhabitants in the Eastern Province. It was formed into a district in 1786, after the then governor of the Cape, Van de Graaff, and his wife's Reinet. For many years, however, anterior to this, it had been occupied by the white man; the colonists, in their migratory excursions from the westward in search of water and pasturage, penetrating to this neighbourhood, where they established themselves with their flocks and herds.

At that time it was found very thinly inhabited by straggling tribes of Bushmen, who "roamed on the dreary waste unclad," sustaining a wretched and precarious existence by game, killed with their poisoned arrows, by feeding on the larvae of ants, and on locusts; large flights of which, and especially when drought prevails farther in the interior, occasionally spread over this and the adjacent divisions. They possessed neither flocks nor herds, never cultivated the soil, built no houses, but lived in the most savage state, their habitations being the clefts of the rock, and their only care that of appeasing for the moment the calls of hunger.

The early colonists, the pioneers of civilization, found these people for a considerable time excessively troublesome. The most daring acts of robbery were committed by them; whole flocks of sheep, and large numbers of cattle and horses were frequently driven off and destroyed; not solely for food, but to gratify that sanguinary propensity inherent in man, when living in a savage state. These acts of robbery were often attended with the murder of the farmer and herdsmen; and there are also numerous instances on record where whole families of the whites have paid for their intrusion into this country by the forfeiture of their lives.

The two classes thus meeting in mutual hostility, a struggle ensued, not merely for territory, but for existence. Plunder and violence on the one side, were followed by retaliatory measures on the other; until the weaker party gradually gave way, and the country became permanently settled by the whites; and was included within the limits of the colony.

It is due, however, to the farmers to say, that, during this struggle for supremacy, many well-directed attempts were made by them to civilize, and to win these people from their wandering and savage life. Flocks of sheep were several times raised by voluntary contributions of the inhabitants and presented to adjacent kraals; but these were no sooner received than destroyed; their old habits of prowling round the stock stations of the colonists being renewed with, if possible, increased bitterness.

Time, however, has wrought a change: many of these people, amongst the most degraded in the race of man, were killed in the course of the early feuds; others fell back deep into the interior; numbers of them entered into the service of the colonists, where they have now, by admixture with other native tribes, almost lost their distinctive character.

At the present day it is not known that there is a single tribe living in an independent state, anywhere in the colony. In a few years the race of Bushmen will be extinct, not simply by death, but by amalgamation with other and more useful tribes of natives in the colony beyond its boundary.

The division of Graaff Reinet, when originally formed, was computed to contain 50,000 square miles, but it has been greatly reduced; the division of Beaufort, (in the Western Province,) Colesberg, Craddock, Somerset, and part of Uitenhage having been dismembered from it. Its entire area now is estimated at 80,000 square miles, with a population of about 9000 souls.

The town or capital of the division is one of the most pleasing and regularly laid out villages in the colony. It is situated on the left bank of the Zondag (or Sunday) River, in a bend of the lofty Sneeuwberg Mountains, and is well watered by the adjacent river. Its streets are spacious, intersecting each other at right angles. Most of them are planted on each side with lemon trees, interspersed with the Acacia and Ceylon rose, adding greatly to the general appearance of the town, and which has obtained for it, contrasted with the sterile appearance of the surrounding hills, the significant designation of "a diamond in a desert."

It contains 280 houses and 2500 inhabitants of all classes. The public building comprise a Dutch Reformed Church, and a Chapel built many years ago by the Dutch inhabitants for the religious instruction of the coloured classes, and to which a Missionary is appointed, and supported by the London and Graaff Reinet Missionary Societies. To this chapel is attached a school-room, capable of holding upwards of 200 children, in which instruction is given in the day to coloured children, and in the evenings, of four days in the week, to adults. The other public buildings are, the public offices, a government school, a gaol, and the dwelling of the civil commissioner; also the residence of the minister of the Reformed Community, which is Church property. The houses of the inhabitants are generally built in the old Dutch (or Flemish) style, with ornamented gables in front, which, together with a *stoop*, are generally considered indispensable adjuncts to the dwellings of the Dutch inhabitants. Many of the houses are large and well-built, each having a spacious garden, planted with the vine, and orange, and other fruit trees, all of which are watered by a copious stream led out by a canal from the Sunday River.

The pasturage of this division is greatly diversified, and is found to be suitable for all descriptions of stock. On this account it is much resorted to by the Cape Town butchers, or their agents. It is only within the last few years that much attention has been paid to the growth of fine wool, and for which this division is particularly well adapted. It is affirmed, that on the higher lands, wool of a *longer* staple may be produced than in any other part of the colony, and it may be inferred from the progress already made, that ultimately this division will vie in importance in the production of this valuable staple export, with the most

favoured parts of the colony. At present there exists among the Dutch inhabitants, a considerable degree of prejudice against Merino and other wool-bearing sheep; but this prejudice is fast disappearing: the superiority of wool-bearing sheep being manifest in many particulars, and especially in the hardihood of their constitutions, and their adaptation to the elevated parts of this division.

The lofty Sneeuwberg Mountains form a considerable portion of the division, and abounding, as they do, with grass, are eminently suited to pastoral pursuits in general, some of the wealthiest farmers in the province reside here. The cold of winter is, however, sometimes excessively severe, and at such seasons it has been customary for the inhabitants to drive their flocks into the lower and warmer country, and to return with them early in the spring. These migrations are attended with many inconveniences, the distance travelled being often not less than from 100 to 150 miles. With woolled sheep, it is affirmed, that this labour and inconvenience may be saved, they being found not only proof against the cold, but the frosts are said to lengthen the wool, and to render the staple more firm and durable. These are very material points in the growth of fine wool, and should experience confirm them, must stamp this division with peculiar value and importance. The horse also thrives extremely well in the upland country, and in many parts the epidemic, to which this animal is liable in autumn, is almost unknown. During the winter the higher lands are often covered with snow, sometimes to the depth of several feet, but it seldom lies upon the inhabited parts for more than two or three days. On the highest peaks of the mountains it is often seen sparkling in the bright sunshine for many weeks. One of the most graphic descriptions of this part of the colony, and of the manners and mode of living of the inhabitants, has been furnished by the poet Pringle, who, with his family, in July, 1827, travelled across the Alpine range, on his route to Cape Town. No apology will be necessary for introducing here his own words:—

“The temperature of Sneeuwberg was at this season very cold, and all the highest points were covered with snow. The loftiest peak, called Compass Berg, is considered, according to the most accurate estimate yet made, to be 6500* feet above the level of the sea. The aspect of this shoaled region was bleak, ragged, and bare of wood, but well watered, and for Africa, rich in pasturage. It consists of a sort of plateau or table-land, rising abruptly from the Camdebo and the Koroo, in immense buttresses of naked rock; the ledges or strata of which, as Mr. Barrow has accurately remarked, are so perfectly horizontal, and so regularly squared at the angles, that, but for their vast height and magnitude, they might be taken for gigantic lines of masonry. The uppermost stratum consists of sandstone, intermingled at intervals with quartz; the bases are schistus. There is no appearance of granite.

* This estimate is considered as by far too low. Lieut. Sherwill computes with more appearance of probability, the altitude of this peak as 10,250 feet above the level of the sea,

“The following day we reached the place of Schalk Burger, an affluent grazier, where we spent the night. The house, which was large substantial and well furnished, we found full of guests, there being not fewer than 28, besides ourselves, all respectable looking African farmers and travellers, mostly with their wives and children. How they were all accommodated I could not easily guess; but when I made an apology for increasing the number of their visitors, in consequence of the piercing cold wind which prevented our sleeping in our wagons, the bustling hostess assured me with a smile that they had abundance of accommodation, and bedding for many more guests. So far as bedding went, this was certainly the case, for on retiring to rest, I was conducted to a ‘Slaap Kamer,’ containing three good curtained bedsteads, furnished with two, three, or four feather beds each; but in one of these were already deposited my wife and her sister. Such, indeed, was not unusually the arrangement made for us when we slept (as we sometimes found it necessary to do) in the houses of the Dutch African colonists during our journey. Even in the best houses in the remote districts, the sleeping apartments are few, and usually contain two or three beds each. In a country where there are no inns, hospitality prevails; the crowding of one or more entire families into the same bed-room cannot be avoided perhaps, and from having become customary, appears not even to be regarded as inconvenient. It is a custom which indicates both lack of refinement and great simplicity of manners. A century ago, a state of things not very widely dissimilar, prevailed in the most respectable farm-houses of Scotland, and still prevails in the cottages of the peasantry.

“We spent the following forenoon with this family, which furnished a pleasing specimen of the Sneeuwberg farmers, a class of men of whom Mr. Barrow, thirty years ago, gave so favourable a report. After breakfast some more company arrived, whom I found to be neighbours and relatives, come to spend the Sunday with our patriarchal host. We were soon invited to attend their religious service in the hall, round which the whole company were already seated; and I was glad to see what I had never witnessed on the frontier, that the slaves and Hottentots belonging to the household, were also freely admitted. After singing some hymns and reading certain portions of Scripture, our landlord addressed the company in an exhortation apparently extempore, of about half an hour in length.

“After this becoming service, all the company sat down to a plentiful and cheerful repast, consisting chiefly of stewed meats, according to the Dutch fashion, but very well cooked, and varied with baked fruits, pickles and salads in abundance. The spoons and some of the other articles were of silver; the spacious tureens of well burnished pewter; the plates of China and English delf, with napkins, &c. There was country wine, but glasses were only placed for the men, who drank of it very moderately, the women not at all.

“I left them in the afternoon, much pleased with the good humour and good sense that seemed to prevail among these rustic inhabitants of

the mountain. There was nothing very Arcadian certainly about them; but their appearance was decent and comfortable, and their manners frank, hospitable, and courteous. Notwithstanding the heavy damage occasioned throughout the district, by mildew in the crops, and recent violent rains, plenty was apparently everywhere. I afterwards learned, indeed, that our host was one of the wealthiest, and, at the same time, one of the worthiest men and best masters in the Sneeuwberg. His 'substance' might almost have rivalled that of Job and Jacob in their most prosperous days. He possessed eleven 'platzen,' or farm properties, pastured by 13,000 sheep, and from 2,000 to 3,000 cattle, besides horses, corn, &c. He had only one son, and notwithstanding his unbounded hospitality, had saved much property; and this I was told he generally lent out to his poorer neighbours without interest; it being a maxim with this liberal man, that it is more profitable to assist one's friends than to hoard money by usury.

"As an evidence of the simplicity of manners existing among this class of people, I may mention that, notwithstanding the wealth of the family and their numerous coloured servants, Schalk Burger's only son drove our wagon himself, with a team of oxen, with which his father had furnished me for the next stage, in order to keep my bullocks fresh for the arduous journey before us.

"The hospitality for which the Dutch African colonies have always been famed, I found still prevailing, unimpaired in the Sneeuwberg. Not only this family, to whom it would have been an insult to have offered remuneration of any sort, but every other I visited in that quarter, positively refused any compensation for lodging or provisions; while many of them made us presents of loaves, &c., although we were perfect strangers to them, and all that they could know of us was such slight information as might be furnished by our fellow travellers."

The above, though written a quarter of a century ago, gives a very faithful picture of the more wealthy class of Dutch frontier farmers at the present day. The middle and lower classes of frontier inhabitants have since that time greatly improved in information, and in a variety of other particulars, which mark progressive amelioration in the state of society at large.

The soil of this division greatly varies, but in general it must be pronounced as extremely rich. Agriculture is, however, in comparison with the extent and fertility of the division, as yet but extremely limited. No one thinks of cultivating land which cannot be brought under irrigation, and even, where this is the case, the distance from the coast discourages the production of any considerable quantity of grain, beyond that required for home consumption.

The principal river in this division is the Sunday, which rising on the S.W. side of the Sneeuwberg, flows through the higher country by a very tortuous channel, and then across the Karro plains, until it reaches the boundary of the division at the Swarty Ruggens. The fall of this river is considerable, and the stream in general very rapid. The channel throughout its whole extent, is interrupted by ledges of rock, and which

have this advantage, that the farmers who reside on its banks, are enabled at little cost to lead the stream over their lands, and which therefore become amazingly fruitful. Many extensive vineyards have been planted, but no wine has been hitherto produced superior to the most common light wines of the South of France. This, however, must be attributed to defective manufacture, and perhaps partly to climate, and not to the quality of the grape, which arrives at high perfection, and is in general of excellent flavour. There are no parts of the colony more fruitful than this neighbourhood, and there can be very little doubt that with an increase of population, more labour, and more consumers, its capabilities will be turned to profitable account. The banks of this stream are in many parts extremely beautiful. Being lined thickly with the Babylonian willow, the Acacia of very large growth, and other indigenous trees, the course of the stream may be traced, often as far as the eye can reach, by its umbrageous margin.

The flat country abounds with the sulsula, and which is used by the neighbouring farmers in the manufacture of soap, considerable quantities of excellent quality being made by them and sent to market. The ridges, which are very numerous, are composed of loose stones, chiefly sandstone, interspersed with graywacke, and here and there strewed with felspar, and silicious slate. The country abounds also with a kind of tufa or limestone, which, when burnt, is used for all the purposes of house-building. One of the most valuable shrubs spread over the lower part of the district is the speck boom (*postularia afra.*) It is found in great abundance on the stony ridges, and affords excellent food for those large flocks of sheep, and especially of goats, which many of the inhabitants possess. In severe droughts this shrub is truly invaluable.

The upper part of the division is considered, however, as being decidedly the most preferable. The Field-Corneteirs of the Buffela Heck and Voor Sneuwberg, comprise the lower range of the Sneuwberg mountains, as far as the boundaries of Somerset and Colesberg. Within these Field-Corneteirs are contained the best farms in the district. The general surface of this tract presents a series of long grassy hills and valleys, producing a mixture of grass and heath (*karoo,*) with here and there the mimosa and other bushes. To the N. and N.W., are the Field-Corneteirs of Op Sneuwberg Uitolutg, and the remaining portion of the Comdecho, comprising the whole of the principal range of the Sneuwberg Mountains and the Karroo flats beyond.

At Drie-fontein a village has been established, now called "Richmond," where considerable progress has been made in building; a substantial church has been erected, together with from thirty to forty dwelling houses. The population is increasing, but the want of some magisterial authority is much felt. On the whole, this village promises to become, from its position, a place of considerable importance.

With the exception of the ward Uitolutg, these parts are very cold during the winter months, so that the farmer is sometimes compelled to confine his flocks in their folds or kraals during the continuance of those snow-storms, which at that season are common. This tract of country

is entirely destitute of wood, except where the poplar has been planted, and which thrives well, attaining often a large size, and being found very useful in house-building, and for farming purposes in general. The ordinary fuel is cattle dung. This is dug out of the kraals when softened by rain, it is then cut into square pieces, and stacked the same as turf or peat as in many parts of Great Britain. When sufficiently dry, it is preferred as fuel to wood, giving a stronger heat, and causing less trouble. It is frequently used by blacksmiths at the forge, instead of coal. In this part of the division is situated the celebrated peak, called the "Compass Berg," and which is the highest point in South Africa.

The principal streams in this district, tributaries to the Sunday River, are the Comdecho, Milk, Bull, Buffalo, and Kurrika. These are all periodical streams, and in long droughts, not only cease to flow, but their channels are, for long distances, perfectly dry. At such seasons, many of the farmers are compelled to remove with their flocks and herds to more favourable situations.

The public roads of this division are but indifferent. The authorities are said to have no funds that can be applied to this object; and hence, ever since the old regulation of road-service has fallen into disuetude, when the inhabitants were called upon to preserve in good order, the public thoroughfares, they have been much neglected, and now demand the attention both of the general government and the local functionaries. Game of all kinds is plentiful, sometimes far too superabundant. Long droughts in the interior compel the springbok to forsake the extensive plains, which are their favourite haunts, and to migrate into the colony. This it occasionally does in such incredible numbers, that their visit is felt as a serious calamity; the herbage being compelled to retire before the unsparing invader.

The great majority of the inhabitants are Dutch, but interspersed among them, are many respectable British emigrants, all of whom appear to live in the most social and friendly terms with the old inhabitants, and to be in very prosperous circumstances.

This district contains the highest mountains in Southern Africa, its altitude being computed at 10,250 feet above the level of the sea. This gives it celebrity, and hence the following account of its character, as given by Lieut. Sherwill, who ascended to its summit, will be perused with interest.

(To be concluded in our next.)

ISLANDS IN THE PACIFIC OCEAN.

BORDELAISE Island is a small low coral island, covered with bushes and palm trees, and can only be seen about ten or twelve miles. It has a reef projecting from it to the south-east, fully fifteen miles, forming a lagoon inside. A Mr. Edward du Pernet, master of an Oahu schooner,

(and who gave me this information) was wrecked on its reef in 1843, and remained on the islet five months, during which time they built a small craft which carried them safe to Guam. His opinion was that Jane's, Meaburn's, and Bordelaise Islands were one and the same, and that he was pretty certain no other island existed near it. I am of the same opinion. The position I have assigned it in my chart is from his authority. The island cannot be seen from the south-east part of the reef.

Of San Raphael's Island I have no knowledge, I have placed it in the chart from Norie's Epitome. Its position being lat. $7^{\circ} 18' N.$, long. $153^{\circ} 54' E.$

D'Urville Island I have not seen, I have likewise placed it from Norie's Epitome in lat. $7^{\circ} 5' 18'' N.$, long. $152^{\circ} 36' 52'' E.$

The Royalist Islands I have seen: they are a group of low coral islands, covered with cocoa-nut trees, and connected by coral reefs forming a lagoon inside. They are well inhabited by an able bodied race, who should not be trusted.

The position assigned to them in Norie's chart is correct, being in lat. $6^{\circ} 47' N.$, long. $152^{\circ} 8' E.$

Hashmy's Group consist of five low islands, covered with cocoa-nut trees, and connected by coral reefs forming a lagoon inside. The reef may be approached to within 200 yards, as no hidden dangers exist. These islands are thickly populated by a light complexioned race, who although wearing the mask of friendship are by no means to be trusted. The group is about fifteen miles in circumference, of a circular form, and may be seen twelve miles from a ship's deck. I visited this group in July 1846, and made the centre in lat. $5^{\circ} 47' N.$, long. $153^{\circ} 6' E.$, by two good chronometers. This position will be found nearly correct.

Young Williams Group was first seen by me in April 1844, and in October following I again visited it in the brig *Naiad*. We found a good passage through the reef on the south-west part of the group, and anchorage in the lagoon near the entrance, but the bottom was very uneven and rocky. We anchored in 25 fathoms, about three quarters of a mile to the northward of the entrance, inside of a small islet bearing from us south-west one quarter of a mile, where we lay for three weeks, and built a biche de mer house on the small island, but could not get the natives to collect the slug, and consequently were obliged to leave.

This group is thickly populated by a light complexioned and able bodied race, who are excessively lazy and unwilling to work, and who would not hesitate to cut off a vessel provided they had a fair opportunity. Vessels touching here should always be on their guard, and not allow any natives on deck.

This group is about sixty miles in circumference, and consists of a number of islands, connected by coral reefs, forming a large lagoon inside. The two southernmost islands are the largest; they are each about eight miles in length, and hardly half a mile in breadth. All the islands of this group are low, of coral formation, and covered with cocoa-nut and bread fruit trees. They can be seen about thirteen miles from a ship's deck.

Abundance of cocoa-nuts, bread-fruit, and fowls may be procured for cheap knives, chisels, iron-hoop, fish-hooks, and calico. During my stay at this place in 1844, I purchased about forty dozen of fowls from the natives, for trifles!

No fresh water can be got at any of these low coral islands. The last time I visited this group was in July, 1846, and by observations then, agreeing with former ones, I place the N.W. part of the group in lat. $5^{\circ} 27' N.$, long. $153^{\circ} 24' E.$, and the S.W. part in lat. $5^{\circ} 8' N.$, long. $153^{\circ} 38' E.$

The position I have assigned to it may be depended on, as I had two good chronometers, and proved them to be correct on making Ascension Island.

Naiad group, (discovered by me in the brig *Naiad*, in 1844,) consists of several low coral islands, connected by coral reefs, forming a lagoon inside. This group is fifteen miles in circumference, and well inhabited. There is a clear passage five miles wide between it and Young William group. The islands are covered with cocoa-nut and bread-fruit trees, and may be seen twelve miles from a ship's deck. I made the centre in lat. $5^{\circ} 39' N.$, long. $153^{\circ} 32' E.$

Hogoleu is of great extent, the group being composed of five large islands, and a number of small ones, and the whole surrounded by coral reefs, forming a very large lagoon inside. All the low islands are situated on or near the barrier reef, and are of coral formation; but, the five large and high islands are situated in the lagoon, near the south side of the group, and are of volcanic formation. Many good ship passages are to be found through the barrier reef, leading to the lagoon; and anchorage can be got within the reefs, or near the shore at the large islands. Vessels entering this lagoon, or sailing through it amongst the islands, should have a careful officer at the mast-head, as it is studded with dangerous coral patches in many places, which can only be seen from aloft, and which have no soundings near them. These islands are thickly inhabited, and I reckon the population of the whole group to be not less than twenty thousand souls. They are similar in complexion to the other islanders of the Caroline Islands, and are a cruel and treacherous race.

No vessel should visit this group for biche de mer, unless well manned and armed, as the natives are too lazy to work, and will be certain to attack any vessel which they may find in a defenceless state.

I visited this group in October, 1844, with the brig *Naiad* and schooner *Will-o'-the-Wisp*, for the purpose of collecting biche de mer. The natives at first appeared very friendly, and assisted us to erect houses on shore for curing the slug, and managed so completely to take us off our guard, that I left the schooner to take charge of the station we had formed, and removed the brig to another village, intending to form a second curing establishment; but, the morning after my departure, they attacked the schooner with an immense force, supposed to be not less than two thousand men; and after desperate fighting they managed to beat them off, with the loss of six men killed, and five wounded. The

savages also seized their long boat, and they had to slip their cable, thereby losing an anchor and 75 fathoms of chain. I was at an anchor in the brig, about four miles from the schooner, and during the fight, a few natives were quietly assisting some of my men to fill water casks on shore; so, that I had no suspicion of anything being wrong. The first I knew of it was by seeing the schooner heave in sight, with signals of distress flying. We attacked the town with our boats the same day, and recovered the long boat. She was concealed in a house five hundred yards from the beach.

Many of the natives were armed with brass-hilted cutlasses, and a great number had large Spanish knives. They fought our boats for two hours, before we effected a landing. They are very expert in sling-ing stones, and can throw the spear with great precision. I have no doubt the drubbing they got from us will make them more careful in future.

I know nothing of the Arecifos Islands, and have, therefore, omitted them in my chart. Reefs and islands N.E. end $8^{\circ} 45' N.$, long. $152^{\circ} 36' E.$, and S.W. end $8^{\circ} 28' N.$, long. $152^{\circ} 6' E.$ This group was discovered by a Capt. Cook in 1825, and are (I have been told) correctly placed in Norie's chart. They consist of low coral islands, connected by coral reefs, and form a lagoon inside.

Tamatam is a small group of three low coral islands connected by reefs forming a lagoon inside, and well inhabited. Its position is lat. $7^{\circ} 32' N.$, long. $149^{\circ} 30' E.$

I do not think Soame's Island exists. Some person has probably mistaken the westernmost island of Hogoleu for a new discovery. I have omitted it in my chart.

The position I have assigned to a dangerous reef to the westward of Bordelaise Island, is from the *Nautical Magazine*.

Halls Islands and Hursts Reefs I have not seen. I have placed them according to Norie's Epitome.

Pulowat is a low coral island covered with cocoa-nut trees, and well inhabited. A shoal projects from it a considerable distance to the north-west, having irregular soundings of from ten to thirty fathoms on it, and terminates in a dangerous reef on which the sea mostly always breaks. When on the reef Pulowat can just be seen from a ship's top-sail yard. I visited this island in 1844, and found it correctly placed in Norie's chart. Its position is lat. $6^{\circ} 40' N.$, long. $149^{\circ} 23' E.$

Enderby's Isles I have not seen, I have placed them according to Norie's Epitome.

Montevarde Islands are of coral formation, and consist of several low islands covered with cocoa-nut trees, and connected by coral reefs, forming a lagoon inside, with a good passage through the reef on the west side of the group. These islands are thickly populated by an able-bodied race of a light complexion, and who are not to be trusted. Its position is lat $3^{\circ} 27\frac{1}{2}' N.$, long. $155^{\circ} 48' E.$

St. Bartholomew Island is of coral formation, low, covered with cocoa-nut trees, and similar in size and appearance to Pulowat. It is well-

inhabited by a light complexioned race; lat. $6^{\circ} 35' N.$, long. $148^{\circ} 47' E.$

Pigali Island is in lat. $8^{\circ} 11' 53'' N.$, long. $147^{\circ} 40' 10'' E.$

Tuckers Island is of coral formation, low, and covered with cocoa-nut trees. It may be approached within one quarter of a mile, as no hidden dangers exist. I visited this island in June 1846, and found it correctly placed in the charts. The population amounts to about three hundred and fifty souls. Its position is in lat. $7^{\circ} 22' N.$, long. $146^{\circ} 48' E.$

Swede's Islands I have not seen. I have placed them according to Norie in lat. $7^{\circ} 30' N.$, long. $146^{\circ} 28' E.$

Five Islands I have not seen. I have also placed them according to Norie in lat. $7^{\circ} 32' N.$, long. $145^{\circ} 31' E.$

A dry shoal near the Five Islands is also placed in my chart according to Norie.

Wilson's two isles named by the natives Evalook, consist of three small low islands, of coral formation, covered with cocoa-nut trees, and connected by coral reefs, forming a lagoon inside. There is a good boat passage through the reef on the south side of the group. The population amounts to about one hundred and forty souls. They speak the same language as the natives of Ullieye. I visited this small group in 1844, and made it in lat. $7^{\circ} 11' N.$, long. $145^{\circ} 8' E.$

Ullieye consists of thirteen low coral islands, covered with cocoa-nut trees, and connected by coral reefs, forming a lagoon inside, with a wide entrance to it on the south side of the group, which has a bar across it, and on which we had not less than five fathoms water when going in, but we deepened suddenly to seven, nine, and twelve fathoms after crossing the bar, and anchored in nine fathoms coral and sand near the north-east part of the group. About nine of the islands are inhabited, and the population amounts to about fifteen hundred souls. These natives are of a light copper colour, and although friendly in appearance, are not to be trusted. I visited this group in September, 1844, and made the entrance to the lagoon to be in lat. $7^{\circ} 15' N.$, long. $144^{\circ} 2' E.$, by two good chronometers. This longitude agrees with the Russian navigator Kotzebue's position, but he is twenty miles wrong in his latitude! The food of these natives consists of cocoa-nuts, fish, bread fruit, tarro, sugar-cane, and bananas. Their arms consist of Spanish knives, spears, clubs, slings, and stones.

Grimes Island was seen by Mr. Grimes, master of a Southern whaler. The position I have assigned it in my chart is from Mr. Thomas Beckford Simpson's authority.

Kama Islands were visited by me in September 1844, I made them in lat. $6^{\circ} 34' N.$, long. $142^{\circ} 56' E.$

They consist of two small coral islets surrounded by a coral reef, forming a small lagoon inside, and can be seen about twelve miles from a ship's deck. The population amounts to about one hundred and fifty souls. The islets produce nothing but cocoa-nuts.

Phillips Isles I have not seen: I have placed them in the chart from Norie's Epitome. The natives of Yap and Ullieye often visit them.

Mackenzie Group is of great extent, and consists of a number of low coral islands, covered with cocoa-nut trees, and connected by coral reefs forming a large lagoon inside, with many good passages through the reef leading to it. This group is thickly populated by a light complexioned race, whose manners and customs are similar to those of the other Caroline islanders. These natives, although appearing mild and friendly to a stranger, are by no means to be trusted, as one or two Manila vessels have been cut off at this group some years ago.

I have placed them in my chart, according to Capt. Wilkes of the United States Exploring Expedition, who had the group examined by one of his tenders.

I visited the island of Yap in 1843, and remained there seven weeks collecting biche-de-mer. It has an excellent harbour on the south-east side, formed by reefs; the entrance to which can easily be discerned from the mast-head when standing along the reef. Yap is thickly populated by a light complexioned race; they are of a treacherous disposition, and have cut off several Manila vessels which have gone there to collect biche-de-mer. The chiefs confessed to us that they had taken two Spanish vessels; the last one having a crew of fifty Manila men, who were all massacred.

The tribe at the harbour formed a conspiracy to cut us off, and which they undoubtedly would have done had we not been put on our guard by a neighbouring tribe then at war with them. No merchant vessel passing should have any intercourse with these natives, or allow them on deck as they are not to be trusted. This island is correctly placed in the charts, its centre being in lat. $9^{\circ} 35\frac{1}{2}'$ N., long. $138^{\circ} 8'$ E., by Horsburgh, which agreed with my observations.

The Matelotas consist of three small islets, and reefs. The south islet is inhabited, and is situated in lat. $8^{\circ} 17'$ N., long. $137^{\circ} 33\frac{1}{2}'$ E., and the north-easternmost islet in lat. $8^{\circ} 35'$, N., long. $137^{\circ} 40'$ E. I visited this group in August 1843, and found my observations to agree with the above positions. The population does not amount to more than thirty-five souls. They live entirely on cocoa-nuts and fish.

I have visited the Pelew (called Pallou by the natives) Islands several times, and by admeasurements from Macao and Manila with good chronometers I found the whole group placed fifteen miles too far east in Norie's and Horsburgh's charts.

I think these positions will be found nearly correct.

I make Angour in lat $6^{\circ} 53\frac{1}{2}'$ N., long. $134^{\circ} 6'$ E.; Babelthouap, East Point, lat. $7^{\circ} 41'$ N., long. $134^{\circ} 40'$ E; Kyangl, lat. $8^{\circ} 8\frac{1}{2}'$ N., long. $134^{\circ} 35'$ E.; I think these positions will be found nearly correct.

With respect to the winds and currents prevalent at the Carolines, the observations I have made respecting Bornabi will hold good as far west as the Kama Islands, and Horsburgh's Directory will be found a very correct guide to the westward of that meridian.

The Eddystone Island New Georgia in lat. $8^{\circ} 18'$ S., long. $156^{\circ} 30' 40''$ E., has a small harbour on its north-west side. A vessel can moor in the cove at the head of the harbour, where she will be completely

land-locked, and sheltered from all winds. I visited this island in 1844 in the brig *Naiad*, and lay in this harbour for six weeks, and while there I made a plan of it. The Eddystone is of small extent, and elevated 1036 feet at the west side.

The natives are black, with woolly hair like negroes. They are also cannibals, and are not to be trusted.

Vocabulary of the Yap Language.

Moy. To come.	Ou. Twine.
Sur'i. To go.	Eyou. Cocoa-nut leaves.
Minni fthingam. What name.	Walau. The teeth.
Mangeninum, By and by.	Naun. A house.
Pinock. Give me.	Lute. Firewood.
Thamapia. I do'n't like.	Munum. To drink.
Thackunang. I do'n't know.	Mocoy. To eat.
Coconang. I understand.	Fakak. A friend.
Lukul. Biche-de-mer.	Beyot. A musket.
Kuer. You.	Kapung. A big gun.
Gheak. Me.	Truiah. Beads.
Kokui. To look.	Kymol. Sleep.
Pilung. A chief.	Fal. Rope.
Papun. A woman.	Yar. Kuife.
Pemmone. A man.	Venou. A village.
Betur. A boy.	Oung. A woman's dress.
Rukoth. A girl.	Athui. A man's dress.
Yam. Dead.	Navu. Fire.
Rugullum. I will kill you.	Raan. Fresh water.
Penageam. Quick.	Puel. The moon.
Minmilli. Kill him.	Fannou. To go.
Toar. To day.	Maat. Calico.
Kabuul. Tomorrow.	Fafilbrain. White.
Eneul. To night.	Brungatu. Black.
Langeleth. Day after tomorrow.	Rou. Red.
Fowap. Yesterday.	Manafeck. To bring.
Kytmy. Enough.	Pring-abuut. Sit down.
Niu. Cocoa-nuts.	Tuleng. Rise up.
Tupe. Green cocoa-nuts.	Kassic. I do not want it.
Mal. Tarro.	Rotie pun. A little girl.
Tohock. Yams.	Meylor. A glass bottle.
Kirtou. Tattoo.	Farape. One.
Pakah'. Large.	Arou. Two.
Pijijuk. Small.	Thaleip. Three.
Po'ar. Plenty.	Anengake. Four.
Tow. An axe.	A-lal. Five.
Wasy. A chisel.	A-neal. Six.
Arumapup. A knife.	Madeliep. Seven.
Muu. A canoe or proa.	Mearuke. Eight.
Delack. A spear.	Meareap. Nine.
Soroke. It is true.	Arakak. Ten.
Moke. To speak.	Rahie. One hundred.
Moer. Bamboo.	Bhuiou. One thousand.

Vocabulary of the Pallou Language.

May. To come.	Aolt. The wind.
Murrah. To go.	Aphuel. The moon.
Karrathow. Go away.	Mathangay. I understand.
Amsal. By and by.	Deak mathangay. I don't know.

Wysay. That is the way, or that is } the fashion.	Merakung. Enough.
Mungah. To eat.	Alukas. A shoal.
Peaback. Plenty.	Kalmull. Barrier reef.
Packasuel. A lie.	Tiang. Here.
Myrrakoro. A thief.	Say. There.
Agaleth. Biche de-mer.	Kaeltang. Which.
Ply. A house.	Narakay. Where
Ralm. Fresh water.	Kabue. Betel-nut leaves.
Milliem. To drink.	Ung-eel. Good.
Kybakle. A chisel.	Macneat. Bad.
Pelew. A village.	Mackywuy. To sleep.
Boyus. A musket.	Mopath. Lie down.
Klowboyus. A cannon.	Atutow. Daylight.
Karr. Gunpowder.	Karraal. Payment.
Ngou. Fire.	Klallo. Goods, or things.
Ouse. Lime or chunam.	Engara mu karaal. What price.
Olcisa. A knife.	Waa. Holloa, or holla.
Towel. A fork.	Engara. What.
Arthiel. A woman.	Swam. You like.
Eelwy. A very stout woman.	Swack. I like.
Kakeray. Small.	Swal. He likes.
Klow. Large.	Deak ateck. I do not like.
Bouk. Betel nut.	Deak atcem. You do not like.
Nekill. Fish.	Deak ateel. He does not like.
Muur. Cocoa-nuts.	Millsang. Give him.
Babee. A pig.	Biskou. Give you.
Bumgeey. Sit down.	Biskak. Give me.
Putdeas. Rise up.	Klallo kleak. My goods.
Thouap. Salt water.	Klallo kleam. Your goods.
Malokoy. To speak.	Klallo klel. His goods.
Kow. You.	Klubaguel. A club.
Nak. Me.	A rack. Friend.
Murrakathow. Be quick.	Sukaleek. My friend.
Kyroko. A fish hook.	Sukaleem. Your friend.
Koosond. A comb.	Sukaleel. His friend.
Kalakang. To day.	Leek. Mine.
Klu kuuk. Tomorrow.	Leem. Yours.
Ynous. The day after tomorrow.	Leel. His.
Yosell. Three day hence.	Maruel. To make.
Kapasingay. To night, evening.	Mews. To pull or paddle.
Kakamangal. Long.	Moduck. Strong.
Kakathape. Short.	Posoas. A paddle.
Guay. He or him.	Yars. A sail.
Mal. Very.	Akeel. A rope.
Ring-aringa. A fool.	Weead. A light.
Tokoy. Custom or fashion.	Gualack. Children.
Arrakath. Men.	Pukeck. My wife.
Asakkal. A man.	Pukeem. Your wife.
Imly. A canoe.	Pukeel. His wife.
Bose. A boat.	Murra ma keth. Go on shore.
T-deal. A ship.	Maketh. Shore or dry land.
Mammuth. Calico.	Murra kay. Go fishing.
Olakang. An iron pot.	Mala'muk. To chew.
Peath. A stone.	Et mollock. Deep.
Athungan. Firewood.	Are ingee. There is.
Kyleseep. Yesterday.	Killseekill. What for.
Mathey. Dead.	Dayseeshew. All the same.
Rial. A road or passage.	Motuuk. Plenty.
Mul May. To bring.	Takankleck. What is my name.
	Takanklel. What is his name.

Maykeeth a murra pelew. Come we } will go to town.	Tethey. Three.
Keeth. Us or we.	Tewang. Four.
Kow mur. Where are you going.	Te-cem. Five.
Marial. Go on, or walk.	Malong. Six.
Aming-owl. A concubine.	Te wceth. Seven.
Kasuse. To night.	Te eye. Eight.
Kapasingay. This evening.	Eateem. Nine.
Tealang. How many.	Maccoth. Ten.
Momace. To look.	Loeak. Twenty.
Memakisang. Let me look.	Oguthey. Thirty.
Kaseep. Warm.	Oguwang. Forty.
Rassack. Blood.	Ogeem. Fifty.
Rupack. A chief.	Ogolong. Sixty.
Klow rupack. A king.	Ogweeth. Seventy.
Tetang. One.	Ogeye. Eighty.
Terou. Two.	Ogateem. Ninety.
	Thirt. One hundred.

(To be concluded in our next.)

FIRST IMPRESSIONS OF SHANGHAI.

FIRST impressions of men and things are ordinarily received from some of their most prominent features and most remarkable characteristics. These outline-sketches, whether feebly or strongly stamped on the mind, must usually, as they are filled up, require more or less modification, because the objects seen may not always be in the best points of view, and there may be unseen disturbing causes to prevent perfectly exact impressions. Besides, these received from new objects must be placed in juxtaposition with former impressions of the same or similar objects seen elsewhere, on former occasions and perhaps under different circumstances. Nearly all the knowledge we acquire is subject to modification by the laws of comparison. What one pronounces beautiful in nature or art, is esteemed by another coarse, uninteresting or even repulsive. This principle, applicable to every thing we see, must be especially borne in mind, when judging of descriptions where the writer is on new ground and surrounded by new objects. Things seen make such different impressions on minds that we should, as far as practicable, refer them to some common standard. Looking, for instance, at the full moon in a clear night, one will tell you that its size is that of a man's hat, a second says it is as large as a common drum head; and so, as described by different persons, its diameter will be found to vary from a few inches to many feet.

My first impressions of men and things here, have been and must be influenced, not a little by what had become familiar in the south. No apology will be offered, therefore, for the frequent references in the following notes, to objects there, or for comparisons and contrasts drawn between what may be seen in the two cities—one at the extreme north, the other at the extreme south, of that part of China now accessible to foreigners.

Approaching Shanghai by the river, from Woosung, next to the foreign factories, that have sprung up as if by magic, the native shipping was the most prominent object of attention. The city itself having no

high grounds or lofty towers or pagodas, was quite concealed by trees, so that only a few poor houses could be seen along the river's bank, while a forest of masts, covering one half of the river, stretched away for more than a mile southward. These vessels are of the middling size, say from one to two hundred tons burden, most of them carrying four masts. As they are moored in rows of ten, fifteen, or twenty—the sight at a distance is imposing. On passing through the fleet, however, you are soon disposed to believe the number of vessels, and the amount of tonnage, to be less than what the first impression had led you to anticipate. I should judge the tonnage to be less than that usually seen in the river at Canton, taking into account the numerous large canal boats at the latter place.

Shanghai, however, is a great entrepot, whence native craft take their departure for the high seas, whether bound northward for Shantung and Chili, or southward for Chehkiang, Fukien, &c. At this place too, vessels rendezvous as they come in from sea, destined to the scores of towns and cities, covering the wide plains of Kiangnan. At present I dare not hazard any conjecture, regarding either the amount of tonnage or number of vessels; they are all marked and numbered; as an example, thus, reversing our order:—“*Kiangsu's Sungkiang's Shanghai's, No. one hundred merchant vessel, the Prosperous,*” i. e. “the Prosperous, a merchant vessel, No. 100, belonging to (a firm in) Shanghai, in the department of Sungkiang, in the province of Kiangsu.”

The population living here in boats is not one-tenth so large as that at Canton—though equally poor, equally debased. Their boats are very rude, and clumsy, and rowed or sculled usually by men, not by women as at Canton. Many of the passenger-boats have cloth sails, made of “Yankee Cotton.” The ferry-boats are much larger than at the south, sometimes carrying seventy or more passengers.

The dwelling houses are low, close and dark, for the most part poorly adapted and badly constructed for comfort and convenience. The windows are small and without glass. In their general contour, the houses have much of the tent-form, after which they seem to have been modelled. The whole structure is very slender. A wooden frame goes up first, and then brick walls, the latter supported by the former. At Canton the roofs are covered with light tile, firmly laid in white lime; here the tiles are dark and heavy, laid loosely without a particle of lime, except along the ridge, and over the latter a row of tiles, piled with their edges upwards, gives the house a singularly ridged appearance. At Canton you have terraces over almost every house; but here they are seldom seen. There too, the houses are crowded together, so that on a given space you have double or treble the number you will find here; but each is more densely populated there than here. Such at least are my first impressions.

Temples are quite like the other buildings in their general features; and in their principal characteristics, as dedicated to false gods. They resemble the temples of the south, the idols, &c., being the same. There is no pagoda in the city, and the only one I have seen is that, four or five miles up the river, called the “Dragon's Splendour.”

The altars, tables, and the like, seem less numerous than in the south; and I am anxious to ascertain whether such be indeed the fact. The people of the south, have the reputation of being specially fond of the strange and marvellous, and it may be are more devoted to idolatrous worship than those in the more northern provinces.

Coffins containing the remains of the dead, are seen all around Shanghai, on almost every unoccupied spot beyond the walls of the city. Some of these are covered with miniature houses of bricks, others with mounds of earth, and some with straw and mats, while many are left without a shred to screen them from the sun and rain. Few coffins, one would fancy from the number above ground, are ever placed beneath the surface, and this probably because it is so low, very often not above high-water mark.

Public nuisances are not a few. Some may be named; of others it would be a shame even to speak. Such could exist only in a pagan country; and are seldom seen even in Canton. Beggars are, apparently, equally numerous, equally wretched and loathsome, and equally intrusive in both cities. Whether they be with or without a king here, I do not know.

Sacrifices to the tenants of the invisible world, offered by the people here, are plentiful in kind, but poor enough in quality, false like the beings to whom they are made, tinselled paper pretending to be gold and silver ingots. In one instance, I have seen a whole household and the domicile itself, falsified in this manner, by priests employed by a rich widow. All these precious things are transmitted, by fire, to the shades of the invisible regions of another world.

Drunkenness has many votaries, though the use of strong drink may be no more common in Shanghai than in Canton; but what I never saw there more than once or twice, I have often seen here, intoxicated men staggering through the streets. The smoking of opium too, is practiced openly, with little or no desire to conceal it from public view.

Quarrelling is not mere logomachy as it usually is in the city of Rams, but hard blows are often dealt out right lustily, with fist or cudgel.

Gambling, at least on a small scale, is universal here, as it seems to be every where among the sons of Han. They will gamble at all times, in all places, and so far as I know for any thing and all they possess.

The theatre is not perhaps so prominent here as in Canton, nor have I yet been where I could see the actors, though many times I have passed temples, and other places, where hundreds and thousands of the people were congregated, drawn together by the attractions of the stage, which in China, as in all the world besides, is a prolific source of vice and dissipation. Here there are no tickets, and just as in the south, you see all the idlers of the city crammed and jammed shoulder to shoulder; their bald pates baking in the hot sun, seemingly as insensible as the stones of a pavement. Some of these exhibitions are given as entertainment for the gods. So I have been told, and their expenses are defrayed from funds collected for charitable purposes. These of course, are services acceptable, as the Chinese will have it, "most acceptable to both gods and men."

The walls of Shanghai, if my first impressions be correct, are less massive than those of Canton, as they are less also in extent, their circuit being, as the Chinese inform me, only nine li, say two and a half English miles.

The gates are low and only six in number; and, thanks to British authority, are opened day and night to the ingress and egress of foreigners.

The streets are narrow as in Canton, and much less cleanly. A few are paved or flagged with stone, while most of them are covered with brick or tile, laid with their edges upwards.

The ditches, drains and moats, are bad enough at Canton; but here they are in a much worse condition, half filled up with all manner of refuse matter and choked with stagnant water.

Women, apparently, enjoy more freedom and more respect here than in the great metropolis of the south. There they are seldom seen in the streets, except they be very aged, or of the very poorest or most abandoned class. Here of the middling classes many of all ages go abroad, on foot, to visit their neighbours and the shops. The freedom and respect, enjoyed here by the women of China, is doubtless, the main reason why the foreign lady is not such an object of wonder in Shanghai as at Canton.

Food seems abundant—rice being the staff of life; meat, fish, &c., being supplied in about the same proportions as in the south. Mutton, however, is here found to be both good and plentiful, as cheap as beef and pork.

Of the fruits of the season none are so attractive as the peach. When well ripened it is excellent, and often of a generous size. Apples, pears, and grapes are beginning to appear. The rage for green fruit is as great here as in Canton. Cucumbers have been plentiful, and water-melons are becoming so. Both are of good size, and when well selected they are not to be despised.

As to clothing, and manners and customs generally, there are many little differences between the Chinese in the two different latitudes—most of these, however, are such as the stranger will hardly notice—certainly if he be not a Chinese. Fashions in China change as they do in all other parts of the world; and what is in vogue to-day, may be discarded or disliked to-morrow.

Warm baths, very common in Shanghai, do not exempt its inhabitants from some infections that seem almost inherent in their nature. I shall never forget the scenes I witnessed on entering, for the first time, one of the establishments where these warm baths are provided; nor can I, nor would I, if I could, describe my first impressions. We did not go through all the apartments, but were glad to retrace our steps, not wishing to have first impressions too much deepened. It may be a long time before the visit to that, or any similar establishment, will be repeated.

The tea-houses are, if possible, more numerous than in Canton. How they are furnished I am not yet able to say. Two things connected with them are remarkable, the sale of hot water and public reading, or

story telling. Hot boiling water is sold in all quantities and furnished at the shortest notice, and of the best quality. Very often, at a late hour in the evening, you may see in one corner of these tea-houses, a grave looking man, a fan in one hand and a book in the other, holding a large audience of tea drinkers, for a long hour, listening to what he rehearses. For compensation each one pays, one or more cash, according as they may be disposed.

Ice-houses in Shanghai can hardly be too highly prized. They are of great value, and will doubtless, supported by foreigners, be very much improved. Many a time has the dreadful heat of a summer's day been abated by refrigerants from these establishments.

The hatching of ducks, five thousand in one day, and in one establishment, was a very amusing spectacle. The process was simple, but seemed more like juggling than reality. The thermometer did not stand above 93° while the ducklings were coming out in seemingly countless numbers. Strange; we are told that incubation is unknown among the ducks and hens of this region!

Of the dialect spoken by the people of this city it would require a book to describe my first impressions. Radically the same, this language has in the various provinces, cities and towns of the Empire, an endless variety of localisms. To describe these is not an easy matter. There are in this dialect, seemingly, many resemblances to that called the court dialect, or mandarin tongue.

The general character of the people here is more gentle, tame perhaps we should say, than in the south; this is especially the case in their bearing towards foreigners. They are, too, perhaps, less enterprising, less polished, less literary. But it is to be borne in mind that Canton is a great metropolis, the residence of many high officers and literati, in constant correspondence with the residents at Peking, and for more than two centuries has enjoyed intercourse with the christian world. On the whole, however, my first impressions of Shanghai are favourable, and will doubtless be improved by a longer and more intimate acquaintance.

THE ANEROID BAROMETER.

Edinburgh, Dec. 7th, 1848.

SIR.—Let me call your attention to p. 674, of the last *Nautical Magazine*. Surely your correspondent is in error about the word *Aneroïd*. Nothing, I think, is more obvious than the derivation of the name, which is legitimately compounded of three Greek vocables, *a*, *privative*, *νηπος*, *wet* or *damp*, and *ειδος*, *appearance* or *form*, which last is the symbol generally used in the composition of such names as set forth the peculiar or distinguishing property of the objects to which they are applied. The word thus means in plain English *of the dry sort*; and should be pronounced *Aneroïd*, not *Anëroïd*. I never heard the word

Ροῦεως, *fluid*, or rather *fluidly* before; but there is a word, Ροειδιου, a *small channel*, which, if it could be legitimately compressed within the limits of the name *Aneroid*, might indicate the absence of the tube in this new instrument.

To the Editor N.M.

Σ.

HONG KONG, September 28, 1848.—We have lately (August 31) been visited by one of those fearful hurricanes called a typhoon. It possesses characteristic peculiarities; amongst which the fact of its commencing in one "heart," and blowing consecutively from every point in the compass, is the most remarkable. Its violence, I believe, has no parallel.

The day preceding it was very wet; and I will remark that the rain descends within the tropics in a manner, you in England cannot understand. Shortly after I went bed, I was disturbed in my slumbers by the terrible commotion of the elements. The wind, which opened the battery, blew from the N.W. It assailed the front of our house (which stands in rather an exposed situation) with terrific gusts, as if it were determined to get in, and required the whole front of the house to be removed for its admission. The pauses, which lasted for half a minute, in the assaults of this storm were awful for their solemnity. The silence was that of a universal death. It seemed as if the enraged elements had retired to concert together renewed and more energetic attacks. At sea, the warning of the troubled waters engages this awful pause. On land, the silence is so intense, that you fancy no earthly moving object is left to break the solemn monotony, and the imagination pictures all without swallowed up in death and ruin, and yourself the last victim. I lay on my bed rocking with the agitation of the house, to hear first one drawing-room window and then another yield to the fury of the storm. Every servant about the house was summoned to lend his hand to close the breach. A Chinaman is a great fatalist, and submits when danger comes. He thinks, after he has propitiated the peculiar god suitable to the occasion, by burning joss paper, the rest is no concern of his. I had great difficulty in prevailing upon the men to assist me in facing the blast, but eventually succeeded in closing the doors and blocking them up with props and cleats.

When daylight broke, (and it did so sullenly, as if the sun had been detained in rebuking the winds for their bad behaviour during his absence,) I peeped out of my window, and what a scene of desolation presented itself! Ships were lying sluggishly in the harbour, dismasted and without anchors, at the mercy of the abating swell; some were cast hopelessly on the rocks, and their crews looking wistfully out for the craft that were to rescue them; here was the interior of a well-furnished house exposed by the removal of its roof; there, by the destruction of its front wall; tiles, bricks, painted wood, and even blocks of granite were strewn about in confused heaps, blocking up the ways: Venetian blinds were swinging in eccentric movements on one hinge, and creaking in unharmonious concord with the dying wind; doors lay prostrate on their own thresholds, and paling was cast away far from the space it fenced. In short, everything presented such a sight as Herculaneum might have afforded, if it could have been seen the day after its inhumation. Even the loud chattering of the Chinamen was hushed; and those thousand noises so peculiar to them were no longer heard.

As the day wore on, Coolies, laden with the blue and mangled bodies of

the slain and drowned, partially covered with coarse matting, flitted stealthily by. Despair and terror sat on every one's countenance, who had some sorrow to relate more fearful than the last. Rumours of wrecks became rife; and predictions of others, emanating from some nautical oracle, turned out worse than the assumed facts,

It is now three weeks since this awful visitation—and how altered is the scene! There is scarcely left a trace of all this desolation, Houses are repaired; the naked trees are assuming fresh verdure; ships are either broken up or floating with new rigging; the dead are either buried or devoured by fish, and passed from the memory of their friends. What a power of adaptation to circumstances and events the most calamitous, does this exhibit in the human mind. When hundreds of poor human wretches, as friendless and unknown as the beasts of the field, have fallen victims to this terrible storm, others have been saved by its influence in sweeping away disease,

The armed police-boat, sent away with a cargo of English invalided policemen on a convalescent cruise, was swamped, and all but three perished.

The typhoon that raged in the evening of Thursday the 31st ultimo, and morning of Friday the 1st instant, has probably caused more damage to Europeans than any they have experienced in China. Fortunately it was of shorter duration than these hurricanes generally have been, otherwise much more serious effects must have resulted from it, especially on shore. The barometer had fallen steadily from 29·75 in the morning of the 28th to 29·70 on the 29th, 29·62 on the 30th, and 29·51 on the morning of the 31st; still the fall was not so rapid as to excite much attention, and though it was more marked during the 31st, it was not until afternoon that any alarm was felt. At that time, Mr. Lena, Assistant-Harbour-Master, went round the vessels in the bay, to see that they were properly moored, and warning them that the appearances were threatening. He directed the captain of the *Charles Wirgman* to lift his anchors to see if they were clear, which Capt. Osborne did. At a later hour a signal was made from the flag-staff that "the barometer indicates bad weather," but being dusk it is believed few observed it. Soon after it blew hard, and gradually increased until about two in the morning, when the storm reached its height, gradually subsiding till morning, though the squalls were still of great violence in the forenoon of the 1st. We subjoin a statement of the fall of the barometer as given by the Harbour Master. Other observers make the lowest point 28·14, and one gives 28·83, the difference probably depending upon the instruments. There is much variety of opinion whether this storm was attended with lightning or thunder. We have been assured by several gentlemen that about 3 A.M. there were several very vivid flashes, which rendered the whole bay visible, and the captain of a vessel lying near the Cowloon shore, heard a very loud peal of thunder about the same time, though from the noise of the tempest it was not audible on shore.*

31st August, 10h. P.M., barometer 29·28, N.E., 11h. P.M., 29·24, N.E., 11h. 50m. P.M., 29·10, N.E.

1st September, 1h. A.M., barometer 28·98, E.N.E., 2h. A.M., 28·94, E.N.E., 2h. 45m. A.M., 28·94, E.b.N., 3h. 15m. A.M., 28·98, E.b.N., 4h. A.M., 29·05, E., 5h. A.M., 29·15, S.E.b.S., 6h. 30m. A.M., 29·35, S.b.E.

* It seems generally imagined that during a typhoon there is no lightning or thunder, but this is a mistake; as we find the first typhoon of 1841 was ushered in by "heavy rain, fresh squall of wind, very vivid lightning, with loud thunder," as noted by Mr. Beale in a register kept at Macao.

Considerable damage has been suffered by many houses, but certainly much less than was generally expected to result from a typhoon. We are sorry the same statement cannot apply to the shipping, among which the loss both of life and property has been truly appalling.

STORMS OF THE ATLANTIC.

THE utility and importance of understanding the laws which govern our tempests are well exemplified in the following letter, received from Messrs. Blunt, from an intelligent officer in the navy. It relates to one of the violent gales of the present season, now understood to be the same hurricane which visited Antigua on the 22nd of August.

Boston, September 15th, 1848.

The U.S. ship *Marion*, bound from Gibraltar to Boston, at 8 o'clock, Friday evening, September 1st, was in lat. $42^{\circ} 40'$ N., and long. 42° W., under royals, with a fine steady breeze from the south, the sky perfectly clear, and the barometer standing at 29.95. It was, however, observed that the swell, which was considerable, was setting from the S.W. At 10 o'clock, P.M., the wind increasing, it became necessary to shorten sail, until, at midnight, the top-gallant sails, the main-sail, jib and spanker had been furled, and three reefs successively taken in the top-sails. At this time the barometer stood 29.85, with the sky still free from clouds of any description. At 2 A.M., September 2nd, the wind had increased, when the top-sails were close reefed; the ship, however, continued on her course, the clouds now commenced rising in the S.W., and scudding rapidly in a north-east direction. At 4 A.M., the barometer 29.80.

At daylight, there was every appearance of a strong gale, clouds in different strata were flying in different directions, the sea running higher and higher, and the barometer gradually falling. The ship was hove to on the larboard tack, under close reefed fore-sail, top-sails, main-trysail, mizen-storm-spanker, and fore-storm-staysail; head up to W.S.W., and off to west; the wind, consequently, at this period of the gale, was about S.S.E. [S.E. as corrected for variation.] At 8 A.M., it commenced raining, while the gale appeared on the increase, and during the forenoon, as there was every indication of its continuance, the ship was made as "snug" as possible, by sending down light yards, housing top-gallant masts, and furling the top-sails.

At noon, (Saturday, September 2nd, lat. $42^{\circ} 53'$, long. $43^{\circ} 40'$), the barometer stood 29.25, while the gale appeared to be gaining additional force from occasional squalls of wind and rain. At 12h. 30m. however, much to our surprise, the wind died completely away. The weather assumed a more favourable appearance, and the ship was left entirely without steerage way, and at the mercy of a most tremendous sea. This condition of things lasted about thirty minutes, during which time the barometer fell from 29.25, to 29.05, and then rapidly to its alarming minimum of 28.65.

At this time, a light air from the northward, enabled the ship to get her head around to southward and eastward, and a bank now rising in the N.W., gave evidence of a wind from that quarter; the main spencer was scarcely brailled up and the storm-spanker lowered, when the most terrific squall from the last mentioned direction struck us abaft the larboard beam, forcing the ship over until her lee quarter boat filled; the helm was of course immediately

put a-weather. The fore-storm-staysail was split by the first burst of this second and enlarged edition of our gale, but fortunately the fore-sail held, and through its influence the ship paid-off before the wind, in which position she was kept from 1h. 30m. till 4 P.M., scudding before it with an almost inconceivable velocity. At first, the ship had to meet the sea running from S.E., caused by the former direction of the wind, and right nobly did she perform her task, once or twice, indeed, burying her bowsprit, and flooding her fore-castle, but as often rising to her work with a buoyancy which fully sustained her character as an excellent sea vessel.

The force of the N.W. gale, however, soon brought a swell from that direction, which overpowered the old one; and thereafter we had the gale and the sea directly aft, while both one and the other seemed to rage with irresistible violence. Nothing was discernible fifty yards from the ship; the force of the wind rendered it impossible to stand upright in any exposed situation, and its terrific howlings drowned any efforts of the human voice, and thus it was providential that the ship was in the best possible condition to receive it.

As I have before mentioned, at 12h. 30m. the barometer stood at 28.65, and from this moment it commenced ascending steadily until at 3h. 30m. P.M., it stood again at 29.25, at which time we had evidently received the force of the storm. At 4h. 30m., barometer 29.70, when the wind had sufficiently abated to bring to on the starboard tack, under storm-sails. Through the following night the weather gradually improved, until about 7 o'clock on Sunday morning, we had comparatively a smooth sea, a light northerly breeze, and the barometer at 30.20, when all sail was made, and we again pointed her head as near homeward as possible; and felt that we had survived a gale whose violence the oldest seaman in the *Marion* declared they had never seen equalled.

I would not trouble you, gentlemen, with this imperfect account of a September gale, had I not been led in some degree to anticipate its approach, and subsequent direction from a previous and recent perusal of Redfield's theory of storms in your Coast Pilot. I will refer you to the 9th section on the 668th page of this work. You will have observed that we had the wind at S.S.E., accompanied latterly by rain, with a constant decline in the mercury of the barometer; this and the lull which then so suddenly ensued, led us to infer that we were in the "central portions" of the track of a storm, and consequently, to anticipate the most probable direction of the wind and its force; for which reason no more sail was made during the calm; and most fortunately indeed, for such seemed to me the violence of the gale, that had there been any more canvass, the masts must have gone by the board, or still more lamentable consequences have followed.

As Mr. Redfield had foretold, the wind came from the N.W. quarter, and for three hours blew rather with the peculiar fury of a hurricane, than the ordinary force of a gale; during which, in perfect accordance with the theory the barometer continued rising until it reached the former starting point 29.95. While yet blowing from the south-eastward, a "shore-going" bird of the snipe species, put on board of us in distress; at this time the nearest land was 500 miles distant in a northerly direction.

So strong and complete an illustration of a theory which evinces the deepest research, proves how beneficial are the studies of the philosopher in his closet to the practical navigator of the ocean; and while we can but express our gratitude to Mr. Redfield, for having learned from his theory that, which we were ignorant of from experience; we also most sincerely hope that all "homeward bound," like the *Marion*, have been enabled, from either one cause or the other, to escape with the same impunity. The limits of my

sheet forbid any apology for the infliction of this letter, but incidents as individually unimportant have gone to make up the sum of practical information contained in your valuable work; and thus, I hope that this also will be suffered to increase the stock of knowledge, as a single drop adds to the waters of the ocean.

Your obedient Servant,

R. W. SHUFELDT,
Acting-Master, U.S. ship Marion.

To Messrs. E. & G. W. Blunt.

Remarks on the above by Mr. Redfield.

The case exhibited in the foregoing letter, is one of the many in which our homeward-bound ships have run directly into the heart of a gale, or hurricane. It is always gratifying, however, to find that my attempted elucidations of these storms, and of the laws which govern them, as found in the American Coast Pilot, and elsewhere, have contributed in any degree to the safety of navigation. I may say, also, that these favourable results have been owing not so much to "studies in the closet" as to a direct investigation of the observations and experience of mariners and others, by carefully collecting and comparing such observations in their true geographical and consecutive relations.

Since I first brought this practical view of storms to public notice, several able inquirers have entered upon a similar course of investigation; such as Col. Reid, Mr. Milne, Mr. Piddington, and Dr. Thom; and their inquiries in various parts of the world, have led to similar results. In consequence of these labours, many valuable vessels have been saved from hazard and misfortune, and it has been conclusively shown that many others have received serious injury, or have been wholly lost, for want of suitable attention to the established laws which govern the great tempests.

A useful work on this subject by Mr. Piddington, of Calcutta, entitled "*The Sailor's Horn Book for the Law of Storms in all Parts of the World*," is now published by John Wiley, New York, which I doubt not will prove of great benefit to navigation. Col. Reid's work, entitled "*An Attempt to Develop the Law of Storms*," and Dr. Thom's, "*On the Nature and Courses of Storms in the Indian Ocean, south of the Equator*," both published in London, have been highly and justly commended; but, are not as well known to our navigators as a due regard to their interests and the credit of their profession would seem to require.

It is due to the interest of navigation to state, that if the winds in our great storms were directed to the centre of the gale, in the manner which has been represented by some, then when the *Marion's* gale began blowing from S.S.E., its calm centre or axis would already have been passing to the northward of the ship, while the latter in pursuing her westerly course would soon, instead of running into the heart of the gale, have been found departing most rapidly from it, and could have been in no danger whatever. If, to avoid this obvious conclusion, it shall be said that the storm was moving towards the south-east, such an allegation will prove wholly unfounded; for, from the Bahamas and coast of Florida, where this storm raged, between the 27th and 29th of August, it has been traced directly to the parallel in which it was encountered by the *Marion* and other vessels, where its direction of progress was about E.N.E. Like conditions will also hold true, as regards every tempest of which I have obtained knowledge.

I would take this occasion to caution our ship-masters against the hazards of heaving-to on the *larboard tack*, or of pushing to the westward, when in the *southerly side* of these gales. In these latitudes, when the fall of the barometer has given sufficient warning of the strength of the approaching tempest, the ship should be brought to on the *starboard tack*, (unless it is deemed necessary to run out of the gale to the S.E.) for, on this tack the ship will come up to the sea as the wind veers to the westward, and the heart of the gale will be avoided*. In the *northerly side* of the gale, if the ship is brought to, it should be on the *starboard tack*; for the changes of wind will be in the opposite direction. Scores of instances can be given of the value and necessity of these rules, which are founded on the actual progression and rotation of the storms.

W. C. REDFIELD.

NAUTICAL NOTICES.

The Commissioners of Northern Lighthouses hereby give notice that, in the course of the past season they have erected Beacons, and moored Buoys on various parts of the coast; the position and appearance of which are specified by the Engineer to the Board, as follows:—

MORAY FRITH DISTRICT.—*Whiteness Buoy, on North edge of Bank, East of Fort George.*—12 feet, Buoy with conical top, Red, 8 fathoms. Broomhill Farmhouse, at foot of wood on hill, above Rosemarkie, in line with Rosemarkie Manse—bearing W.b.N. $\frac{1}{4}$ W. Buoy on West end of Riff Bank—bearing W.N.W. $\frac{1}{4}$ W. Fairway Mast Buoy, on East end of Riff Bank—bearing E.N.E. $\frac{1}{4}$ N. Notch, on the Western slope of Ord Hill, in line with clump of poplar trees at Dumbie Farmhouse—bearing S.S.E. $\frac{3}{4}$ S.

N.B.—The Buoy has been substituted for the Beacon formerly advertised.

ORKNEY DISTRICT.—*Crockness Shoal Buoy, Longhope.*—7 feet Buoy, Black, $3\frac{1}{2}$ fathoms. Crockness Mortella Tower, in line with North end of a cottage near it—bearing N.W.b.N. South Point of Fara Isle, in line with Hollow, at West end of Wydeford Hill—bearing N.E. $\frac{3}{4}$ E. West end of Switha Isle, S.S.E. $\frac{1}{4}$ S. East side of Hackness Mortella Tower, in line with angle of Stone Fence—bearing S. $\frac{1}{2}$ E. Manse of Walls, in line with cottage at Ship's Watering Place—bearing W.S.W. $\frac{3}{4}$ S.

Nevaholm Beacon, off Panhope, Flota Isle.—Cone of iron plates, with cornice on top, Black, dry at low water. Hoxahead, South Ronaldsay—bearing S.b.W. $\frac{1}{2}$ W. Stangahead, Flota—bearing S.W.b.W. Calf of Flota—bearing N.N.W. $\frac{1}{4}$ W. Spire of St. Magnus' Cathedral Church, Kirkwall—bearing N.E. Hundahead, off Burra—bearing E. $\frac{1}{2}$ S.

The Grinds Buoy, off Hunda Isle.—8 feet Buoy, Black, 5 fathoms. High water mark, North end of Hunda Isle, in line with Ware Bank's Farmhouses, in Burra Isle—bearing E.b.S. $\frac{1}{2}$ S. West end of T. Laughton's House, in line with East end of Park Cottage—bearing S.E. Hoxa Head—bearing S.W.b.S. $\frac{3}{4}$ W. Nevaholm Beacon—bearing W.b.S. $\frac{3}{4}$ W. Roza Head, in line with black cottage in Flota Isle—bearing W. $\frac{1}{2}$ N. Houston House, in line with Hollow on Hill behind it—bearing N.W.b.N. $\frac{1}{4}$ N. St. Magnus' Cathedral Church, Kirkwall—bearing N.E. $\frac{1}{4}$ N.

Lappa Rock Buoy, in Water Sound.—8 feet Buoy, Black, 3 fathoms. Gable of Brechen's Cottage on hill, in line with Quoy's Bank Cottage on

* See a short article published by Mr. G. W. Blunt, on "heaving-to."

shore, in South Ronaldsay—bearing W. $\frac{1}{4}$ N. Flagstaff on Cara Storehouse—bearing N.W.b.W. Eastern Chimney of Scarpoë Cottage, in Burra—bearing N.E. $\frac{1}{4}$ N. Isle of Horse of Copinsha—bearing E. $\frac{1}{2}$ N. East Chimney of Romney Cottage, in South Ronaldsay—bearing S.

N.B.—The Buoy lies on the south side of the Rock.

Glimsholme Skerry Beacon, in Holm Sound.—Pyramid of iron pillars, with cylindric open cage, Red, dry at low water. Seaward Beacon, Pict's Burying Ground, Laman Isle—bearing N.N.E. $\frac{3}{4}$ E. Roseness Cairn—bearing S.E.b.E. $\frac{3}{4}$ S. East Chimney, Northfield Farm—bearing S. $\frac{1}{4}$ W. East end of Cooperage House, at Ware Banks, Isle of Burra—bearing S.W.b.W. $\frac{1}{4}$ W. Moncrieff Farmhouse, Houton—bearing N.W.b.W. $\frac{1}{4}$ N.

N.B.—Glimsholme Skerry extends about a cable's length and a half to the East of the Beacon.

Cubsay Rock Buoy, in Holm Sound.—7 feet Buoy, Black, $3\frac{1}{2}$ fathoms. East end of Northfield Farmhouse; bearing W. $\frac{3}{4}$ N. Glimsholme Skerry Beacon—bearing N.W.b.W. $\frac{3}{4}$ W. Secession Church of Holme, in line with East end of Vigo Farmhouse—bearing N.b.E. $\frac{1}{4}$ N. West end of Holme Manse—bearing E. $\frac{3}{4}$ N. Roseness Point—bearing S.S.E. $\frac{1}{4}$ S.

Peter's Skerries Buoy, Houton.—7 feet Buoy, Black, $3\frac{1}{2}$ fathoms. Orry Kirk Farmhouse, North end, in line with Scaradale Farmhouse—bearing E. Farmhouse in Hoy, its own length clear of Greenhead Point—bearing S.S.W. $\frac{1}{4}$ S. Mrs. Polloxfen's House, near Stromness—bearing N. $\frac{3}{4}$ W. Houton Head—bearing S.S.E. $\frac{1}{4}$ E.

Stromness Harbour Buoy.—6 feet Buoy, Black, 3 fathoms. Window in old windmill on Holme of Stromness—bearing E. $\frac{1}{2}$ N. Cottage on Graemsay Isle, in line with Sandside House—bearing S. $\frac{3}{4}$ W. Kame of Hoy—bearing W. $\frac{3}{4}$ S. Stromness Free Church Manse, in line with Stromness School House—bearing N. $\frac{3}{4}$ W.

Langaskerry, off Shapinsha Isle, Buoy.—7 feet Buoy, Black, 4 fathoms. Cairn, on hill top in Shapinsha Isle—bearing S.E. $\frac{1}{2}$ S. St. Magnus Cathedral Church, Kirkwall—bearing S.S.W. $\frac{1}{4}$ W. House at base of Wydeford Hill, in centre—bearing S.W.b.W. $\frac{1}{4}$ W. Rendall Manse, in line with Breke House—bearing N.b.W. $\frac{1}{2}$ W. South end of Egilsha Isle, in line with Ness of Gairsa—bearing N.E. $\frac{3}{4}$ N.

Sunk Rock in Otterswick Bay, Buoy.—7 feet Buoy, Black, 3 fathoms. West gable of Purgistor Farmhouse, in Sanda Isle, in line with East chimney of Wearon Cottage—bearing S. Saville Green Windmill—bearing S.W.b.W. $\frac{1}{4}$ W. Burness Windmill—bearing W.N.W. $\frac{1}{4}$ W. Bridesness Point, North Ronaldsay Isle—bearing E.N.E. $\frac{1}{4}$ E. Roseness Windmill—bearing S.E.b.S. $\frac{1}{4}$ S. Start Point Lighthouse—bearing S.E.

N.B.—The Fairway is on the East side of the Buoy.

ZETLAND DISTRICT.—*North Shoal Entrance to Lerwick, Buoy.*—7 feet Buoy, Black, $2\frac{1}{2}$ fathoms. End of Northness House, Mainland, in line with East end of Hillhead Farmhouse—bearing S.b.W. $\frac{1}{2}$ S. North end of Gremister House, in line with Booth of Gremister—bearing N.W. $\frac{1}{2}$ N. Hagan Fishing house, Bressay—bearing N.E. Ruined Booth of Ormister, in line with Bressay School-house—bearing S.E.b.S. $\frac{1}{4}$ S.

North Entrance to Baltu Sound, Buoy.—7 feet Buoy, Black, $4\frac{1}{2}$ fathoms. Swenee Point—bearing E.N.E. $\frac{1}{4}$ E. Sheepfold, in middle of Centre Hill of Balta—bearing S.S.E. $\frac{3}{4}$ S. Survey-Cairn, in line with Scarpoë Cottages, in Unst Isle—bearing W. Midgarth House, in Unst—bearing N.W.b.N. $\frac{1}{2}$ N.

MINSH DISTRICT.—*Skernamule Reef Beacon, off Fladdahuan Isle.*—Pyramid of iron pillars, with open cylindric cage, and a cross rising to the height of about 50 feet above high-water; Red, Rock dry at low-water.

Island Glass Lighthouse—bearing N.W.b.N. $\frac{3}{4}$ N. Rock off Wirrey (Shiant Isles)—bearing N.E.b.N. $\frac{1}{2}$ E. Pile on Trodda Isle—bearing S.E. $\frac{3}{4}$ S. Highest point of Yesker Rock—bearing S.W. $\frac{1}{2}$ W. Pile on Woolmore Islet—bearing S.W.b.W. $\frac{3}{4}$ W. North-west end of Fladdahuan Island—bearing W.N.W. $\frac{1}{4}$ N.

Skerinoe Reef Buoy, off Island Glass Lighthouse.—21 feet Buoy, Black, 12 fathoms. Island Glass Lighthouse Tower—bearing N.W.b.N. Isle of Galtimore, northernmost of Shiant Isles—bearing E.b.N. $\frac{3}{4}$ E. Woolmore Isle, off Skye—bearing S. $\frac{3}{4}$ E.

N.B.—The Buoy lies S.E. $\frac{3}{4}$ E. from the shoalest point of Skerinoe Reef.

SOUND OF SKYE DISTRICT.—*String Rock Buoy, off Castle Moyle.*—7 feet Buoy, Black, 2 $\frac{1}{2}$ fathoms. Eastern Chimney of Kyle House—bearing N.N.E. $\frac{3}{4}$ N. The tree on north side of the Sound, in line with the Northern Point of the Black Isle—bearing N.E. $\frac{1}{4}$ E. North Angle of Castle Moyle Ruins—bearing W. $\frac{1}{2}$ N. Duncanne Hill, Raza Isle, in line with Middle of the Blind Sound of Kylakin—bearing N.N.W. $\frac{1}{2}$ W.

Bow Rock, Southern Entrance to Sound of Skye Buoy.—12 feet Buoy, Black, 3 $\frac{1}{2}$ fathoms. Cliff under Dr. Mackinnon's House, Kylakin—bearing S.E. $\frac{1}{2}$ E. Mackinnon of Corrie's House—bearing W.b.N. Duncanne Hill, in Raza—bearing N.N.W. $\frac{1}{2}$ W. Tuscaig Point in Applecross—bearing N.b.E.

SOUND OF MULL.—*New Rock Buoy, off Entrance to Tobermory.*—7 feet Buoy, Black, 2 $\frac{1}{2}$ fathoms. Cairn on Eray Point, north-west from Tobermory Bay—bearing W.S.W. $\frac{1}{2}$ W. Point of Ardnamurchan Land—bearing N.W. $\frac{3}{4}$ N. Mingarry Castle—bearing N. $\frac{3}{4}$ E. Clump of trees at Ardsligonach Farm-house—bearing E.b.N. $\frac{1}{4}$ N. Roman Catholic Chapel at Drimnin—bearing S.S.E. $\frac{3}{4}$ S.

FRITH OF CLYDE DISTRICT.—*Patterson's Rock Buoy off Sanna Island.*—15 feet Buoy, with Mast and Ball Black, 13 fathoms. Ship of Sanna Rock—bearing W.b.N. Cairn on Gluinamore Island—bearing N.W.b.N. $\frac{1}{2}$ N. Point on the Land towards Campbeltou—bearing N.E.b.N. $\frac{3}{4}$ E. Top of Ailsa Craig—bearing S.E.b E. $\frac{1}{4}$ S.

The Commissioners hereby further give Notice, that no duty is exigible from Shipping in respect of these Beacons or Buoys.

By order of the Board,

ALEX. CUNINGHAM, *Secretary.*

Office of Lighthouse Board, Edinburgh, Nov. 1, 1848.

CAY WEST, November 5th. — About a month since, a meeting of the citizens was called for the purpose of taking into consideration the best course to be adopted for amending the present pilot laws of this port, which resulted in a resolution to petition the legislature (which meets next month) for so amending the law, to allow all vessels, bound or passing through this place, to do so free of any charges of pilotage, whether spoken or not, unless a pilot's services are required by the master.

This will be a great advantage to the place, as many vessels were prevented from calling here, owing to the probability of having pilotage to pay. There is no doubt but that this law will be so amended, as at least four-fifths of the citizens are in favour of it.

The lighthouse on Sand Cay is not yet rebuilt, and no probability of its being done, although much needed.

The works on the fort here, and at Tortugas, are rapidly progressing.

NARROW ESCAPE OF THE FRENCH SHIP-OF-THE-LINE "FRIEDLAND."

The French three-decker *Friedland*, 130; and *Inflexible*, two-decker, 90, the former bearing Admiral Baudin and his flag, left Naples for the winter anchorage at Baico on the 14th of November, and arrived on the same day. The *Friedland*, in working up to the anchorage, narrowly escaped getting stranded on a reef of rocks, not laid down in the chart of the bay, and unknown to the Neapolitan pilot, who was on board. Fortunately, the English line-of-battle-ship *Vengeance*, 84, was lying at the anchorage, and immediately dispatched the master of that ship, an officer of age and experience, to point out and warn them of their impending destruction. This officer (Mr. R. Salmon), saw from his ship that the French ship was standing into danger, asked for a boat, and started off immediately, waving with all his might, and hailing to draw their attention on board to "go about;" but it appeared of no use, and even when he got alongside the ship they said they had a "branch pilot, on board, and 7 fathoms water under them.

Luckily for them Admiral Baudin, hearing the altercation, came out of his cabin and inquired the cause, which being explained by Mr. Salmon, as well as he could, not being a good French speaker, the Admiral followed, by orders, Mr. Salmon's gestures, laid all the yards aback, hauled down the jibs, &c., which enabled the ship to clear the rocks, which Mr. Salmon had shown the position of to the Admiral, by touching and sounding them with an oar. He then went on board the ship, and anchored her safely; receiving the grateful thanks of the French Admiral and officers.

These are the same rocks on which H.M.S. *Rodney*, 90 guns, nearly got on, and have only from three to twelve feet of water over them, situated at the start of Pozzicali Bay, and laid down in the old charts as the Fremosa Rock. The reef is composed of, at least, eight separate and detached rocks.

THE LATE HEROISM OF MISS ARNOLD.—The following circumstantial account of the intrepid conduct of Miss Arnold, before alluded to, has been addressed to the editor of the *Madras Spectator* by Capt. Biden:—"Mr. Editor,—The following remarkable and most exciting narrative cannot fail to be interesting to the public, and should it ever meet the eye of that dear young lady to whom it relates, I am confident the grateful mention here made of her naval guardians, together with her own amiable and generous disposition, will induce a free pardon for the liberty I have taken, thus proclaiming to the community at large the relation of events pre-eminently worthy of the highest testimonial.

Imprimis.—The *Rainbow*, from Southampton to Aden, arrived there about the 16th ult.; Mr. Arnold, her late commander, died ten days before the ship reached that port, and the chief mate was so habituated to drunkenness that he had been confined to his cabin several times during the passage. The master's daughter, about sixteen years of age, was on board, and after her father's death, the second mate, who had assumed the command, made a daring and insidious attempt to entice the young lady and run away with the ship. She indignantly and successfully repelled all his base and dastardly attempts, and although suffering under a painful bereavement, she at once rushed on the quarter-deck and made a public appeal to the ship's crew as British seamen, and threw herself on their protection. This well-judged resolution had the desired effect. The seamen (except two of their number, who were led away by the second mate,) declared, with that manly feeling which

sailors have so often displayed, that they would to a man protect her from all harm, and told the second mate and their misguided shipmates, in very plain terms, that if he dared to take the slightest liberty with their late commander's daughter, they would pitch him overboard, and any one else who dared follow his example would share the same fate. Miss Arnold then, with great presence of mind, begged the ship's company would grant her one special favour: her character, her manners, and the well-timed appeal which she had already made, induced the crew to declare their assent to any favour she might ask. She then said that the safety of the ship and her own security from insult could only be insured by throwing overboard, that instant, every drop of spirits in the ship. Without hesitation the ship's company consented, and, losing no time for reflection, they forthwith got the spirits on deck and threw every drop overboard.

From that time Miss Arnold had her screened cot secured near the wheel and kept alongside the binnacle, and three of the crew kept a faithful watch around her during the remainder of the voyage. These faithful guardians of one of our beloved country-women never failed to evince the utmost respect, and preserve the most rigid decorum, honourable in every point of view to themselves, and to that charge which they had pledged themselves to undertake. Miss Arnold wrote a statement of all these occurrences, and forwarded it to Capt. Haines, on the ship's arrival, when the second mate and the disaffected men were immediately arrested and sent to prison. The chief mate had indulged himself to such an excess, that after the master's death, and the absence of all means of resort to his favourite stimulants, he was perfectly useless. Miss Arnold has been well educated, and is an amiable, unaffected person; her strength of mind and energy of deportment need no further comment. She became the welcome guest of Capt. Thomas, at Aden, and every possible attention was shown to this noble-minded lady by the whole society there. Her dignified and virtuous conduct is beyond all praise, and is well worthy the highest honour and reward which can possibly be bestowed, whilst the exemplary conduct of the *Rainbow's* devoted crew is deserving of every encomium. I shall endeavour to obtain their names, and they may one and all rely on my endeavours to serve them, should either or the whole of them fall in my way. I am, Mr. Editor, your obedient servant, CHRIS. BIDEN.
—Madras, October 18, 1848.

Subsequent to Miss Arnold's charge against the second mate, Capt. Haines applied to her for a circumstantial statement of all that occurred on board the *Rainbow* after her father's death. Miss A. complied with his request immediately, and her narrative was so well and ably written that it excited admiration on all sides. At her solicitation her father's remains were preserved in a cask of spirits, and buried at Aden the day after the ship's arrival. She had always kept his accounts; the second mate navigated the ship, but several of the crew knew the proper course to Aden, and all his proceedings were narrowly watched.

[We should be glad to publish the names of these noble fellows in a future number, if Capt. Biden will send them to us, and we hope that their conduct will not go unrewarded. Such men as they are should never want a ship, and a good berth in her too.—ED. N.M.]

STEAM TO AUSTRALIA.—The beginning of the year 1849, which is now fast approaching, will be distinguished in the history of this country as the period when a steam communication by way of Egypt and India was established between Great Britain and our vast colonies in Australasia. For some months past powerful, and well appointed steamers have been leaving Southampton Water, and wending their way to the Indian ocean, prepared to convey, or to

supply the place of those which may be appointed to convey mails between Singapore and New South Wales. The gradual progress and extension of steam navigation in the East, from Egypt to India and from India to China, almost prevent us from estimating the magnificent enterprise which is now about to be completed. In five week's time the government will have entered into contract, probably with one single steam navigation company, for the conveyance of mails eastward for upwards of twelve hundred miles. Very shortly a letter posted in England will be delivered in about two months afterwards at the Antipodes. The ends of the earth may then be said to be united, and the most distant countries known or dreamt of by the ancient world will only be as resting places for travellers during a rapid flight around the globe.

When the extent and unrivalled fertility of Australia is considered, as well as the suitability of its climate for Englishmen, and the almost exclusive possession of its territory by the English nation, one cannot avoid looking to that country mainly for relief from the overwhelming increase of our population. The establishment, therefore, of a rapid postal communication between the two countries is a matter of primary and immeasurable importance, and, when accomplished, must be attended with beneficial results.

It is the want of this, in a great measure, that has hitherto limited the number of emigrants to Australia, and confined emigration to those colonies, in a considerable degree, to the lowest portion of the working classes. Hitherto, the long and irregular period occupied in the transmission of correspondence between this country and our most distant possessions, has discouraged those from emigrating whose affections have not been blunted by want or poverty. They have known that they would be perpetually harassed by fear and anxiety about friends and relatives from whom they were separated. But when a postal communication, rapid, frequent, and regular, is established, distance from friends will not be so severely felt. The poorest classes also, finding those above their own rank whom they have known in this country disposed to emigrate and to whom they could look up to in a distant land for either employment, assistance, or protection, will be less unwilling than they now are to leave a place, where both food and labour are scarce, for a spot where they are abundant.

Persons of rank, wealth, and influence will shortly be enabled to visit our most distant colonies, and contribute also in some degree to lessen the dislike of emigration. The comforts and luxuries enjoyed on board large and well appointed steamers induce wealthy individuals to extend their travels, and in a short time hence persons possessed of money and leisure will be able to pass by the shores of India and China, to view the wonders of another hemisphere, without consuming more time or experiencing greater inconvenience than used to be occupied and felt in a summer cruise to the Mediterranean.

In a few weeks two lines of steam navigation will be found branching off east and west from this country. The one to the east will, by means of a branch steamer from Sydney, extend from Southampton to New Zealand, and the other to the west, extending also from Southampton through the Mexican Gulf to the borders of the Pacific Ocean; and at no distant day perhaps an ocean pathway will be formed which will extend around the globe; and be only broken by the Isthmus of Suez and that of Panama.

It is consolatory to reflect that, while other nations are fighting for social existence and preventing an excess of population by fratricidal war, we are bridging over the immensity of the ocean to encourage clamorous and discontented multitudes to fly to a land of exuberant plenty; and that, instead of slaughtering men at the barricades, we are enabling them to build up a mighty empire in a distant land, in which they can enjoy every political and social blessing.—*Daily News*.

STEAM STATISTICS.—The following table may be serviceable to those engaged in steam affairs. It is the first of a series of passages performed by the *Terrible*, the tonnage of which vessel is 1847, her armament seven 56-pounders of 95 cwt. each, and twelve 8-inch guns of 65 cwt. each.

EXAMINATION OF MASTERS AND MATES.

A List of all the Masters and Mates in the Merchant Service, who have voluntarily passed an Examination, and obtained Certificates of Qualification for the Class against each assigned, under the Regulations issued by the Board of Trade, between the 29th of August, and the 31st of October.

* Mate.—† Seaman.—‡ Acting Master.

Name of Party who has received the Certificate.	Class of Certificate.	Age.	Present or last previous Service.	No. of Register Ticket.	Where Examined.	When.
						1848.
A. Johnston	2nd	28	Tropic, 380 tons*	388612	London	Aug. 29th
J. Hetherington	3rd	31	Amphitrite, 273* tons	97842	S. Shields	Sept. 1st
W. Ford	1st	40	Malcolm Brown 300tns		Plymouth	— 1st
W. R. Metcalfe	2nd	33	Scourfield, 329 tons*...	135997	London	— th
J. Sayre	2nd	22	Nebudda, †	287495	London	— 4th
S. M. Weeks jr.	3rd	35	Louisa Maria, 186 tons		London	— 4th
R. Kilgour	2nd	32	Diamond, 600 tons* ...		London	— 7th
H. Dring	2nd	31	Lusitania, 175 tons ...		London	— 7th
E. Faulkner	2nd	35	Harrison Chilton,* 450	14863	Newcastle	— 9th
G. Wigg	2nd	26	Caroline, 378 tons* ...	33288	London	— 11th
G. Mitchell	2nd	33	Duchess of Northumberland, 541 tons	25772	London	— 11th
E. Fittock	2nd	21	Vectis, 210 tons*	1900	London	— 11th
A. Sinclair	2nd	28	Duke Richmond 407*	87535	London	— 11th
G. Holland	2nd	35	Beaver, 100 tons†		London	— 11th
J. W. Young	1st	28	Lily, †		London	— 12th
B. Frynn	2nd	27	Calcutta, 389 tons.....		London	— 12th
G. H. Heaton	3rd	34	Thomas Arbutnot 621		London	— 14th
H. R. Cumming	2nd	38	Caledonia, 445 tons ...		London	— 14th
J. Heaton	2nd	29	Belle Creole, 269 tons		London	— 14th
D. C. Miller	2nd	26	Mariner, 449 tons	34316	London	— 14th
J. R. M'Dowell	2nd	26	Jane, 508 tons	16192	London	— 14th
A. S. Molison	3rd	46	Blenheim, 108 tons ...		London	— 14th
J. H. Jellicoe	1st	23	Lec, 120 tons	54979	Portsmouth	— 16th
J. W. Usher	2nd	33	Lord Auckland, 628*	325538	London	— 16th
T. Bacon	3rd	55	Theresa, 500 tons.....		London	— 16th
T. M. Tilby	2nd	40	Dale Park, 402 tons...		London	— 18th
H. Harris	2nd	35	Amphitrite, 174 tons		London	— 19th
W. P. Cranch	2nd	35	Japan, 359 tons*	389294	London	— 19th
P. Smith	2nd	46	Moffatt, 822*		Plymouth	— 19th
J. Henderson	2nd	53	Neptune, 643 tons.....		London	— 21st
E. Ella	2nd	29	Walmer Castle, 656 *	27772	London	— 21st
J. B. Berger	2nd	35	Mary Campbell, 415...	391571	London	— 21st
V. M. Sampson	2nd	37	Harbinger, 751		London	— 21st
G. Williams	3rd	25	Jane, 328 tons*	25863	London	— 21st
J. H. Ramsey	2nd	33	Brothers, 60 tons	270192	Newcastle	— 22nd
J. Dodds	3rd	48	Wear Packet, 212 tons		S. Shields	— 25th
B. Roberts	2nd	28	Pacha, 650 tons*	75907	London	— 25th
J. T. Ryder	2nd	38	Saint George, 605 tns*	4792	London	— 25th
W. C. Dally	3rd	34	Alert, 394 tons*.....	30580	London	— 25th
H. C. Loney	3rd	28	Princess Royal, 564 tns	31906	London	— 25th
C. A. Warming	3rd	48	Bathurst, 531 tons.....		London	— 26th
H. Biles	2nd	29	Tartar, 567 tons*	19145	London	— 28th
E. C. Griffin	2nd	33	Eleanor, 350 tons* ...	30954	London	— 28th
W. H. Frynn	2nd	24	Sir Char. Forbes, 364	9615	London	— 28th

J. W. Loft	2nd	27	Fortitude, 196 tons*...	391664	London	Sept. 28th
W. H. Roberts	2nd	31	Euxine, 729 tons*.....	144089	London	— 28th
W. Smith	2nd	27	Marmora, 321 tons*.....	.....	S. Shields	— 28th
R. Brown	2nd	25	Thoburn, 287 tons*....	.....	S. Shields	— 29th
W. J. Green	2nd	34	Ann Armstrong, 900*	185083	Newcastle	— 29th
F. Erwin	2nd	31	Elizabeth, 445 tons*....	84586	Plymouth	— 29th
G. Shadrake	2nd	27	Vere, 308 tons*.....	24794	London	Oct. 2nd
T. Smith	2nd	34	L. Kath. Barham, 321*	6100	London	— 2nd
W. R. Boyle	2nd	33	Ocean Bride, 386 tons*	539	London	— 2nd
J. J. Driver	2nd	23	Gilb. Munro, 258 tons*	178793	London	— 2nd
W. Hyslop	2nd	29	Inchinnan, 565 tons*	12528	London	— 2nd
T. W. Herbert	2nd	26	Albion, 180 tons*.....	28288	London	— 2nd
D. Morrice	3rd	31	Walter Morrice, 666tn	.....	London	— 2nd
H. S. Harris	3rd	27	Manchester, 600 tons	377140	London	— 2nd
W. P. Stevenson	3rd	32	Ann, 665 tons.....	.....	London	— 2nd
K. Macauley	1st	43	Mary, 695 tons.....	.....	Liverpool	— 3rd
S. P. Webber	2nd	32	Ellen, 301 tons*.....	24055	London	— 3rd
J. H. M. Starcich	2nd	37	Neptune, 643 tons*....	32392	London	— 3rd
G. Embleton	2nd	31	Lord Dufferin*.....	54126	S. Shields	— 4th
A. Stuart	2nd	36	Dismond, 563 tons....	.....	London	— 5th
J. Corcoran	2nd	25	Cadet, 465 tons*.....	324400	London	— 5th
E. Johnson	3rd	24	Ameer, 496 tons*.....	434121	London	— 5th
T. F. Haines	2nd	26	Steadfast, 540 tons*....	261529	London	— 6th
R. Gray	2nd	29	Dona Carmelita, 286 tn	27526	London	— 6th
R. Hall	2nd	30	Punjab, 576 tons.....	.....	London	— 6th
J. Byron	3rd	40	William Wise, 329 tns	.....	London	— 6th
W. Tapper	3rd	35	Thetis, 575 tons*.....	30956	London	— 6th
A. Findlay	3rd	37	Walter Morrice, 666*	180215	London	— 6th
I. C. Gales	2nd	40	Jane, 328 tons*.....	.....	London	— 9th
W. Pattle	2nd	24	Sir G. Seymour, 724*	344790	London	— 9th
J. Morton	2nd	47	Indus, 200 tons.....	23124	London	— 9th
W. Ryan	2nd	45	Elizab. & Henry, 534*	245246	London	— 9th
J. Dodds	3rd	32	Thetis 575 tons.....	.....	London	— 9th
T. Grant	3rd	39	Mary, 533 tons.....	.....	London	— 9th
T. Cunningham	1st	25	Romance, 316 tons*....	261169	Glasgow	— 10th
L. Morice	2nd	38	Harpooner, 405 tons....	.....	London	— 10th
J. Mackintosh	2nd	30	Ratcliff, 739 tons*....	21497	London	— 12tn
T. Martin	2nd	33	New Express, 306 tons	28000	London	— 12th
F. B. Sladden	2nd	23	Reindeer, 750 tons*....	28274	London	— 12th
D. Peace	2nd	28	Orpheus, 391 tons*....	388242	London	— 12th
G. Killick	2nd	36	William Forster, 175tn	.....	London	— 12th
H. Allan	2nd	30	Demerara, 213 tons....	.....	Glasgow	— 13th
W. Walker	2nd	30	Mary Wyllie, 130 tons	.....	Glasgow	— 13th
R. Kirby	1st	29	Emetje, 103 tons.....	.....	Newcastle	— 14th
J. Colford	2nd	45	Creole, 234 tons.....	.....	London	— 16th
T. W. Thompson	2nd	41	Harpooner, 405 tons*	.....	London	— 16th
J. Higgs	3rd	27	Clara, 307 tons*.....	156948	London	— 16th
R. Ashbee	3rd	26	Mary, 533 tons*.....	1592	London	— 16th
P. Polson	3rd	29	Times, 251 tons.....	.....	London	— 16th
T. Spencer	3rd	36	Steadfast, 535 tons....	.....	London	— 16th
A. Taylor	3rd	29	Inchinnan, 565 tons*	9302	London	— 16th
J. Keough	3rd	31	Bathurst, 531 tons*....	246150	London	— 16th
J. Southeron	2nd	24	Loyal Standard, 191*	80183	S. Shields	— 17th
W. H. P. Hains	1st	25	Lalla Rookh, 372 tons	211426	London	— 19th
R. Turnbull	2nd	37	Ameer, 459 tons.....	.....	London	— 19th
G. Goodbourn	2nd	36	Gibraltar, 275 tons....	.....	London	— 19th
W. Crisp	2nd	23	Orpheus, 391 tons*....	327015	London	— 19th

						1848.
T. Ashmead	3rd	24	Messenger, 330 tons*	218784	London	Oct. 19th
J. H. Wilson	1st	26	Ann Emma, 265 tons	.....	Newcastle	— 19th
G. Briar		46	Palestine, 359 tons	.....	Leith	— 19th
S. E. Jane	2nd	33	Galway Lass, 224 tons	.....	London	— 23rd
T. R. Mason	2nd	26	Whitby, 447 tons	434000	London	— 23rd
J. Nicholson	2nd	45	Sultana, 723 tons	.....	London	— 23rd
R. O. Alpton	3rd	29	Saint Vincent, 628 tn*	325821	London	— 23rd
T. R. Butler	3rd	22	Sm. Enderby, 395 tns*	31453	London	— 23rd
J. Chellew	3rd	28	Panope, 117 tons	47933	London	— 23rd
T. F. Hunt	2nd	36	Charles Brooke, 295 tn	.....	London	— 24th
J. W. Brown	2nd	22	Saint Vincent, 629 tn*	324523	London	— 24th
J. G. Carter	2nd	30	Lord Hungerford, 786*	34105	London	— 26th
W. C. Cole	2nd	36	Nan. Dawson, 164 tns*	17556	London	— 26th
M. Megget	2nd	29	Anne Amelia, 45 tons	.....	London	— 26th
C. Packe	3rd	22	Minerva, 1300 tons*	345701	London	— 26th
G. Ford	3rd	52	Amity Hall, 420 tons	.....	London	— 26th
B. Bearne	3rd	34	Elizabeth, 445 tons*	55486	London	— 26th
J. B. Thomson	2nd	27	East London, 410 tons	.....	London	— 26th
C. Williamson	2nd	26	Pilgrim, 181 tons*	16531	S. Shields	— 28th
C. Jameson	2nd	36	Wandering Shepherd	.....	S. Shields	— 28th
C. G. Gentil	3rd	22	Timandra 432 tons*	22094	London	— 30th
R. W. Evans	2nd	34	Tagus, 497 tons.....	.....	London	— 31st

MATES.

						1848.
J. C. Gilbert	2nd	21	Maitland, 648 tons	22552	London	Sept. 4th
D. Bowen	3rd	28	Harrison Chilton, 452	27133	London	— 4th
G. E. Drew	3rd	28	T. & J. Crisp, 371 tons	324734	London	— 5th
J. Fisher	2nd	20	Morayshire, 316 tons†	19981	London	— 11th
T. H. Perrins	3rd	21	J. & T. Foord, 790 tons	34628	London	— 12th
J. Nicolle	3rd	27	Tuscan, 181 tons	178047	London	— 14th
H. A. Living	3rd	22	Elizabeth, 569 tons†...	15869	London	— 21st
J. Porter	2nd	21	Baboo, 423 tons.....	91060	Glasgow	— 21st
B. Oakley	2nd	20	George Anson, 159 tons	10555	London	— 28th
G. Lowe	2nd	20	Eliza, 314 tons	14063	London	Oct. 2nd
T. Harrison	2nd	21	Scourfield, 329 tons	18455	London	— 2nd
T. Flint	3rd	31	Justina, 600 tons	33893	London	— 9th
J. T. Jarman	2nd	21	Kath. Stewart Forbes,	27350	London	— 12th
C. Haines	2nd	23	Mercury, 243 tons	30319	London	— 12th
R. Barter	3rd	37	Ealing Grove, 351 tons	21462	London	— 12th
W. B. Salmon	2nd	22	Cairo, 335 tons	22561	London	— 19th
C. Cheswright	2nd	20	Caroline, 336 tons.....	12680	London	— 23rd
J. Winkley	2nd	23	Cato, 265 tons	14340	London	— 26th
W. C. Shruballs	2nd	21	Aug. Jessie, 380 tons†	336141	London	— 30th

THE LIVERPOOL EXAMINATION.

Liverpool, 16th December, 1848.

SIR.—Stimulated probably by the article in your Magazine of last month, relative to the examination of Masters and Mates in Liverpool, such examinations have now been actively resumed, although no salaried scientific

examiner has been appointed; but Mr. Dobie, the Secretary, sends every one for examination to Mr. Monteath, thus, virtually and apparently on his own responsibility, superseding Mr. Livingston, and has declared, "*he will never let another person be sent, if he can help it, to him, but the Board may do as it likes.*" The article in your Magazine, as I understand, being his assigned reason for his hostility to Mr. Livingston.

In addition to the *case* stated in your October Magazine, another may be mentioned of a gentleman having been passed entirely without any scientific examination, and on this being remarked, the person who spoke of it was requested "*to say nothing about it.*" This was shortly after the examinations were first carried on here.

I have heard of a late gentleman, deeply interested in Sierra Leone affairs: writing to a friend, "*We must save Government the trouble of thinking,*" and it really seems to me as if Mr. Dobie was willing to save the Board, of which he is Secretary, from any troublesome exertion of their mental faculties.

Mr. Mitchell, it seems, is highly indignant, and says he will never sit at the same Board with Mr. Livingston.

It is to be hoped the Board of Trade will take cognizance of the whole affair; and, in some way, prevent jobbing for an individual benefit, or partial decisions as to qualifications.

Surely there ought to be different classes for seamanship, as well as for Navigation, &c., as many may be first-class seamen, but poor navigators, and *vice versa*.

ANON.

To the Editor N.M.

THE AMERICAN FRIGATE "ST. LAWRENCE."—The visit of this ship to Southampton has occasioned that display of christian feeling towards our American neighbours in the persons of her captain and officers, which might have been expected; such we are happy to say as tends to cement that union which should exist between two civilized nations. There have been proper doings, therefore, at Southampton, and we regret that we cannot preserve any more vestige of them than the following speech of Capt. Paulding, from which, however, the character of the rest may be fairly inferred —

Captain Paulding rose amidst tremendous applause, and replied as follows:—Mr Mayor and Gentlemen.—In responding to your Worship's friendly salutation, if I should undertake to express all I feel, I should occupy more time than the occasion will permit. I came here with the St. Lawrence, bearing the star-spangled banner, to your beautiful shores, and found a welcome as though I had indeed been a long lost brother. Your words bid me welcome, and your deeds are eloquent with all that proclaims a community's good will, or the free offering of the sons of a kindred land—(great cheering). The impulse that is given here to-night, Mr. Mayor, will quicken many a generous inspiration, and many a bosom in my native land will be impatient to mingle its kindred sympathies with ours; for, Mr. Mayor, you cannot indicate to us here in England a friendly feeling that is not joyously responded to throughout the union of our western shores. I am but too happy, Mr. Mayor, in being the recipient of these honours, and this cordial greeting given to my flag; and the compliment is the more impressive, that the best and noblest feelings of our social character are in communion consecrated here in this noble hall—(cheers). Sir, in drinking the health of my officers and crew, you have justly conceived that I owe you my acknowledgments as being proud of the honour of the command with which my Government has intrusted me on such service as this. In peace or war I hope and trust the gallant officers and noble crew of that frigate may, in the language of the memorable Nelson, "do their duty." Although we carry the elements of

war, our mission now is of peace and good will to all men ; and, Mr. Mayor, if it were otherwise, your kindness would put us in good humour with ourselves and all the world besides. I say, gentlemen, our peaceful mission devotes us now to the protection of persons and property on the wide ocean wherever we may roam, and the interests of the British merchant, and the protection of and solicitude for his personal safety and comfort would be equally regarded as that of our own countrymen, whenever and wherever it might be required—(long and continued cheering). Under the most ordinary circumstances this would be our pleasure, but, under our present relations with you, I cannot express with what lively gratification the *St. Lawrence* would lend her aid in protecting, if need required, the interests of the merchants of Southampton, and how highly appreciated is the cordial welcome she has received from the Mayor and Corporation of this ancient borough. (The most rapturous applause followed Captain Paulding's speech.)

THE LONDONDERY steamer left Sligo for Liverpool, at 4 o'clock on the evening of the 1st of December, having on board, besides cattle, &c., nearly one hundred and fifty steerage passengers, the greater number of whom were on their way to America ; and that evening the weather became so bad, that none but the crew could keep the deck. The passengers were ordered below, the hatch was covered to keep the seas from below ; but, sufficient space was not left for the purpose of ventilation, which caused the unfortunate people below to experience all the horrors of suffocation. One passenger, more fortunate than the rest, succeeded in gaining the deck, and alarmed the mate, when he, with some of the crew, hastened to their relief ; but it was too late : 73 human beings had ceased to exist.

ST. LAWRENCE CHARTS,—*Their dangerous Condition.*

Extract of a letter from Capt. Bayfield, R.N., to Rear Admiral Sir Francis Beaufort, Hydrographer to the Admiralty.

The following extracts of a letter from Capt. Bayfield, to whose valuable services in the regeneration of the Charts of the St. Lawrence, we have had occasion to allude, places in a strong light the dangerous condition of the Charts of Cape Breton Island. But for the accidental presence of his officers during a severe onshore gale, the erroneous condition of the existing charts would have occasioned the loss of three vessels at one and the same time: and in these days of improvement when every care is taken by the Government to render the Admiralty charts available to merchant ships, it is no less important that those charts should be correct. Capt. Bayfield shews in a few words the incorrectness of those of his surveying ground, a failing which is too evident in those of our own shore wherever surveys are going forward. It is true with reference to Des Barre's charts, the boldness of their scale inspires a fatal confidence in them, and they still form the main features of the charts of the coast which Capt. Bayfield is surveying; but they have long been out of use in Her Majesty's ships.

Extract—While thus employed, we were rewarded by the discovery of a dangerous rock, off Ciboux Island, a bar of 13 feet at low water, across the entrance of St. Ann's Harbour, and very dangerous shoals off the entrance of

the Great Bras d'Or. None of these dangers, as far as I know, are shown in any existing chart: on the contrary, they shew deep water in place of them, and thus are calculated to allure vessels to destruction.

It is our habit to examine any parts where the soundings of the preceding season indicate the probability of finding any less water; and this has led to the discovery of the Premier Shoal, so named, because that vessel was known to have grounded on a shoal somewhere near Ship Harbour, although no one could show us exactly where.

The greater half of the sea coast of Cape Breton Island having been surveyed in this and the preceding year, has left (exclusive of the Bras d'Or), to be examined the coast from Point Cunnent to Scatari, and from Scatari to St. Peter's, distances, which, together, do not exceed 200 miles of coast; but, which abounds with harbours and bays. The existing charts of these places are so inaccurate and imperfect, as neither to shew the character of the land nor the dangers off it; but, on the contrary, shewing deep water in the place of shoals, so that a complete re-survey can alone supply the wants of the navigator.

The dense fogs and heavy swell which accompany the prevailing southerly and easterly winds, and which render this work so necessary will also greatly delay its execution, especially on the eastern coast of the island to the southward of Scatari. Much deep water sounding is wanted between St. Paul and Island Cape Gaspe, to complete the long line of banks, the northern edge of which would be so important a guide to the numerous vessels which resort to and from Canada every year.

Mr. Hancock was encamped on the west point of entrance of the Great Bras d'Or, during the heavy gale of the 22nd of August, last. In the height of the gale, he observed a large brigantine and two large schooners, through the driving rain, running directly for the breakers, our people waving to them in vain, until the leading brigantine almost touched the broken water. A few moments more and they must all have been in eternity, for nothing could have saved them, the ebb tide running out against the sea at the rate of 4 or 5 knots; but, just as she appeared to be past all hope, she perceived her danger; and, assisted by the rapid weather tide, succeeded in sheering across the passage into deep water; and, the other vessels following her example, all were saved. Misled by the charts which they had seen, they had no idea that there was anything in their way running in.

I have related this occurrence, in order that you may perceive the evil which these charts of Des Barres may produce, for, they are in general sufficiently nearly correct in the delineation of the shores, as to inspire confidence, which is also increased by the pretension about them, from their large scale, &c.; but, of which, in the important matters of shoals, and soundings especially, they are totally undeserving.

I know not whether these charts are issued to Her Majesty's ships; but, as they were supplied to me, it has occurred to me that, they might be issued as the best that could be had. I believe the map-makers compile from them.

I have learnt the existence of extensive fishing banks, off the N.E. coast of Cape Breton Island, of which we know nothing. There is, therefore, much work to be done here, of the highest importance to the safety of navigation.

NEW BOOKS.

BISCUITS AND GROG.—*Darling, Bishopgate Street.*

“What’s in a name?” Whether we have amusement or information under the title of “Noctes Ambrosianæ,” “Wine and Walnuts,” or the more homely, shall we say, “tarry” sobriquet of “Biscuits and Grog,” it matters little. We have here, in a diminutive form, the reminiscences of a naval officer, who writes of past scenes, men and manners, with a *gusto* which smacks of approval, and disapproval, as might be expected from one whose career has yet been of no great extent in salt water. We shall have another opportunity of saying a word on some few sentiments dropped by the author in discussing his adventures. He writes well, and would he take up the pen of Marryatt, whose productions he so justly admires, he would not want readers. He might then find ample occasion to hold up folly for ridicule, to applaud where he approves; but, we would recommend him to disguise his persons more completely than he has done in the little *jeu d’esprit* before us; or his work will be excluded. We will here take a sample of it for our readers:—

“When the *Caliban* arrived at Malta, in the latter part of the year 184—, we found instructions to proceed to join the admiral and the fleet at Beyrout, carrying as many stores for the squadron as we could, without incommoding the guns. This was an important proviso, for the Syrian war had just broken out. Place after place had been bombarded, and troops landed. The gallant Albanian, who rules the throne of Egypt, saw his schemes of ambition defeated by the European intervention. The tottering power of the Turkish Empire was bolstered up by English assistance, and half the papers in France were crying out for war. It may easily be imagined that this state of things was a glorious change for the Mediterranean squadron, tired of the monotony of peace, and wearied with doing nothing. On arriving at Beyrout, where the fleet was, I entered at once into the spirit of the time. Everything was active and gay. Early in the morning the crews were summoned on deck to drill, and the strictest discipline maintained. All day long boats were seen passing from ship to ship, and signals flew from the mast-heads; and as officers came on board to see old messmates, lively anticipations were interchanged. ‘Sidon will be the next place,’ you would hear a young midshipman cry, ‘then Acre—and then—who knows?—perhaps Alexandria!’

“And if there’s a war with France, I hear that they mean to send their squadron down to Alexandria, to raise a blockade there,” said Ferrers, of the *Bellerophon*, one day at lunch in our mess.

“I hope I’ll be there if they do,” said Sydney, one of our midshipmen. “I saw them weigh in Vola Bay last year, and two of them went ashore! That’s not the kind of seamanship to face old Fisher, of the *Asia*, and his squadron with.”

“Then look at our gunnery,” said Ferrers. “Do you know what the gunnery-lieutenant of the *Harold* did the other day? When we were bombarding Beyrout, he went to one of the main-deck guns, and taking the trigger-line from the captain of it, pointed at the town. Soon after, a man’s head was seen peeping out of a loop-hole in the rickety old castle. Jerk went the trigger-line—bang went the shot—and the fellow’s head was smashed in a second.”

A roar of laughter greeted the anecdote.

“Did he tell that story himself?” said I, “because if he did I think he ought to be raised to the peerage, with the title of Baron Munchausen.”

"A fact, I assure you. Queer fellows, these Harolds. Heard what old Laurie, the captain of her, did the other day?"

"No. We've been out of all the fun, in this dirty old *Caliban*."

"Why, sir, the *Harold* was lying within gun-shot of the shore, between Beyrout and Djouni, and there was nobody in sight on the beach at all. Up came old Laurie, and ordered half-a-dozen main-deck guns to be got ready. It was done. 'Now send the band on the poop, and make them play a lively air.' That was done also; and the mountaineers, attracted from their shelter by the music, like serpents charmed from their holes, came down on the beach. The guns were fired, and they were cut up right and left. Didn't they run!"

"The blood-thirsty old miscreant?" cried Sydney, and was echoed by some of the berth, though many could not help laughing at the trick.

"Not one of all these poor wild mountaineers," said I, "but had some dark-eyed girl to weep for him, most probably. Perhaps had a widowed mother, now lamenting him—desolate in the mountain of Lebanon!"

"Bah! my dear fellow," said the matter-of-fact Ferrers, "all's fair in war. They'd serve us just the same if they had a chance. We've all got mothers to weep for us, hav'n't we, or relations of some sort."

"Yes," remarked Burden, "and some of them don't come half often enough down with the needful."

Such were the stories which enlivened us, and "biscuits and grog" were passed round merrily. Better this, thought I, than *τυπτῶ, τυπτεις, τυπτει*, repeated in the class at old Birchem's, or illustrated, practically, by that gentleman with a rod!

"There's another story to be told of the *Harold* yet," said Ferrers, refreshing himself with a draught of "swizzle," as weak grog is called in the service. "Some of you fellows knew Langley, who belonged to her?"

"Ah! he came to sea as an amateur midshipman, and had £2,000 a-year of his own; parted pathetically from a couple of maiden aunts, and all that sort of thing, didn't he?"

"Poor fellow," continued Ferrers, "he was an enthusiast. I knew him very well, and I'm afraid I didn't half sympathise with him. He used to come on deck sometimes and talk to me in the middle watch, in the *Bellerophon*, about glory, and ambition, and the progress of the species, and God knows what; and he would never take anything, not even a cigar! 'Ferrers,' he would say, 'I feel that I am destined to do something in my day. There is almost a certainty of an European war. Would to God that there were, and that I had done something for renown! Would that I could have my epitaph engraved upon the moon, that all generations might read it, while they enjoy her light.' Why, my dear boy, I used to say, what language would you like it written in? It would require a deuced number to make it intelligible to all the world! The moon's face would have to be enlarged."

"By Jove," cried old Hankom, interrupting, "the youngster was downright cracked, and wanted a good rope's end."

"I hae seldom heard o' a more clear case of incipient insanity. He was *joost* distractit, and gone clean daft," said the Scotch assistant-surgeon.

"Well," continued Ferrers, "some time after our last conversation, it was determined to send boats with a party to cut off a train that had been laid to a mine on shore. Langley went to old Laurie, and begged and prayed to be allowed to go on the expedition in the *Harold's* first cutter. With some difficulty he obtained leave. The boat landed, and, Langley, sword in hand, rushed at the head of the men on the enemy. The struggle was short and fierce: the work was accomplished—the party regained the cutter, and just as Langley jumped on one of the thwarts, a shot from an Albanian's musket

struck him in the heart, and he fell dead in the bottom of the boat. As she neared the ship, telescopes were anxiously turned to her; but, instead of the handsome face of the officer in her stern-sheets, a heap was seen lying there, covered over with the ensign, which told the whole tale! He was buried at Djouni."

"Served him right," quoth Hankom, "for coming to sea, when he had £2,000 a-year!"

Such was not my commentary on the melancholy narrative. It is strictly and literally true; and, while I write these sentences, the breeze from the Mediterranean stirs gently the weeds upon his lonely grave!

We, of the *Caliban*, soon found that we had come too late on the station, and execrated our ill-fortune. Most of the active work had been done, and Stopford and Napier were waiting further instructions. Acre, however, was not yet taken, there was still a chance; and it was with some hope that we learned that we were to join the squadron blockading Alexandria, which (after watering at Dog River, near Beyrout), we proceeded to do.

CAMPBELL'S ESSAYS ON ENGLISH POETRY, &c.—*Edited by P. Cunningham.*

A very acceptable little edition of "The Lives of English Poets," judiciously condensed into two volumes. We must take an opportunity of quoting a notice of the author of "The Shipwreck," &c., well known to naval readers; William Falconer, the son of a barber, in Edinburgh, who went to sea at an early age, in a merchant vessel of Leith. "He was afterwards mate of a ship that was wrecked in the Levant, and was one of only three of her crew that was saved: a catastrophe, which formed the subject of his future poem." Our limits oblige us, however, to reserve for another number, our notice of this interesting writer.

HISTORICAL ESSAYS.—*By Lord Mahon.—Murray, Albemarle Street.*

These historical essays comprise some beautiful dissertations on celebrated personages, Joan of Arc, Mary Queen of Scots, and others celebrated in history, a concise account of the French Revolution, and conclude with a few pages on the subject of Latin inscriptions. They form like the preceding, two volumes of Mr. Murray's Home and Colonial Library, which is preserving the same character for good taste and judgment, which has hitherto marked its progress.

THE NAUTICAL ALMANACK, FOR 1852.—*Murray, Albemarle Street.*

We are glad to have to record the appearance of this volume for the fourth year in advance from the present. It is a sterling proof of attention to business highly creditable to the conductor of this great national work, to say nothing of the great convenience derived from it by our merchant captains bound on long and extensive voyages.

THE SHIP.—*Allen & Co., Leadenhall Street.*

A glance over a few pages of the elaborate work of Mr. Steinitz, on the progress and improvement of the ship, has satisfied us that, it is full of most interesting information to our nautical readers. It is accompanied by a large collection of plates, neatly executed in lithography, illustrating the gradual improvements in the construction of the ship, from the time of the Phœnicians, down to the present era. We shall have an opportunity in our next to say more on the plan of Mr. Steinitz, and the style of its execution; but, as far as we have yet seen, he appears to have executed his difficult task with perseverance and good judgment.

BIRTHS.

Dec. 1, at Wexford, the lady of Capt. Lyster, R.N., of a daughter.

Dec. 3 at Avening, the wife of Lieut. Read, R.N., of a son.

MARRIAGES.

Nov. 28, At Burnham, Somersetshire, A. Barrow, Esq., Lieut. R.N. to Harriet, daughter of J. Allen, Esq.

Nov. 23, at Newland, Gloucestershire A. Meetkerke, Esq., of Julians, Herts, to Cecilia daughter of Capt. Gore R.N.

DEATHS.

Nov. 27, at Albany, Surry, Capt. R. Russel, R.N.

Nov. 29, in Pall Mall, the wife of Vice-Admiral, Sir. T. Briggs, G.C.

Dec. 4, at Long Ditton, the wife of C. Corkran, Esq., and eldest daughter of Rear-Admiral Sir George Seymour.

Dec. 4, in Bishopswearmouth, Lieut. R. Leech, R.N.

Dec. 5, at Woodend, Hants, the wife of Capt. Hockings, R.N.

Dec. 11, at Peckham, the relict of late Capt. T. Scriven, R.N.

METEOROLOGICAL REGISTER.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory, From the 21st of Novemberr to the 20th of December, 1848.

Month Day.	Week Day.	Barometer In Inches and Decimals		Fahrenheit Thermometer In the Shade				Wind. Quarter. Strength.				Weather.			
		9 A.M.	3 P.M.	9A	3P.	Min	Max	A.M.	P.M.	A.M.	P.M.	A. M.	P. M.		
		In Dec	In Dec												
21	Tu.	29.71	30.01	44	48	43	51	SW	SW	2	2	bcp 1	bcp 4		
22	W.	29.33	29.19	48	48	39	49	SW	S	5	6	qo 2	qop 4		
23	Th.	29.21	29.21	47	48	44	49	S	SE	2	2	bc	bcp 3		
24	F.	29.65	29.82	45	43	42	45	N	N	5	5	qbc	qb		
25	S.	30.08	30.06	32	42	30	44	S	S	2	4	bc	or 4		
26	Su.	29.91	29.91	49	53	44	54	S	SW	2	3	bcd 4	bc		
27	M.	29.82	29.94	45	47	44	48	SW	W	2	1	br 1	bc		
28	Tu.	30.12	30.12	45	50	44	51	SW	SW	4	4	bc	o		
29	W.	29.96	29.94	53	54	47	55	W	SW	5	5	qo	qo		
30	Th.	29.91	29.91	41	45	40	46	W	W	2	3	br 1	o		
1	F.	29.68	29.66	42	42	39	45	SW	SW	2	6	or 2	qbcprh 4		
2	S.	29.39	29.43	39	42	37	43	SW	W	5	5	qbc	qbc 3		
3	Su.	29.82	29.80	34	43	32	44	SW	SW	2	2	bc	op 4		
4	M.	29.28	29.18	49	48	40	51	S	SW	7	5	qor 2	qor 3		
5	Tu.	29.04	29.21	41	44	40	45	W	W	5	5	qbc 1	qbc 4		
6	W.	29.32	29.19	43	48	40	51	SW	SW	4	5	bc	qop 3		
7	Th.	29.53	29.57	48	53	41	56	SW	SW	5	6	qor 2	qop 3 4		
8	F.	29.86	29.95	53	55	50	56	SW	SW	6	5	qop 1	qo		
9	S.	30.18	30.20	50	54	48	56	S	S	3	3	b	b		
10	Su.	30.34	30.26	47	56	43	57	SE	S	1	1	b	b		
11	M.	30.16	30.19	45	52	43	54	SW	SW	3	3	b	bc		
12	Tu.	30.22	30.20	51	54	47	55	S	S	2	2	o	o		
13	W.	30.07	30.05	51	53	46	58	S	S	4	4	b	b		
14	Th.	29.83	29.74	44	48	43	51	SE	S	5	5	qbc	qbc 3 4		
15	F.	29.88	29.69	48	52	45	53	S	S	5	6	qo	qor 3		
16	S.	29.84	29.84	45	41	40	45	NE	NE	2	3	ogr 2	ogr 3 4		
17	Su.	29.96	29.96	38	41	36	42	NE	NE	2	2	bcp 1	bc		
18	M.	29.90	29.84	42	47	39	50	SE	S	2	2	bc	bc		
19	Tu.	29.86	29.92	45	47	43	48	SE	E	1	1	bc	o		
20	W.	30.21	30.25	41	39	29	41	NE	E	4	4	ogd 2	bc		

NOVEMBER 1848.—Mean height of Barometer—29.917 inches; Mean Temperature—42.2 degrees; depth of rain fallen—0.96 inches.

NOTICE TO CORRESPONDENTS.

The Letters from STORMY JACK have been received.

Hunt, Printer, 130, St Alban's Place, Edware Road.

THE
NAUTICAL MAGAZINE

AND

Naval Chronicle.

FEBRUARY 1849.

THE LATE FIRST LORD OF THE ADMIRALTY:—THE RIGHT HONOURABLE GEORGE EARL OF AUCKLAND, G.C.B.

Admiralty Board, Minute, Jan. 4th, 1849.

“The Board of Admiralty desires to record its sense of the irreparable loss which the Naval Service and the Country have sustained in the death of the Earl of Auckland, whose long experience, admirable judgment, and unremitting attention to the duties of his high situation, have left the deepest impression upon the minds of all who had the honour of serving under him.

“My Lords desire that, as a mark of respect to Lord Auckland’s memory, the colours of her Majesty’s ships in all the ports of Great Britain and Ireland shall be hoisted half-mast high from 9h. A.M., till sunset, on Saturday next, the day of his Lordship’s funeral.”

“H. G. WARD.”

Scarcely had we closed the page in which we had recorded the sudden and unexpected loss of Sir John Barrow, Bart., ere we have to add to it that of the nobleman whose name appears in the above Minute of that Board, over which he had presided. How truly and forcibly do these events bring home to the reflecting mind that “in the midst of life we are in death!” How suddenly and how unexpectedly may the transitory scenes of this world be exchanged for the next, even in the midst of health and recreation! we are left to profit by the lesson! We have preserved for our readers the following biographical sketch from the

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I

columns of a popular journal, and being among those who had the honour and good fortune to enjoy some official communication with the lamented Earl, we know, from experience, how justly, and how truly, his character is there portrayed.

Sir John Barrow, in his valuable auto-biography says of Lord Auckland that he "had for some years been Auditor of Greenwich Hospital, and had occasion at certain periods, to show himself at the Admiralty; but, he never held any other situation by which he could become conversant with public business, or any that had to do with more than a small portion of Admiralty concerns. The limited degree of patronage* that, during the short period of his service, fell to his share, consisting of a promotion or two, and a few naval appointments, he distributed, I believe, without favour or affection, to the best of his judgment and according to his conscience.

"He was, moreover, a nobleman of good sound sense and solid understanding, of an amiable disposition, mild in his manner, and good tempered."

On Saturday, December 30th, 1848, while shooting at Lord Ashburton's, Lord Auckland was seized with a paralytic attack. Though four miles from the house when the attack came on, he was very speedily conveyed thither, and every remedy that human skill could suggest was immediately administered; but, unhappily, without effect. Dr. Locock was in attendance on his Lordship early on Sunday morning. As usual in such cases, there were some symptoms which seemed to justify a hope that he might rally, but a second attack destroyed all hope, and Dr. Locock came to town on Sunday with the painful conviction that nothing remained doubtful in the case, except the moment at which the patient might breathe his last. From more recent accounts we learn that his Lordship only survived until Monday morning.

The Earl of Auckland was born at Eden-farm, near Beckenham, in Kent, on the 20th of August, 1784, and his elder brother, William, having lived till the year 1810, Mr. George Eden, afterwards Earl of Auckland, received an education befitting a man intended for one of the learned professions. He entered Lincoln's-inn as a student on the 7th of May, 1806, and was called to the bar by that Society on the 13th of May, 1809; but in the following year he became heir apparent to the peerage, and abandoned all thoughts of the bar as a profession before he could be said to have well entered upon that arduous pursuit. His brother, Mr. William Eden, had for some time represented the borough of Woodstock, and having unfortunately been drowned in the Thames, in the year 1810, the noble Earl just deceased became then the eldest surviving son of his father, and was shortly afterwards elected to fill that seat in Parliament which his deceased brother had previously occupied. He was not returned for Woodstock, however, at the general election in

* This limited degree of patronage was severely felt by his lordship, and his consequent inability to bestow well-earned promotion, was a frequent source of regret.

1812, and he remained out of Parliament till the month of November 1813, when General Thoruton having resigned, he again became member for Woodstock, and so continued till he succeeded to the peerage as second Baron Auckland, upon the death of his father, which event took place on the 28th of May, 1814.

He was about twenty-six years of age when he entered the House of Commons, and under thirty when he quitted that assembly, so that it could scarcely be said he had ever had time to build up for himself a reputation amongst the representatives of the people, and it must be acknowledged that in neither branch of the legislature did he attain to any very great eminence. But the impression left on the minds of those who enjoyed officially and privately the best means of appreciating his character is "that a more kind, a more true, or a more just man never existed than Lord Auckland;" and there is every reason to believe that these praises are not the exaggerations of friendship, but the award of an impartial judgment.

In common parlance, however, he was not much of "a Parliament man," and yet he was a respectable speaker; and great good sense, general knowledge, moderation, refinement, a very gentle bearing towards his adversaries, and a very consistent support of his friends, made him greatly beloved.

He was a good Whig, but far from being among the most efficient and formidable members of that party; hence he is more heard of when his political friends are in power than in their less prosperous days, being, like the late Lord Besborough, more useful in council than distinguished in debate. The great mass of the public, therefore, knew scarcely anything of Lord Auckland till in the month of November, 1830, they were informed that he had been appointed President of the Board of Trade, with a seat in the Cabinet of Earl Grey.

In the month of July, 1834, Sir James Graham resigned the office of First Lord of the Admiralty, and Lord Auckland presided at that Board during the following four months, going out with his party when Sir Robert Peel came from Italy. Upon the speedy return of his friends to office, Lord Auckland's talents were transferred to a very different sphere of action. It might perhaps have been more conducive to his happiness, and not less favourable to his reputation, if he had resumed the administration in chief of Admiralty affairs; for he is said to be excellent as first member of that Board, though it will scarce be considered that he was very fortunate as Governor-General of India. One of the best possible judges of his character and qualifications as head of our naval department pronounces him to have been a man whose "mind was of the very highest order. His long experience, impartiality, and excellent judgment fitted him admirably for the place which he filled." The destiny of Lord Auckland, however, was to become Governor-General of India; and he quitted England in the month of September, 1835, for the purpose of entering on the administration of affairs in that most important part of the British possessions. Of course, the great feature of his government in India was the Affghan war. Soon after his Lord-

ship's arrival at Calcutta the aspect of the relations which had long subsisted between the Princes of India and our Government underwent an extensive and important alteration. Our own subjects became alarmed at the expectation of prodigious force from the regions beyond the Indus, while the native Princes betrayed by their restlessness and feverish anxiety the fact that confidence in our supremacy had been shaken. The progress of the Persian arms and the fears of Russian influence gave birth to a panic universal, and in many of its effects disastrous. Lord Auckland was assailed by a formidable combination of circumstances. Desirous of supporting an ally who should be interested in peace and tranquillity, rather than a chief whose schemes of personal aggrandizement were undisguised, he felt himself almost driven to espouse the cause of Schah Soojah, a chief who had long lived as a refugee in our territories, against the active and energetic *de facto* ruler, Dost Mahomed. A firm persuasion that so long as Cabul remained under the government of the latter chief no tranquillity on our frontiers could be expected, and an earnest hope of raising up a barrier against western encroachments, seemed to have been the grounds which induced Lord Auckland to undertake those vast operations in the cause of Schah Soojahool-Moolk, which have rendered his rule in India so disastrously memorable.

It is now unnecessary to discuss at any length the history of this untoward exhibition. The British forces reached Candahar in the month of April, 1839, and with every expectation of success the current of the expedition proceeded. It is well known how Ghuznee was taken, how Dost Mahomed fled, how Schah Soojah was installed, and how a considerable portion of the army returned to British India. It is not necessary now to dwell on the varied fortunes of Dost Mahomed, on the insurrection of Cabul, on the assassinations of Burnes and M'Naghten, or on the dissensions which ended in the expulsion of the British forces from those districts.

Early in the year 1841, and even somewhat before that period, it was found that the time had arrived when Lord Auckland must surrender the government of India. Before he returned to England Lord Heytesbury had been appointed to succeed him; but the change of ministry which took place in 1841 had the effect of cancelling that appointment, and on the last day of February, 1842, Lord Ellenborough landed at Calcutta to assume the government of India. When Lord Auckland returned to this country he seemed still to enjoy good, if not robust health, and to have suffered little from residence in a warm climate. He resumed his customary punctual attendance upon the deliberations of the House of Lords, and gave his political friends the full benefit of his votes and advice, besides an occasional speech on any matters connected with trade, the business of the navy, or the affairs of India. Of course, when the present Ministers, in the year 1846, became once more the responsible advisers of the Crown, merits like those of the Earl of Auckland were not to be forgotten, or such assistance as he could render to be on any account disregarded; he is therefore found again at the head of the Admiralty Board, discharging its duties with a degree of ability which

has commanded the approbation of the most competent judges, and has been, at the same time, rewarded with no inconsiderable amount of success. Doubtless, regret for the death of Lord Auckland will be at least as general as the surprise which so sudden an event is calculated to produce. It will naturally be thought that, though a sexagenarian cannot have many years left, yet, in modern times, we are not accustomed to lose our public men at the age of 65, especially when they have not previously manifested any symptoms of declining health. Lord Auckland, however, though summoned unexpectedly, descends to the tomb, if not full of age, at least having acquired a competent share of honours; and though no son inherits his higher dignity, yet a numerous and attached circle of friends may regard the degree of fame which he had acquired with just complacency, and may refer to his unspotted integrity with unqualified and honourable pride.

On Saturday, the 6th of January, the remains of his lordship were removed from the Admiralty for interment in the family vault in Beckenham Church, near Bromley, Kent.

Shortly before 10 o'clock, at which hour it was appointed the funeral procession should leave the Admiralty, Rear-Admiral James Deans Dundas, the Hon. W. Cowper, Mr. Ward, M.P., Capt. Hamilton, the Secretaries, and the gentlemen of the various departments of the Admiralty, the barge-master, and assistants in their liveries, connected with that department of the State, assembled in the inner hall and vestibule of the First Lord's official residence, and formed in line on each side through which the coffin and mourners passed on the way to the hearse, and three mourning coaches and four; the first containing the present Lord Auckland, (the Bishop of Sodor and Man,) the Hon. Frances Eden, the brother and sister of the deceased Earl, and the Hon. W. Osborne. The second contained Mr. A. Colville, Capt. H. Eden, and Capt. Charles Eden. The third contained the chief domestics of the late earl's household. The private carriage of the deceased peer brought up the rear.

The funeral was as private as possible, from the desire of the family that the least display should take place on the mournful occasion. The Queen, the Queen Dowager, and the other members of the royal family, the Marquis of Landsdowne, and the members of the cabinet, made applications to be allowed to send their respective equipages; but, these offers were respectfully declined, as it was believed to be in accordance with the previously expressed wishes of the deceased.

The *cortège* proceeded without interruption to Lewisham, where the funeral procession was joined by the carriages of the Countess of Buckinghamshire and Lord Bexley. On reaching Beckenham Church, at half-past 12 o'clock, the body was received at the church-gates by the Rev. A. Brandram, the rector of Beckenham, who performed the service. The coffin having been deposited in the family vault, situate in the aisle of the sacred edifice, the funeral service was concluded, and the mourners immediately afterwards retired.

The usual respect to the memory of the late earl was observed in all

the royal dockyards and naval establishments, agreeably to the Admiralty minute, which we have recorded; and, by the merchant shipping in the river, in accordance with the order of Sir James Duke, the present Lord Mayor.

REMARKS ON THE PILOTAGE OF THE RIVER SUIR, *between Waterford and Carrick Bridges.*—By Mr. G. H. Hills, *Second-Master of H.M.S. Dwarf.*

THE pilotage of the river Suir above Waterford bridge is such that, from the nature of the banks, (with low swamps extending mostly to a great distance inland from them,) and the great rise and fall of tide, leading marks for avoiding the shoals are difficult to obtain, and can rarely be useful; but attention to the general course of the river will in most cases point out where danger is to be anticipated.

Immediately above Waterford bridge is good anchorage with room for a long vessel to swing (if moored) in 5 or 6 fathoms at low water, spring tides; from this place to Grana Castle, a distance of about two miles and a quarter, the river runs in a W.N.W. and E.S.E. direction, and may be navigated at all times of tide by vessels drawing 12 or 14 feet water, by keeping as nearly as possible a mid-channel course, the least water being 17 or 18 feet. Grana Castle is an old ruin, standing upon the Kilkenny, or north shore of the river, and here the river turns sharp to the southward, running nearly S.W. and N.E. The point on the south shore here should be avoided, as a small spit rises from it, which at half tide would be dangerous to a vessel of the above description. This part of the river, from Grana Castle to a thickly wooded hill, called Mount Congreve, with a gentleman's house on the north side, facing right up the reach, called Long Reach, is about four miles long, and may be navigated by vessels of the before-mentioned draught at half tide, the depths varying at low water from 7 to 25 feet. From Mount Congreve to Doorman Point the distance is about four or five miles; the river runs in a N.W. and S.E. direction, and may be safely navigated at half tide, by making it a general rule to avoid the shore near projecting points, and to hug the shore in the bights.

The Doorman shoal commences about half-a-mile below Doorman Point, and runs right in the centre of the stream till abreast of the Point, where it turns towards, and joins the Point, drying several feet at low water in nearly its whole length; on either side of the spit is deep water, 7 feet at low water. There is good anchorage just below the shoal, with room to swing when moored.

To pass this shoal, as soon as Mount Congreve is shut in by the intervening hills from sight, the northern shore must be kept close aboard: a good mark to know when you are nearly abreast of the centre of the shoal is a limekiln standing on the north bank, close to the water's edge. On passing this shoal the river runs in a W.N.W. direction for nearly two

miles, when it again turns to the south-westward. A mid-channel course from Doorman shoal to this turning will be safe, when care must be taken to avoid the point on the south shore, and to steer well over into the bight on the north side; when round this point keep a mid-channel course until abreast of a white farm-house, in a clump of trees on the northern shore; and then the southern shore must be kept well aboard right through Mayfield Reach, which will be easily recognized by the trees on its southern shore. In this reach a shoal runs off the north shore nearly two-thirds across the river, and which dries several feet at low water; so that the Fairway from the fore-mentioned house, right through the reach, forms nearly a half circle, convexing to the southward.

At the north end of the trees before-named is good anchorage (head and stern) in 3 fathoms at low water; but from the narrowness of the gully a vessel cannot swing at low water, and care must be taken to avoid a single pinnacle of rock which lies right in the Fairway abreast the centre of the trees, and stands 8 or 9 feet out of the mud, with only 7 feet at very low water. From the Doorman shoal to this anchorage is about four or five miles. Leaving this reach keep over to the north shore till nearly up to a point in a N.W. direction from it, rounding which hug the north shore close, and keep to the same shore until within three-quarters of a mile of Fiddown Island, when sheer over to the south shore, and keep to it right up to Fiddown Island. Here there is good anchorage on the north side of the island, with hawsers to the island on one side, and a bower and quarter anchor in the stream on the other, lying within about 7 or 8 fathoms of the island to avoid the sandy shelving shore of the main land, where the holding ground is bad. From Mayfield Reach to this place is about three miles by the Fairway.

The channel on the south side of the island is impracticable, except for river barges, as it dries several feet at low water, and on the north side there is only 5 feet at low water; ordinary spring tides.

From Doorman shoal to this island the river is only navigable between half tide and high-water.

From Fiddown to Carrick bridge is about six miles by water; the shoals are many of them shifting, and their position can only be known by constant watching. This part can only be safely navigated near high water. Coal vessels of 170 or 180 tons, and drawing 12 feet water lie at Fiddown; but it is rarely that any vessels but river craft go above there.

The rise and fall of the spring tides at Fiddown Island is from 15 to 18 feet, and at Carrick bridge not more than 10 feet. But they are considerably affected by the direction and force of the wind; a northerly wind emptying the river, and a southerly or westerly wind the reverse: as also by the fall of rain or other local causes. It is high-water at Fiddown at the full and change of the moon at near 11 o'clock, and about two hours earlier above bridge at Waterford.

When at anchor a good look out should be kept for barges, which are,

many of them, heavy craft and carelessly navigated; and a berth taken up as much as possible in a bight to avoid them, and at night a light should be kept in the rigging.

LIGHTS ON THE SOUTH COAST OF IRELAND.

SIR.—The disasters of last winter having drawn attention to the lights on the south coast of Ireland, a brief notice of any changes and improvements in them will be interesting to our readers.

In addition to the works on the Fastnet,* preparations have been commenced on Mine Head, in the county of Waterford, for the reception of a lighthouse, and on the Connybeg half tide rock, great exertions have been making for some years past for another.

The Connybeg rock is the most outlying danger in the vicinity of the Saltees. From the south end of the Great Island it bears S.W. $\frac{1}{2}$ W. distant $2\frac{1}{4}$ miles, and is nearly 7 miles from Kilmore, the nearest point on the Coast of Wexford. It is composed of a coarse kind of granite with large crystals of felspar, uncovers at 2h. 10m. after high-water on the shore, and at low-water spring tides exposes an irregular surface of about 30 feet by 90 feet in extent. It has from 20 to 25 fathoms water within $1\frac{1}{2}$ cables distance, all around it, the space between it and the coast to the eastward is much encumbered by rocks, some of which are uncovered, others dry at half ebb and some never appear. The want of a light to mark this formidable danger was long felt by seamen but it was not until 1824 that the Ballast Office yielding to the solicitations of the Waterford Merchants, and warned by a fatal shipwreck, of the necessity of the measure, consented to place a light vessel there, which from the important position it occupies on the chart has since been called the guiding star to the Irish Channel. Every seaman is aware of the anxiety and danger attendant on making a light-vessel in a south-west gale, when in order to secure the safety of the vessel the lanterns are scarcely raised above the gunwale, and thus when most needed she is the least efficient.

To more clearly indicate this dangerous locality, the erection of a building on the Connybeg rock has been long contemplated. In the summer of 1843 workmen were first employed to bore holes for the reception of nine iron pillars on which it is purposed to place the lighthouse. The work however has been very tardily conducted, for it was not until the summer of the present year that the *holes were completed*. In the month of July a steam vessel arrived at the little harbour of Dunmore with five of the pillars, and the necessary means for stepping them in their positions. It was hoped that they would have been securely fixed before the winter's gales commenced, and that their power of resisting the heavy surges of the Atlantic would thus have been tested, many fruitless attempts were made, and much vexatious delay occasioned by the sea

* See notice of these in p. 614, of our last year's volume.

sweeping from the rock, the gear prepared for raising them; and it was not until the middle of November that one of the pillars was successfully placed in the position where it now stands a solitary memorial of man's ingenuity and perseverance, and an excellent beacon for the position of the rock when covered. Further efforts are of necessity postponed until next spring.

When so much pains are taken to complete the system of lights, it is much to be regretted that the suggestions for painting lighthouses which have at different times appeared in your journal, and which have been advocated by more than one scientific and distinguished officer are not acted on. To give an additional instance of the necessity of distinctive colours, a West Indian was boarded by a fisherman in September last running into Ballytiegue Bay. He had seen the Hook Light tower through the hazes and mistaking it for the Tuskar bore up a channel course; in another half hour she would have been a total wreck; the fisherman received five pounds for piloting her clear of danger.

I am &c.,

To the Editor N.M.

R. HOSKYN.

The light on the Fastnet Rock near Cork has been extinguished in consequence of the late gales. The wind having remained at north-west for some days the sea broke over the rock so rudely as to render it impossible to inhabit anything but the basement story. Some parties on shore contrived to forward a rope to the inmates which communicated with a boat moored near shore. In this way five men were drawn off, but ten others remain there, not willing to trust themselves to such a precarious mode of escape.

THE MARINE BAROMETER.

Royal Harbour, Ramsgate, Jan. 6th, 1849.

SIR.—I herewith offer to your notice an extract from the public papers, which I think might be productive of great good, if inserted in your widely circulated periodical, independent of the tribute due from every honest-hearted sailor to the munificence of so excellent a nobleman as Lord Aberdeen.

I desire at the same time to offer my humble testimony to the efficacy of such means, as his Lordship generously determines to adopt, to warn the hardy fisherman of the approaching storm. And first (from my own experience) I will mention a case which will prove, in conjunction with Lord Collingwood's, the general practice of our best naval officers, of the olden time, to watch continually, and scientifically, those instruments which have so often cautioned the mariner to reef when under sail, or prepare to ride out at anchor the approaching gale.

In the year 1809, I was chief mate of the hired armed cutter *Hero*, Lieut. Reynolds, Commander, which vessel was a tender to Admiral Sir

James Saumarez, and in the autumn of that year we came down with the Baltic fleet, and anchored in Wingo Sound, in the stream of the *Victory*, the admiral's ship. While there on one occasion, we imagined the admiral was giving his fleet a severe drill; and having no top-hamper in the cutter, were amusing ourselves with the rapidity with which, obedient to signal, that gallant fleet were disrobing themselves of their flying kites, as royal and top-gallant masts and yards descended to the deck.

However all was conjecture as to motive, when the signal, was made, and repeated "Down lower yards and top-masts." Not the slightest indication of bad weather at that time; not a cloud to threaten. This was in the forenoon watch; but at about 3 P.M. a swell came rolling into the roadstead; at sunset a swift scud was crossing in the direction of a light breeze, and in less than an hour afterwards it was blowing a terrific gale right into the Sound. The greater part of the fleet drove, although so well prepared, and we should have lost the cutter upon a sunken rock, but for a shift of a few points in the direction of the gale, which gave our anchors a better position, and canted us clear of the dangers.

As soon as the gale abated the admiral sent an officer with his barge's crew, who assisted us in warping again into our position, and from them we learned that Sir James, with the captain and master of his fleet, had taken a warning from the marine barometers on board the *Victory*.

From that time, I have paid continual attention to barometric influences, and however susceptible an instrument may be, I think nothing is equal to a marine barometer, where the surface of the mercurial column can be strictly watched.

I have in my little waiting room on our east pier head, a common barometer, which is accessible at all times, day or night, to captains of vessels and others. I have another, as a check to it, in my dwelling house. These instruments have in several instances prevented a fleet leaving the harbour, and as often, at other times, accelerated their departure.

On the 17th of January, 1840, the fleet remained with a steady breeze N.E., in consequence of the rapid fall of the barometer at the pier head. The N.E. wind only lasted twelve hours, and was succeeded by a heavy gale from the south, which sent many crippled ships in for shelter and repair. The masters of vessels in the harbour congratulated one another at their escape by attending to barometric indications.

On the 12th of January, 1843, a steady N.E. gale succeeded to a long spell of disastrous weather and westerly winds. A large fleet was preparing to leave the harbour when I called the attention of the captains to the barometer which was rapidly falling. About twenty sail, however, tired of a long detention, put to sea. During the night it fell calm, and on the 13th a heavy storm from S.S.W. succeeded. Two of the vessels which had left were lost upon the French coast, and the remainder returned more or less in a crippled state. About 200 sail had remained in security with us, being warned by barometric indications.

I could multiply instances, but I trust these simple facts are sufficient

to shew that the patriotic example of Lord Aberdeen, is worthy of imitation by such noblemen and gentlemen who reside in maritime localities, and upon conspicuous headlands, where simple signals might be established to warn ships at sea, and caution the poor fishermen to look out for squalls.* Thus a common flag-staff with a ball at different altitudes might denote change, rising or falling. The upper section or half the spar being white, the lower painted black, or a white flag denoting fair; a red, change; and a blue, foul, or falling barometer; white above blue, barometer high but falling; red above blue, change and falling; blue, above white very low, but rising; and so on for the rising of the mercury. Such signals need not be kept constantly flying, but might also denote the time of day every four hours, or the time of high-water and half tide.

This would be a great boon to the fisheries, and to coasters continually navigating our dangerous tide ways and channels; and at particular seasons of the year might be the saving of many valuable lives and much property. There are few maritime towns or villages but could support, by the subscription of a few shillings per week, an old tar to attend to such signals. To all Coast Guard stations it would be easy to the man on watch, and to many of their officers a source of scientific amusement and interest; and a common barometer to each station would be very little expense to the government.

I am, &c.,
K. B. MARTIN, *Harbour-Master.*

THE EARL OF ABERDEEN AND THE SCOTCH FISHERMEN.—The recent melancholy shipwrecks on the coast of Scotland have attracted universal condolence with the unfortunate class of fishermen, for the great periodical suffering which results therefrom. We are glad, however, to announce that the general sympathy has, at least in one instance, been shown in a practical shape, and that the noble and benevolent Earl of Aberdeen has given orders to Mr. West, the well-known optician, of the Strand, for a first-rate barometer, to be placed in a solid block of granite, and to be fixed in a conspicuous and accessible spot on the coast, near Aberdeen, for the sole use and advantage of the fishermen of that neighbourhood. The instrument, which is fitted in a gothic case, made of solid carved oak, surmounted with the earl's coronet, has the advantage of the double verniers for registering from one observation to another.

It is the opinion of numbers of old and experienced seamen that many of the accidents occurring from storms at sea, arise from the want of due observation of the barometer, and if the same attention were paid to the indication of the coming gale given by the barometer, as was observed on board Lord Collingwood's ship, we should not have to record so many grievous disasters to our intrepid but careless seafaring population. In Lord Collingwood's ship, we are told, it was the custom of

* This would be of great advantage in the herring season as those craft have a large fleet of nets always out while driving, and would be warned to get in a part, if not the whole, before the heaviest of a gale came on.

every officer of the watch to take a register of the barometer on going on duty, and it was generally remarked that by so doing they frequently, by reducing sail, &c., were enabled to guard against accident.

We have no doubt that this very appropriate and handsome present of the Earl of Aberdeen will be duly valued by his lordship's tenantry; and we are sure that the hardy and fearless race of fishermen will not fail to evince their gratitude to the noble earl, by strictly attending to the indications of the barometer, and thus save their property and their lives from destruction, and their wives and families from destitution.

CONSULAR PAPERS.—No. II.

SIR.—I trust that the valuable concession made to British Consuls in page 473 of your September number, wherein you express a desire to render your periodical useful to their important branch of the public service, will induce them to have recourse to you for the mutual communication of their various cases.

They will require, in addition, a brief record of magisterial and judicial decisions, relative to merchant ships and seamen, to assist them in their judicial functions; and a notice of any privileges granted in England to foreign Consuls, as precedents whereby to extend their local efficiency.

I beg leave to offer you the accompanying paper, rather for the purpose of calling attention to an important subject, that of the rights of Consuls, than to take the place of more qualified commentators; and I propose to make further similar communications from time to time if you think they deserve insertion.

B. C.

To the Editor N.M.

CONSULAR PAPERS.—No. III.—*Duties.*

The progress of civilization has, in most trading countries, established a system and practice of government in accordance with principles of equity and hospitality; taught authorities an impartial administration of justice, and made the residence of strangers as secure abroad as it would be in their own countries. This may be considered the rule of the present day, and any laws or acts opposed to it, as exceptions. Such exceptions are however to be found; not alone in particular countries under defective constitutions, but in laws inadvertently passed by enlightened legislatures; in steps taken by well intentioned public functionaries; in hostile general measures, and in arbitrary local proceedings. Commercial treaties and conventions have been adopted as a means of anticipation and prevention, to give security to international trade and communication, and to lay down a written law for the differences in which the common law, of civilized usage might be open to controversy.

Under this written law the arrival of a foreign ship to trade, flying before an enemy, or in want of assistance, is no longer a signal for the exercise of fiscal rapacity, the forced discharge of her cargo, or the detention of her crew; wrecked ships and all they contain are not taken as droits of the crown; resident foreigners are not oppressed with forced loans, compulsory military service, and vexatious domiciliary visits and searches; they are not denied equal justice; they can sue natives for debts and prosecute them for personal injuries; the free exercise of their religion is secured to them; they may safely hold, bequeath, and inherit property; the religious rite of their marriages is respected, and they are not condemned after death to be buried below high-water mark.

But the very importance of these stipulations rendering a vigilant supervision necessary, commercial nations have consented to the reciprocal appointment of public agents, whose duty it should be to reside in each other's territories and procure the necessary observance of treaties. Such are Consuls, the representatives of their government, the advocates and protectors of their nation's interests, the guardians of their countrymen's security, and the bearers of functions, whose importance is proportionate to the communication existing between their own country and that in which they reside. There is no proper service which a Consul is not bound to render to any of his nation standing in need of it, and no information, likely to promote the national intercourse committed to his vigilance, that he is not called upon to report to his government and communicate to any of his countrymen who may be able to profit by it.

Yet how little attention does the service attract at home. The public,—nay, merchants and travellers, who most directly receive benefit from it, are no more than acquainted with its existence. Protecting British subjects of all classes from the violence of popular disturbances; defending them from oppression and injustice; extricating them from the consequences of inadvertent offences; privately relieving them in distress; incurring personal risk to save their lives and property, and to secure to them proper attention when sick; consuls follow their useful course from year to year, performing multifarious duties without relaxation, and discharging weighty responsibilities without default; efficient yet unappreciated, indispensable yet unknown.

One prejudicial consequence of this ignorance has been the want of good publications on subjects connected with Consuls' duties, and pointing out the particulars of their rights. The instructions of the Secretary of State, published with the evidence taken on the service by Parliament in 1835, contain the best possible general directions for their official conduct; but in that evidence, given by our Consuls, there are many proofs of the number of cases for which special rules are required.

It is time that this defect should be supplied; and I would earnestly recommend to Consuls, who themselves are best acquainted with such cases and their decisions, to combine and place on record the several authorities and precedents so established. I will give the few following points of Consular rights, on which such an elucidation is required:

Treaty, Statute, and Vattel have not so clearly defined any of them, as not to leave cases for argument and settlement.

Use of national flag and arms; local precedence; presentation at court; inviolability of house, office, property, person, letters and messengers; exemptions from costs of official process, import duties, taxes, and services; freedom of local enquiries; co-operation of local authorities in prosecutions, information and official acts; jurisdiction over intestates, seamen, offenders and lunatics; authority in inquests, affidavits, notarial acts, committals, and boarding ships; attendance at trials and legal processes; inspection of prisoners and pending process; representation of British Government, and absent or disabled British subjects; advocacy for the subjects of allied powers; official language and the text of treaties.

(To be Continued.)

OBSERVATIONS ON THE TIDES OF THE ENGLISH AND IRISH CHANNELS.

From a Paper in the Transactions of the Royal Philosophical Society by Capt. F. W. Beechey, R.N.

IT is with pleasure we notice a paper which has been published in the Philosophical Transactions for 1848, entitled "A report of observations made upon the tides in the Irish Sea, and upon the similarity of the tidal phenomena of the English and Irish Channels, &c.," by Captain F. W. Beechey, R.N., F.R.S.

A paper of this description has long been a great desideratum, and we hail with real gratification an attempt to amalgamate, and refer to one general local standard, the scattered and discordant references with which our charts and sailing directions abound, whenever the subject of the stream in the offing is treated of.

Nothing can be more puzzling and annoying to the anxious navigator when near the land, and desirous of knowing how the tide is affecting his route, than to be told that the stream in the offing turns so many hours after it is high water *by the ground*, and a few miles further on that it turns so many more hours after it is high water at some place on the coast, for neither of which places does he in all probability possess tide-tables; and thus throughout his passage to be referred to data which either has to be collected, and the required quantity to be calculated or which he cannot command: for there are but comparatively few places on the coast for which the times of high water are given in our tide tables.

It was to simplify this question that Captain Beechey set on foot a series of observations on the course of the stream in all parts of the Irish Sea, and his labours are fully repaid by the gratifying fact that, although the tides in their progress along the channel run through all the hours of the quadrant, making low water at one end of the channel whilst it is high water at the other, the turn of the stream is *simultaneous*; that the northern and southern streams in both channels (that is of the Tuskar in one instance, and of Kintyre in the other,)

commence and end in all parts, practically speaking at the same time, and that that time corresponds with the time of high and low water on the shore at a spot where the streams from both channels meet, (or what may be termed the *virtual head* of the tide) which in this case happens to be Morecambe Bay. So that the seaman now, whenever *he wishes to know how the stream is running in any part of the Irish Sea, may consult the tide-table at Liverpool*, (which is within a few minutes of the establishment at Morecambe Bay), and note whether the tide is *rising* or *falling there*, to ascertain whether he is being carried *into* or *out* of the channel; as the rising tide at Liverpool answers to the ingoing stream, and *vice versâ*, the falling tide to the outgoing stream, in all parts of the channel from Tuskar to Rathlin.*

Some time previous to these observations being made a very accurate series of operations was carried round Ireland at the suggestion of Mr. Airy,† to ascertain whether the half tide line or *mean water level* was, as its name implies, a *level* line or otherwise, during which it was discovered that at Camtown, near Wexford, there was little or no rise or fall of the tide, and Captain Beechey referring to this point furnishes us with these curious facts, that whilst in one part of the Irish Sea where there is neither *rise* nor *fall* the stream runs with *great rapidity*, there is in another a spot where the *rise* and *fall*, are *considerable*, and where there is *no perceptible stream*. These and other curious phenomena will be found interspersed over this interesting paper. But the paper is more than interesting, the information has been turned to good practical account, by being embodied in a chart, shewing the courses and rate of the stream in all parts of the channel on a spring tide, an inspection of which will instantly shew the seaman the effect the tide is having on his vessel wherever he may be placed, and is especially useful in apprizing him of the danger of approaching either Cardigan or Caernarvon Bays at particular times of the tide.

To render the observations of further utility another chart accompanies the paper on which are given lines shewing the range of the tide at springs in all parts of the channel, and a simple rule and table are added for the purpose of reducing soundings, taken at any hour to the low-water standard of the chart, that the seaman may have a ready method of comparing his soundings with the depths given in the Admiralty surveys.

In this part of the paper there are some instructive remarks upon the reduction of soundings, in which it is shewn and illustrated by diagrams that the *rising* and *falling* tides are not similarly influenced, but that the latter fall more in the first half of the tide than the last, and that whilst we may with safety reduce our soundings on a *rising* tide by the rule of the cosines, we cannot do so where accuracy is required on a falling tide, especially toward the springs.

* This remark refers only to the fair run of the stream, away from the eddy tides of the bays and headlands.

† The present Astronomer-Royal.

The *mean place of the water* is next treated of, and Captain Beechey recommends this method of obtaining a *standard* for the reduction of the soundings in all nautical surveys. The operations in Ireland above-mentioned had shewn with what accuracy a permanent point of reference might, by this means be obtained: and we find in Captain Beechey's observations that in four consecutive years the extreme difference of the means amounted to only two inches. Such small differences can, however, only be obtained by a series of observations of both day and night tides, and it is remarked that the mean level of spring tides is higher than the mean level of the neaps.

Sections of the tide-wave throughout the Channel are given and referred to, in order to shew that the water having acquired an impetus will maintain its course for a considerable time, and *overrun an advancing tide-wave, although ascending a considerably inclined plane*; and to exemplify that there is no necessary connexion between the *direction of the stream* and the *rising or falling of the water*, for in these instances it is seen that the tide-wave is rolling *in*, making high-water in its progress along the Channel, whilst the stream is passing *out* in spite of the undulation.

We now come to the most interesting part of this paper:—Captain Beechey having reported upon the phenomenon of the Irish Sea as determined by his own observations, takes up the subject of the tides generally, as they affect the navigation of both the English and Irish Channels. Availing himself of the observations which had been already made, especially those of Captain Martin White, he endeavours to reconcile and account for the apparently contradictory observations on the courses of the stream throughout the Channel.

The remarkable similarity of the geographical feature of the English and Irish Channels rendered it probable that a similarity of tidal phenomena would also appear, upon investigation, and combining the information which had been procured in the Irish Sea, with the observations which had been made in the English Channel, it was evident to the author that the water in all the outer part of both Channels was influenced by forces acting in opposition to each other, or in other words that there was a tide in the offing, whose streams of ebb and flood did not correspond with those of the inner waters; but we shall let Captain Beechey speak for himself. He gives it as his opinion that “The great offing stream at the entrance of the English Channel extends its influence as far up as Cape La Hague, beyond which, owing perhaps to the sudden contraction which there occurs in the Channel, the stream suffers no interruption, but, as in the Irish Sea, passes up and down the Channel six hours nearly each way as far as a line joining Dungeness and Cape Grisnez, the apparent *virtual head* of the tidal channel. Here the influence of the North Sea stream begins to be felt, and here, as in the Irish Channel, again *the time of high and low water at the virtual head of the tide regulates the turn of the up and down stream along the whole channel* as far as the contraction. Beyond this the offing stream being governed by its own high water, and that occurring at

about six hours earlier than that of the head of the channel, the offing stream either encounters the returning streams from the Channels, or withdrawing its water, solicits their streams and thus alters their course, making them for the most part set across the Channel in curves more or less bent, as the spot is more or less removed from the offing; so that there seems to be but one hour's tide each way that passes clean down the Channel from Beachy Head to Scilly, and round the Land's End to Bristol. The outgoing stream from Beachy Head encounters the incoming stream of the offing tide somewhere about the Start Point, and both are turned down into the great Gulf of St. Malo, which seems to receive the accumulated waters of these opposite tides.

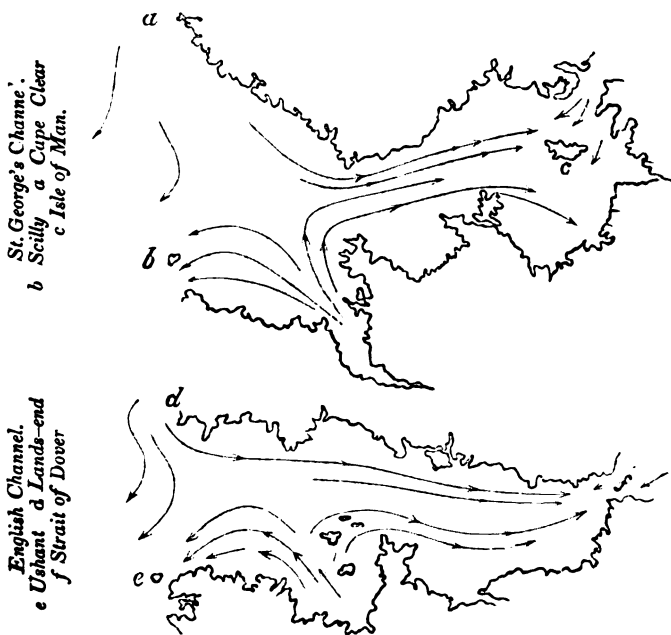
“Whether or not this influx is instrumental in raising the water here to the extraordinary height of 47 feet perpendicular range at springs, or whether it be owing to its form and position as regards the advancing tide-wave, I leave to those who are competent to decide; but it is a coincidence that cannot escape observation, that this spot, like the Bristol Channel, is the concentration of streams from opposite directions; that it has its waters raised to the same extraordinary elevation nearly to a foot, and that its time of high water is nearly the same.

“On the change of tide, this great bay, like the Bristol Channel, as it received so it returns its waters in opposite directions; the tide splitting somewhere between Alderney and the Start.”

In the course of this investigation many coincidences seemed to assimilate both the geographical feature, and the tidal phenomena of the two Channels. “If,” observes Captain Beechey, “we compare their extent and configuration, we shall find that the English Channel, reckoned from a line joining Ushant and the Land's End to the extent of its tidal stream, is 262 geographic miles, and that the Irish Sea, taken from a line joining Cape Clear and Scilly to the end of its tidal stream, is about 265 geographic miles. In both Channels there is a contraction about midway by the promontories of Cape La Hague, and by St. David's Head, and at very nearly the same distances from the entrance. These contractions are in both cases the commencement of a regular stream flowing six hours each way, and the *turn of the stream throughout coinciding with the times of high and low water at the vertical head of the Channel*, situated in both instances about 145 miles above the contraction. Below this contraction the stream in both cases varies its direction nearly every hour according to the force exercised over it by the stream in the offing. In both cases again between the contraction and the southern horn of the Channel there is situated a deep estuary:—the Bristol Channel and the Bay of St. Malo, in which the times of high water coincide, and where, in both cases, the opposing streams meeting off the mouths, pour their waters into these gulfs; and where the tides in both cases rise to the extraordinary height of 47 feet at the springs.

From the Land's End to the meeting of these streams in the Bristol Channel is seventy-five miles, and from Brest to the meeting of the streams off Guernsey the same. A still further coincidence is pointed

out in the phenomena of these Channels. In one at a place called Courtown, a little above the contraction of the Strait, and at 150 miles from Cape Clear, (its entrance,) there is scarcely any rise or fall of the tide, and in the other channel (about Swanage) similarly situated above the contraction, and just 150 miles from the Land's End (the entrance of the Channel) there is only 5 feet rise of the water at the springs. In both cases these points of small range of tide are situated on the opposite side of the Channel to that of the great range abovementioned; and in both cases these spots are the nodes of the tide-wave, on either side of which the times of high water are reversed. Again, there is traced a similarity in an increased rise of the tide on the south-east sides of both Channels abreast of the virtual head of the tide; viz. at Liverpool and at Cayeaux, when the spring ranges are respectively 32 and 34 feet."



Captain Beechey pursues the comparison still further in the progress of the tide-wave along both shores, and between the situation of the node placed by Professor Whewell in the North Sea, and a corresponding point of small range and immersion of phase at the back of Kintyre: the node in the northern being, curiously enough, situated as nearly as possible at the same distance off the head of the tide at Dungeness as the node at Swanage is on the opposite side of it; and the node at Kintyre is about the same distance from the meeting of the tides off the

Isle of Man, as the North Sea node is from the meeting of the waters off Dungeness; and is similarly situated with regard to the node at Courtown* as the North Sea node is with regard to Swanage.

We regret the inability to do more than give a diminutive sketch of one of the many interesting plates which illustrate Captain Beechey's paper.

Much of the reasoning from which the foregoing conclusions as to the motion of the streams in the two Channels was derived, was based upon data collected from various sources, and Captain Beechey being desirous of testing his views by a full investigation of the whole of the tidal phenomena of the Channel, the Admiralty, at the request of the President and Council of the Royal Society placed a cutter at his disposal, and we have just learnt that the observations have confirmed in a most satisfactory manner the comprehensive view he had taken of the subject. The investigation it is understood will be continued in the ensuing summer, and when completed will no doubt be published for the benefit of navigation.

The paper is illustrated by various diagrams shewing the form of the tide-wave of ranges varying from 8 feet to 44 feet, and for the reduction of soundings taken at any hour to low water, &c.

We cannot conclude without congratulating the seaman on the introduction of this simple and reasonable plan of referring the times of the turn of the stream to the phase of the tide at the head of the estuary or channel, and which in a channel accessible to a tide-wave at both extremities, Captain Beechey thinks will be situated somewhere near where the meeting of the tides occurs.

ASCENT OF THE SPITS KOP MOUNTAIN.—*Cape of Good Hope.*

(*Concluded from page 22.*)

BEING at Graaff Reinet, I embraced a good opportunity which presented itself of making the tour of the Sneeuwbergen, or Snowy Mountains, and ascending the Spits Kop or Compass-Berg, the highest peak in South Africa; and if beautiful scenery, a heavenly climate, and the hospitality which is to be met with on the road, have any charms for any of your numerous readers, I would say make this trip by all means. Having procured horses, the earliest dawn of the 2nd of September, saw myself and an old friend and fellow-traveller, Mr. Eden Baker, on the road, accompanied by Mr. R. Southey of this place, who intended riding part of the way with us. We proceeded, not by the direct road to the mountains, but took the longer road through Pretorius Kloof. This romantic ravine, in length upwards of thirty miles, contains in its bosom many fine farms, and the Sunday River, the banks of which are luxuri-

* In page 71 "Courtown" has been inadvertently printed "Camtown."

antly clothed with mimosas and willow trees of an enormous growth. The latter droop their elegant branches quite down to the surface of the waters, whilst the mountains which tower above you on all sides render the valley a complete picture. A curious circumstance is worthy of remark in this river. The stream in many places disappears suddenly in the sand, and rises again after a subterraneous passage of a mile or less; this occurs frequently both above and below the Kloof.

After crossing the river twelve times in as many miles, at some places a flowing stream, at others a dry water course from the above-mentioned circumstance, we arrived at the farm of Lieut. Bingham. In the afternoon we intruded on the kindness of another family, Mr. Siesching for a dinner, to which, with the usual frank hospitality of Africa, we were made most welcome. Towards sun-set we emerged from the Kloof after having crossed the Sunday River twenty-five times. At this spot we remarked the curious appearance of the rocks and stones which have, apparently, been piled and heaped together with the utmost regularity, resembling ruined towers and fortifications, by a hand more powerful than that of puny man. These rocks abound with the rock rabbit or *hyrax*. At the close of the day, we reached the farm of Mr. Southey, where we slept. Over the hills which surround this place, the sharp conical peak of the Spits Kop appeared floating in mid air, having its shoulders enveloped in fleecy clouds. Daylight saw us in our saddles, cantering briskly over a delightful valley thickly strewn with spring boks.

Our party being increased to five, and a hard frost having covered the country, we did not draw bridle for nine or ten miles, when we ascended a lofty ridge of the Sneeuwberg; on the other side of which we perceived another extensive grass plain of many miles extent: the Spits Kop and neighbouring mountains bounding the view. From this elevated spot the eye wanders over a great part of these fine mountains, whilst numerous farm-houses enliven the plain below. At Quagga's Vey our companions parted from us, and we struck off in a southerly direction, having already passed to the northward of our destination—the Spits Kop.

After a ride of a few hours through the most delightful scenery, we again came in sight of the Spits Kop, whose gigantic form was seated on a high range of mountains, having a grassy plain at its own immediate base. This range was similarly situated, being on the summit of another range, thus forming three prodigious steps from the plain to the summit of the peak.

At mid-day we descended a ravine, whence the Sunday River takes its course, and partook of a Dutch boer's dinner at the house of C. Morais. At this place a high ridge of mountains runs east and west, dividing the rivers flowing north and south; those on the south side flowing into the sea, and those on the north into the Orange River, with the exception of the Little Braake River, which, rising on the north side of the range, flows along the side of the Roode or Rhinorter Berg, and suddenly turning to the south, passes the eastern spur of the Scherding Berg, and falls into the Great Fish River at Salt Pan Drift. After pur-

suing our way through a long track of hills and rocks, where no beaten path was to be seen, we arrived towards evening at the base of the mountain; and though we had been rising for the last twelve miles, still he looked "mighty high."

Down one of the polished rocks on its sides, a miniature waterfall was expending its tiny stream in four separate leaps. On our right was a branch of the Kat River, which rises here,—a puny stream. Behind us lay an extensive landscape, embracing an immense extent of country. We now emerged from this wild looking place, and found ourselves descending into a lonely valley, from whence the Zeekol River has its source; this being the third river whose source we had fallen in with during the day. At this moment a few reboks came bounding down the neighbouring heights, clearing at the base, by one bound, an immense chasm cut by the water. These elegant antelopes passed close to us, and were soon lost in the neighbouring hills.

Towards sun-set we reached the farm of Field-cornet Du Toit, where we had some refreshment and a comfortable bed. The hospitality of the South African Dutch farmers is really beyond all praise. At the close of a hard day's ride, a traveller dismounts at the door of a man whose name is unknown to him, of whose very existence he was to this moment ignorant; nevertheless, he is cordially received by the farmer with an invitation to "off saddle," to come in and rest himself; food is immediately placed before him, or coffee during its preparation. The good vrouw is seen busily engaged laying sheets and covering on a bed in a spare room, set apart for strangers and travellers. After supper and a bowl of milk, you are conducted from the refectory to the dormitory, the boer having first made himself acquainted with your name and occupation, which combined with any little news you may have it in your power to communicate, appears to reward him for his trouble and hospitality; pecuniary remuneration being neither sought for nor expected, and if offered, refused. In the morning you are not allowed to start before having partaken of coffee, and a crust of bread. At the many farms where it has been my lot to stop, no shadow of difference in hospitality have I experienced,—a uniform kindness prevails amongst these kind-hearted and simple people.

Bidding farewell to our kind entertainers, we started early the next morning, (4th), and rode in half an hour to the base of the mountain, which can only be ascended from the western shoulder. The ascent being moderate on this side, we managed to ride a good part of the way up; at last becoming too steep we off saddle, and knee-haltered our horses. Having failed in procuring a boy or guide, we were obliged to leave the horses by themselves, and to grope our way up, the best way we could, over immense detached masses of rock, which had fallen from the neck above, until we were suddenly brought to a stand still, by a precipice of about 1,200 feet deep. This spot commands a fine view of the neighbouring hills. Here we found snow in all the crevices, and on the ledge of the rock facing the south.

From this point we were obliged to descend, in order to try some

more practicable point, as a vast wall of perpendicular columnar masses of granite* rose directly over our heads to the height of 300 or 400 feet. This wall runs entirely round the mountain, appearing to defy the attempts of an ascent. Many of these columns are from 80 to 100 feet in length, and about 16 to 20 feet girth; some have slipped from their former elevated spots, and have been hurled into the abyss below; others are about to fall. One I remarked had slipped from its place, its heel resting on the edge of the head of its neighbour below, ready upon the slightest motion being imparted to it, to follow its companions below. Another column of about 60 feet in length, had slipped from its place, but had been stopped in its headlong course by falling between two others, where it had become firmly wedged, as a key stone in an arch; others had snapped in two, and were bulged out in the middle, and appeared as if the slightest breeze would displace them. At last we discovered an opening in the wall, whence we could prosecute our way. At one spot we were necessitated to pile up stones to enable us to reach an overhanging ledge. After a long and tedious climb over loose rocks we reached the summit, where an old flag-staff is planted, the flag having long ago been blown to atoms, and well were we repaid for our toils, which had lasted three hours from leaving the farm. We now stood upon the highest land in South Africa, at the height of 10,250 feet above the marine level.

To the north, looking over the Rhinoster Berg, lay stretched out the immense plains which are intersected by the Orange River, the boundary of the colony. These plains abound in wild beasts, (gnus,) quaggas, ostriches, spring boks, lions, and other large game. The peculiar mountain at Colesberg, the Toverberg was distinctly visible. To the east is seen the lofty peak of the Storm Berg, the western shoulder of the Quathlamba mountains, which range runs through a great part of Kaffraria, as far as 28° south latitude, and through the country of the Amazoolus.

To the south-east the dense bush or jungle of the Great Fish River is seen running in a southerly direction through the District of Somerset, until lost to view in the distance; beyond which the Tarka mountains and Winterberg, the latter on the confines of the colony and Kaffraria closed in the view.

A little more to the south looking over Buffels Hoek, a confused series of mountains and hills in the District of Somerset and Albany, which defy description and cut short the view. To the south, looking over the Camdebo mountains, and Great Karro or Desert, the Winter Hoek mountains stand out in bold relief. The Cock's Comb, with its singular bold outline, peculiarly distinct to the east of which the sea, at a distance of 150 miles, was plainly discernible. To the south-west the view is bounded by the Groote Zwart-bergen, or Black mountains, be-

* This is doubtful. Persons who have made the geological structure of this province a subject of considerable study, are of opinion that granite is not to be found, and it seems probable, therefore, that Licut. Sherwill may have mistaken the true character of the peak.

fore reaching which the eye wanders over the Zwart-ruggens and Great Karoo in the District of Uitenhage. At our feet lay the grand semi-circle of the Sneeuwbergen, with its thousand peaks and table mountains. In the Winterveld to the north is seen the immense Table mountains standing alone the monarch of the plains. The whole embracing one of the most extensive views in South Africa, of many thousands of square miles.

A thunder storm that had been brewing the whole morning in the west, now announced its approach by distant rumbling and bright flashes of lightning. The panorama was complete. The Camdebo and Sneeuwbergen mountains were enveloped in the thickest rain clouds, from whence issued the most vivid flashes of forked lightning; through a break in these clouds, a part of the Sneeuwberg mountains were seen of the brightest orange colour, faintly tinged by the falling rain, whilst to the north all nature was smiling in a beautiful sunshine, unconscious of the approaching storm, which was to shake the hills to their foundation. Perceiving the storm to be rapidly approaching to the spot where we stood, we descended a few yards on the lee side of the mountain to seek for some cave or shelter. Finding an overhanging cliff, where we might repose in safety from the storm, we again ascended to the top to witness the imposing scene; for now the clouds approached nearer and nearer, heavy drops commenced falling, forerunners of mischief, while Heaven's artillery pealed from every cloud. As we approached the flag-staff, a creaking noise as of an insect common about these rocks, (*Blatta Africana*,) was heard in every direction. Stooping down I turned over some of the stones to satisfy myself that the noise was occasioned by the insects in question, on doing which I grasped the flag-staff, and at the same time divested myself of my hat, immediately my head and hands were stung as if by a thousand needles every hair on my head stood on end, and every thing appeared on fire. The truth flashing on my mind, I stood up, and to my horror, and confirmation of my conjecture, saw my friend similarly situated, he was in a blaze of light! The fact is, we were immediately under a highly electrically charged cloud, the fluid from which was passing down the flag-staff and us into the rocks at our feet. With an exclamation to the effect that it was lightning, I bounded down the sides of the mountain with a rapidity that gave my friend reason to believe I had leapt the precipice in fear. In a very short space of time we both found ourselves crouching at the innermost corner of our cave, having in great haste divested ourselves of our knives, pocket compass, and other metallic substances, which we placed at some distance from us.

In a few minutes heavy rain, succeeded by heavier hail, commenced falling, whilst the thunder shook the surrounding heaped up masses of rock.

The lightning was awful and blinding, succeeded by an instantaneous crash. The cold became intense. With the utmost anxiety; we counted the pulsations at our wrists, which began to inform us of the storm passing over, which it did sooner than we expected. Right glad were we,

when from being in the thunder clouds, we were enabled to calculate the distance of the storm, as the distance increased from one to nine miles. At last it died away in indistinct murmurings, as it sped its course over the Tarka and Winterberg mountains.*

Ascending once more to take a farewell of this beautiful scene, all nature seemed refreshed from the passing storm; the air clear and transparent—the hills and valleys smiled with gladness as the bright sun once more illumined them with its beams. Mixing some snow (of which we found plenty at the summit) with our wine, we drank to “absent friends.”

As light fleecy clouds were fast closing round us, we commenced our descent, which we accomplished in safety. We found several rare botanical specimens in our descent, and several craniums of the rock rabbits, victims of the numerous eagles which abound here, which build their nests in the clefts of the rocks, and on the summits of the large pillars of stone surrounding the head of the mountain. Finding our horses where we had left them, we up-saddled at 2 P.M., and rode through the Sneeuwberg and a flight of locusts, putting up at the farm of Van de Merwe in the evening, where we were kindly treated, and presented with food, which was the more acceptable as we had fasted twenty-four hours.

Next morning passed the Kat River, a running torrent from the late storm. Towards evening we rode out of our way half an hour to view the waterfall, near the junction of the Beaufort, Colesberg, and Graaff Reinets roads, and about two miles from the foot of the Oude Berg. I refrain from any description, most waterfalls being alike; but would recommend any one travelling that way to ride out of his path, only three miles to view it, as it will well repay the trouble and loss of time. Descending the Oude Berg pass, we arrived at Graaff Reinets, on Saturday the 5th, having been absent but four days, and gone over 150 miles through one of the most interesting and picturesque parts of South Africa, and where mountain scenery is seen in perfection.

EXTRACTS FROM THE JOURNAL OF A VOYAGE TO THE NORTH-WEST SIDE OF AMERICA.—By *J. Colnett*.

[The journal from which these extracts are made, appears to have remained unpublished among the records of the Admiralty for many years; and at the present time, when every kind of information on Vancouver's Islands is desirable, the condition in which he found it sixty years ago, may prove interesting. Capt. Colnett, prefaces his journal with the following introductory remarks.]

* A Hottentot was struck dead by lightning at Cradock, and many people were knocked senseless to the earth by this very storm.

Having been recommended to a company of merchants trading to the north-west side of America in the beginning of July, 1786, I received a letter from their secretary offering me the command of a cutter to perform a voyage in to King George's or Nootka Sound, as soon as I could obtain leave of absence from H.M.S. *Pegaze*, of which ship I had been first-lieutenant for three years. I waited on the Governor of the Company, and after some little conversation the first plan was altered, and he determined on chartering a ship and purchasing a smack to accompany her.

The beginning of August a ship was selected, and a smack purchased. Some doubts arising from the age of the ship, being thirty-six years old, of her ability to make a passage round Cape Horn, she was regularly surveyed by carpenters, and pronounced fit for the purpose: the command of the ship was given to me, and to be called the *Prince of Wales*, burthen 171 tons, pierced for fourteen guns, half frigate-built, and to carry thirty-five hands, officers included. The smack was to be commanded by Charles Duncau, a master in the Royal Navy, and to be called the *Princess Royal*, burthen 65 tons, to carry four 2-pounders, and fifteen hands in all.

The ship was hauled into gun dock in the river Thames, a false keel put on, bends, and water ways caulked, and some little alterations made; by the 13th was out of dock. The smack also was caulked, sheathed, &c., and off the slip much at the same time. We both began to fit out with every expedition, but one unforeseen business or other prevented our leaving the river till the 23rd of September.

On the 27th anchored in the Downs, the wind being to the westward. Captain Duncan thought he could tide it down Channel to Spithead, at which place I was to take Mr. John Etches on board, as supercargo. I desired Capt. Duncau to lose no time, and I would follow him as soon as the wind would permit. Next morning had a light air of wind from the S.S.E., weighed, and came to sail; before midnight wind flew round to the westward, blowing strong; by daylight it increased to a gale; wore, carrying all the sail we could bear for the Downs. At 8 o'clock saw Folkstone. At noon the 29th abreast the South Foreland, it now blowing a hurricane from the N.N.W., which obliged us to bring up where we were, which we accomplished with both bows, as the first anchor we let go had no effect; in this short cruize two of the mizen shrouds gave way, most of the running ropes broke, and ship strained greatly, and made much water in her upper works and sides; from the water's edge upwards scarce a seam but the oakum had worked out. In the evening it moderated: on heaving the anchors up to get further into the Downs, found a fluke of the best bower anchor sprung.

October the 1st, weather appearing settled, weighed, and came to sail; winds variable. On the 3rd got to Spithead, ran down to Cowes, and anchored, and got the caulkers to work; new rigged the mizen-mast; paid the people advance and river pay, and every thing complete and ready for sailing by the 14th.

Capt. Marshall rendered me many services while I lay here, and also

prior to this, in interesting himself to get me this employ, and readiness to serve me at all times has laid me under numberless obligations to him: Capt. Marshall's son, a lieutenant in the navy, was to accompany me part of the way, but not with his father's consent, to be landed with fifteen men, stores, &c. at New Year's Harbour, Staten Land, to carry on a sea-lion fishery. The articles for this so lumbered us, that the cabin state-room and steerage were so full of provisions and stores that we had scarce room to get into our beds, nor was there room left in any part of the ship for the smallest article to be taken on board.

The smack arrived at Spithead a few hours before the ship, she had met with no material accident during the gale we suffered so much in: she lay at anchor in Dover Roads. On the 2nd of October, we saw her off Brightelmstone. October the 16th weighed, with a light air of wind at W.S.W. and variable, to turn down to Yarmouth; the smack dropt down the day before. Soon after underweigh the wind got round to the northward and eastward, made a signal to the smack to join company; made sail, and ran through the Needles.

[As we shall most likely have occasion to refer to this voyage we have preserved the above record of the vessels, and circumstances under which it was performed. We now turn to the following notices of Nootka Sound in Vancouvers Island.]

Minerals.—Saw none that we have any reason to think are found in this neighbourhood.

Copper.—They were in possession of some small quantity, but their eagerness to possess it is a convincing proof they get it in the way of barter, through the same channel as the iron.

They use a red kind of ore to paint their faces and utensils with, and set little value on it, nor for our vermilion, although they preferred it, would they give the smallest article in exchange: they have also black and white, which they mark their faces with: the latter gives them a horrid aspect.

The inhabitants are of a middling size, neither corpulent nor lean, the visage mostly round and full, and sometimes broad and high prominent cheeks; their nose flat, and wide nostrils; the eye small and black, rather dull than sparkling; the mouth round, and lips mostly thick; their teeth good and regular. Very few young men wear their beards, and scarce an old man without one: the hair of their heads is dark, inclining to black and thick, and on many of them a good length hanging down over the shoulders and forehead in a wild manner, but when going on a visit, it is dressed in different manners, ornamented with the white down of birds.

Their complexion when washed clear of paint is a shade whiter than the people of the Society Isles, and the women had the appearance of colour in their cheeks. The children whose skin had not been dyed with paint, were nearly as white as Europeans, but their mothers have a most unnatural way of treating the males, binding their heads round with a bandage under the poll, and over the crown, forcing the back of the head out to a considerable length. This I believe to be a very new cus-

tom, as I only saw one person arrived at the years of maturity with an uncommonly long head.

The only difference between the men and women in dress, is in the outside covering of the men being an animal's skin with the fur out, but the women have more of other kinds; a mat is used by both, fixed on the shoulders by way of a great coat when it rains. Very few of the women can be called handsome, or anything agreeable in their countenance, and the small number is of those the chiefs had selected for themselves. The employment of every rank of them is making mats, baskets, hats, and other coverings, but none of us saw them making the woollen garment they wear. Their husbands keep them in great subjection, treating them with little affection or tenderness, for besides making their clothing and many other useful articles about the house, they gut fish, prepare the roe and other victuals; at other times on the shores to pick or dig shell-fish, and in the woods for berries and roots.

The women have a great share of modesty, nor had we but two instances of their deviating from it; always decently covered and not without taste: was it not for the dirt they contract from the oil and paint they daub themselves with, which breed a great quantity of vermin, and they take no pains to destroy them, except one is troublesome, and when they get hold of it by chance it is cracked between their teeth and swallowed. This is practised also by the men, who are dirtier, if possible, and void of all modesty; on a fine day lying naked basking in the sun, which was often practised in their canoes alongside: they appear to be very idle, their chief employment is building houses, making canoes, war weapons, and fishing; the latter they go in great bodies to do. I believe to protect one another and their fish; having no doubt but they both thieve and murder when opportunity offers. The supercargo was at a house in his expedition, where a man had just received a stab, and had every reason to think his appearance saved both the man's life and property, for the two men that were on this business paddled off in great haste.

They eat of berries and roots as they come in season, but their chief food is fish, having great numbers smoked and dried for winter, mostly sardine and salmon, packed in mats, making a bale three or four feet square. Deer, I don't think they frequently eat, but kill them for their fat and skin: birds are often shot with arrows, but are of no estimation, as several pigeons were brought alongside to sell. The dishes for their food are as nasty as themselves, and don't appear to have been cleaned since first made; knives they have plenty, but never use them, when their fingers and teeth will do. There is no cultivation among them, which may proceed from too frequent wars, and from the same cause may arise their having such miserable dwellings, being so contrived as the covering of them can be carried away expeditiously. The largest building is generally in the middle of the village; and occupied by the chief: on the two beams which form the length of the house are paintings resembling human figures, and the supporters of these beams are large posts of wood. Those at each end have a human face carved on,

and in the mouth teeth fixed. The remainder of their house is made with small rafters and boards.

To account for the number of deserted villages and houses in different parts of the Sound I cannot, unless the greatest number of the inhabitants have been exterminated by war, the remainder joining the conquering party, or obliged to shift their abode on account of their dirt and nastiness, which is scarce credible, the quantity of fish scales, guts, bones, &c. surrounding all their habitations, and when increasing faster than the crows, ravens, and herons can destroy, rising above the platform of their houses, which are several feet above the ground, must become too great a nuisance for themselves to bear.

The canoes are well constructed, the largest carrying twenty or thirty people, the smallest two or three; they are formed out of one tree growing narrower at each end, the stern the lowest, the bow having a good rake forward, and carried up much higher than the other end; some of them have carving and painting on their stem and gunnel, and the inside cut in grooves, which at a distance look like timbers; they swim without outriggers, and the seats are round sticks.

Their implements are well contrived of every kind, except their nets, which are very indifferent; their most curious one, and which they are very expert in using, is a long piece of wood, sharp-edged, set with large teeth, which they pass under a shoal of fish and catch them on, or between the teeth.

They informed us land animals were caught in snares, placed in their haunts, and killed afterwards with spears and dogs, they have a number of these animals, which resemble the English fox dog. One was taken on board the smack young, and with every attention paid it still retained its savage state, biting at times its best friends. He was given away at the Sandwich Isles, the receiver by the next day finding it of so different a temper to their docile animal brought it back, beseeching they would take it again, as he had driven every one out of house and canoe till his mouth was tied. This animal seldom barks, and then very low; but makes a most hideous noise at times by howling. I believe the animals of the woods are often trepanned by the natives dressing themselves in their skins and masks, running on all-fours, and making the noise of the beast they are in pursuit of;—by the example shown us on board it is a most excellent deception.

Their most common fishing lines are of a sea-weed which grows to a great length, about the size of whip cord; and while kept moist is very strong; they have other lines made from the cypress bark, and also from the skins and sinews of animals, most likely the whale; and many of their implements perhaps from the bone of the same fish.

I saw nothing of their religion. The method of disposing of their dead is cutting them up in pieces, putting them in a box, burying it a little below the earth's surface, or leaving them above ground in the woods, near where some corpse had been interred. A junk of a tree was set up with a human face carved on, and called by the natives "klumma."

There was an old man whom I took for a priest came off several

times, and made long orations to numbers that were collected around the ship. This is the same man that brought the invitation to traffic on shore with the strangers; but what was the purport of his harangue the imperfect knowledge we had of their language made it impossible to tell. I was inclined to think it was against us.

Several days prior to our reception at the village, I observed this person in a small canoe passing and repassing the ship, frequently in great haste, as if employed express, which latterly never happened.

Our confidence was greatly destroyed in each other, from the circumstance that happened on board the *Princess Royal*, on our first arrival. The chief of the district we lay in, was named Vau-maise; he was on board the smack at the time the man drew a knife on Capt. Duncan; he did not speak, but we had frequent opportunities of observing this daring fellow was his right-hand man. No doubt but he brought him there to execute what he threatened. Not till we were offended with our reception on shore did we know his consequence; on our mentioning what had passed, his answer was "We had not treated him, nor his brother well, who resided abreast the ship; that the people of his village had supplied us with fish and berries, and his brother with water, wood, and a mast; the latter articles we had paid nothing for; had made presents to strangers, and given them nothing." I thought some part of his complaint very just, and a grenadier's cap, and several other articles were given him, and Capt. Duncan gave his brother a similar present. On the receipt they set up a loud howl, a signification of approbation. They have few methods of expressing the passions, hardly a circumstance excites pleasure in their countenance, and then only a faint smile, seldom or never laughing. I have seen a man cut several parts of his arm with a knife without shewing the least symptom of pain. The strongest passion is fear of death, which on the sight of fire-arms is expressly shewn.

They frequently scold and abuse each other, but their anger apparently is very superficial, have a little curiosity, and a high opinion of their carving, implements, and ornaments which were preferred to our beads: copper or brass buttons, were in great estimation with them, they stole every thing that could be of use; and from the frequent visits of Europeans, they have found many articles of use that were unknown to them before.

Vau-maise appeared to be a freebooter and great warrior, his neighbours standing in great dread of him, nor do I think he ever bore us any friendship; a convincing proof was his taking the pains to prevent our supplying ourselves with salmon on the day of leaving his village, cruising about in a large canoe well manned and armed, taking all, or most, of the fish from any one he saw coming near us. This they tamely submitted to, and called it "capsheetle." I have seen this practiced by individuals after a long scold, which ended in the loss of the fish; we accounted for it, supposing the person to be a stranger, and a forfeit to his encroaching on their liberty.

The chief of the village we lay at last was named Maccula, he and his

people much more civilized, and treated us well, frequently entertaining us with a song. On our repeating those we learnt up the Sound, they seemed much displeas'd; said they were peshak and belonged to suma, or fishing merchants. They had a great desire for fire arms, and powder, and got a brace of pistols and a few charges in exchange for some dresses of furs.

A native was seen on shore with his head cut off by some of their neighbours; they set out while we lay here with the fire arms collected from us and the other traders, to punish the murderer. It could not be far off as they were soon back,—the result of this expedition we could not learn.

ISLANDS IN THE PACIFIC OCEAN.

(Concluded from page 30.)

Vocabulary of the Eddystone Island Language, New Georgia.

Lceou. What name.	Pora. There.
Myo. To come.	Kaveca. More.
Roo. To go.	Py. Plenty.
Arra. Me.	Neninggo. Scarce.
Agu. You.	Eteckee. Small.
Bangara. A chief.	Tamassee. Large.
Maraan. A man.	Wakka. A ship.
Kumbru. A boy.	Eko. To steal.
Mang-gota. A woman.	Domma. To look.
Ngaru. A girl.	Borro. A pig.
Wana. A house.	Kokeraku. A fowl.
Mola. A canoe.	Bargu. A pigeon.
Venna. To give.	Teesa. Him.
Vennu. Give me.	Gawaso. The sun.
Teku teku. To take.	Popu. The moon.
Verra. By-and-by.	Manja. To kill.
Nongari. I understand.	Eku. Fire.
Tumbelow. I do not know.	Tang'galu. Daylight.
Horee. Go on shore.	Rooundoma. Dark.
Mulee. To return.	Raancee. To-day.
A. Yes.	Wogo. To-morrow.
Kapuree. No.	Bongee. To-night.
Kapu. Tortoiseshell.	Lulum. Father.
Pukau. Biche-de-mer.	Tawetee. Mother.
Gowmanga. Sandal-wood.	Tamana. Brother.
Putu. To sleep.	Manggotanna. Sister.
Tonggo. Sit down.	Keelee keelee. A tomahawk.
Toru. Rise up.	Meeo. An axe.
Matee. Sick.	Takeva. Beads.
Yampo. Dead.	Wetu. A fish hook.
Peca. Fresh water.	Poko. Calico.
Ewerree. Salt water.	Linda. A knife.
Gallegan. To eat.	Aevea. What do you want.
Endah. Cocoa-nuts.	Seenana. Who is that.
Panaky. Potatoes.	Sava. What.
Penggee. Sugar cane.	Teku teku. To bring.
Tomaki. To make.	Kow. Wood.
Pabee. Where are you going.	Tava. Reeds or rattans.
Avee. Where.	Veve. Rope.
Peeu. Here.	Tepee. A sail.

Pru. A bottle.
 Paka. A musket.
 Pesu. Gunpowder.
 Keeko. Lead.
 Kory. Coral.
 Patu. A stone.
 Maty. A reef.
 Elewa. A book.
 Kunru. Black.
 Zemeree. White.
 Kala. Red.
 Dolu. A trunk.
 Teeterona. A looking glass.
 Belu. Lime.
 Embru. Betelnut.
 Bokala. A bow.
 Umbana. An arrow.
 Opuree. A spear.
 Torupy. A hat.
 Kebu. A musical instrument.
 Pebu. Lie down.
 Gong-gona. To speak.
 Tula. Smoke.
 Peeala. To smoke tobacco.
 Ogoro. Rain.
 Kinda. Stars.
 Wazgee waggee. Payment.
 Dynggo. I do not like.
 Tura. The wind.
 Ekarenh. Bad.

Ghekekohah. It is true.
 Sawaru. What for.
 Avaygonuh. What do you mean.
 Batta jungana. Handsome.
 Beta. Bread-fruit.
 Gasu. Long.
 Papaka. Short.
 Loece. Let go.
 Tungee. Hold on.
 Akenatu. Quick.
 Ugasu. Land.
 Nenonsa. Food.
 Lawata. Great.
 Umbetu. All.
 Wountee. Bananas.
 Ogana. To bathe.
 Wotu. Go up.
 Tomee. Go down.
 Kelee. Pearl oyster.
 Tororu. Pearls.
 Kamee. One.
 Kam. Two.
 Kuay. Three.
 Mantee. Four.
 Leema. Five.
 Wouama. Six.
 Wietu. Seven.
 Kalu. Eight.
 Seang. Nine.
 Manosa. Ten.

Vocabulary of the Stewart Islands Language.

Kovy domaree. What is your name?
 Arany. Come here.
 Sya ree. Go.
 Konnon. Me.
 Akoay. You.
 De Alekee. Chief.
 Tanata. Men.
 Tana lygee lygee. Boy.
 Fafenee. Woman.
 Tamafenee. Girl.
 De faree. House.
 De wakka. Canoe.
 Kouwatu. To give.
 Kowmy. Give me.
 To. To take.
 See afeah. By-and-by.
 Eyoah ennon. I understand.
 Neeloah. I do not know.
 Elow'ee. Good.
 Fano kenta. Go on shore.
 Okuwowy. To return.
 O. Yes.
 Bayeye. No.
 Omah. Tortoise-shell.
 Mas-ana. Hawk's bill turtle.
 Woroworo. Sandal-wood.

Kawah. Biche-de-mer.
 Kuratuma. Black ditto.
 Huna huna. Speckled ditto.
 Da babah. Brown ditto.
 Moy. To sleep.
 Nohug-gelaro. Sit down.
 Mas-anee kearunah. Rise up
 Unfeya. Sick.
 Uu'matee. Dead.
 Wymowree. Fresh water.
 Wyty. Salt water.
 Ky. To eat.
 De neu. Cocoa-nuts.
 De uffee. Potatoes.
 Torro. Sugar-cane.
 Fakoutee. That will do.
 Matakuh. Afraid.
 Pe'penna. To make.
 Akoay efanu kefea. Where are you
 Lefeah. Where. [going.
 Dela. There.
 Segeeotee. More.
 Tamakee. Plenty.
 Toyee toyee. Scarce.
 Liggee liggee. Small.
 Naneu. Large.

- Wakka.** Sleep.
Kyyah. To steal.
Toga. To look.
Piggee. Pig.
Moa. Domestic fowl.
Lupee. Pigeon.
Tela. Sun.
Mirramah. Moon.
Tyyah. To kill.
De affee. Fire.
De ata. Daylight.
De bo. Dark.
De on. Morning.
De bo ney. To-night.
Tyyow. To-morrow.
De tamana. Father.
De nana. Mother.
Tyna. Brother.
De kavce. Sister.
Taguh. An axe.
Fuelanee. Beads.
Matow. Fish-hooks.
Calico. Calico.
De kniffee. Knife.
Fayatuh. To fight.
Akoay na wowa. What do you want?
Deney koeye. Who is this?
Keeah. Holloa.
Tomy. To bring.
Rakou. Wood.
Tegoffee. Reeds.
De mya. Rope.
Telah. Sail.
Tafallo. Bottle.
De feete. Musket.
De powda. Gunpowder.
De lead. Lead.
De fat tara tara. Coral.
De fatu. Stone.
Boburannee. Reef.
Booka booka. Book.
E urree. Black.
E ma. White.
De burrah. Thatch.
E urrah. Red.
De baba. Trunk.
De toggah. Looking glass.
De rayhuh. Lime.
De ka wusu. A bow.
De na sou. Arrow.
De tau. Spear.
De burou. Hat.
Fakasenu keraro. Lie down.
Tara tara. To speak.
De on. Smoke.
Meetee meetee. To smoke tobacco.
Douwah. Rain.
Faytuh. Stars.
Tawee. Payment.
Say feefy. I do not like.
Konnou feefy. I like.
De matanee. The wind.
Kakenokeno. Bad.
Say fakareresece. It is true.
Eye yah. What for.
Tow rikkarikka. Handsome.
De kurru. Bread fruit.
Sakarorooa. Long.
Boto boto. Short.
Teeakee. Let go.
Ta offee. Hold on.
Terree. Run
De fenuah. The land.
Na ky. Food.
Guhotee. All.
De futee. Bananas.
Murumuru. To bathe.
Fakareresce. To lie.
De tama. A man.
Kakee kearuna. Go up.
Ery keraro. Go down.
Teefah. Pearl Oyster.
Fatu maka. Pearls.
Seekyana. Stewarts islands.
Ta. To strike.
Katah. To laugh.
Ka'matuh. Old cocoa-nuts.
Noho. To stop, or reside.
Akvay feefy non co noho. Do you like me to stop.
Fokawarea. Fool.
Penuh penuh. Goods.
Tuhunah. A plane.
Tosoah. A friend.
Fymafee. Strong.
Fakarearea. Weak.
Ketay. To see.
Makaredee. Cold.
Mafanah. Warm.
Fyackee. To tell.
Saynanafee. Yesterday.
Teathonay. To-day.
Ney, or nay. This.
Fouremah. Shirt.
Fowwy. Trousers.
Pasouruh. The head.
Tama e ma. A white man.
Huree. To turn over.
Ofakareatu. To teach.
Keoye fyatu. Who says so.
Uufutee. To pull, or haul.
Fakaterree. To slack.
Totokah. Door.
Da peea. Arrow root.
Unuh. Drink.
De toto. Blood.
Efeea. How many.
Ennou kafanu. I am going.
Keeree keeree. Shingle.
Kareematta. The eye.

- Dey ney. Here this.
 Akoay ketay. Do you see.
 Ennou ketay. I see.
 Akoay feefy. Do you like.
 De keore A rat.
 De mure mea. Firewood.
 Say pee. Not full.
 Upee. Full.
 Denev seah. What is the name of this.
 Kowy. Who.
 Delah kowy. Who is there.
 Delah sa wakka kowy dirromy. Who is coming here in that canoe.
 Denev da fenuah feah. What island is this.
 Na ko mata. Let me look.
 Tha sou. Lift up.
 Tuguh. Put it down.
 Tugowy. I do not want it.
 Kewavee. Quick.
 Tutu akoay. You cut it.
 Fafa. Tarro.
 Kakow. Swim.
 Kurele. To fly.
 De oubu. A cocoa-nut shell.
 De peko peko. Cocoa-nut husks.
 Uguh. To dive.
 Tutu. To cut.
 Leuenuwa. Howes group.
 Koaynow owa. What do you want.
 Konnou now olala kawa. I have come to make biche-de-mer.
 Koaysay loto. Are you angry.
 Konnon say loto. I am not angry.
 Koay efanu fyacke de Aleke keou mona e tara tara. You go tell the king to come and speak to me.
 De aleke, say fana efo de wakka e tabu. He cannot come, for he is tabooed.
 Fano fyacke efanu efo. Go and tell him to come here.
 Koay feefy olala kawa. Do you like to make biche-de-mer.
 Matou feefy. We like to make it.
 Matou say feefy. We do not like.
 Kowy domaree de aleke. What is the king's name.
 Tow. Your.
 Aguh. Mine.
 Ke. He.
 Fymy ke anou. He told me.
 Tawah. You and me.
 Mowah. Him and me.
 Onnou feefy kotou ke pe penna da fare. I wish you all to build a house.
- Elow'ena. That is good.
 Seah. What name.
 Kow ruah no efo teatho feah. What day did you two come.
 Tatow. We.
 Elowe tatow ke tyvah. It is good for us to kill him.
 Koutou o tyvah. You kill him.
 Akoay say ta tama. Will you not strike the men.
 Kow ruah olo. You two go.
 Akoay fana efo teatho feah. What day did you come here.
 Teatho. A day.
 Feah. What, which.
 Searah. What do you say.
 Allo. To pull or paddle.
 Seah tawee. What name the payment.
 Akoay tawee. You pay
 Tahl. One.
 Ruah. Two.
 Toruh. Three.
 Fah. Four.
 Leemah. Five.
 Onoh. Six.
 Feetuh. Seven.
 Waruh. Eight.
 Seewo. Nine.
 Katawa. Ten.
 Ma ta ruah. Twenty.
 Ma ta toruh. Thirty.
 Ma ta fah. Forty.
 Ma ta leemah. Fifty.
 Ma ta onoh. Sixty.
 Ma ta feetuh. Seventy.
 Ma ta waruh. Eighty.
 Ma ta seewo. Ninety.
 Low. One hundred.
 Ruah low. Two hundred.
 Toruh low. Three hundred.
 Fah low. Four hundred.
 Leemah low. Five hundred.
 Onoh low. Six hundred.
 Feetuh low. Seven hundred.
 Waruh low. Eight hundred.
 Seewo low. Nine hundred.
 Seematta. One thousand.
 Ruah seematta. Two thousand.
 Toruh seematta. Three thousand.
 Fah seematta. Four thousand.
 Leemah seematta. Five thousand.
 Onoh seematta. Six thousand.
 Feetuh seematta. Seven thousand.
 Waruh seematta. Eight thousand.
 Geewo seematta. Nine thousand.

This language is also spoken by the inhabitants of Howes Group.

Vocabulary of the Uea Language.

Juu. Come here.	Ang. The wind.
Hadah. Go.	Esso with ang. A good wind.
Tawanthan. Chief.	Othe obut. Good bye.
O boga. Men.	Usellat. A looking glass.
Dah. Boy.	Lapadue. Sit down.
Momo. Woman.	Toda. Rise up.
Een. Girl.	Mocuut. To sleep.
Wata. Sandal-wood.	Fuut. To sleep.
Cheelok. Biche-de-mer.	Jetch. To drink.
Ewenu. Cocoa-nuts.	Magaech. Cold.
Owheenmat. Bananas.	Amagae. Warm.
U. Yams.	Veneu. A thief.
An. Fresh water.	Agamakuchu. I'll kill you.
Kuyheen. Salt water.	Koat. Kill him.
Huu. Ship.	Eenah. Mé.
Baleaway. Canoe.	Uu. You.
Keah. Calabash.	Cahum. To bring.
Umah. House.	Kluma. To laugh.
May. Reef, or rock.	Ohigh. To yawn.
Hongeam. Give me.	Chingho. To sneeze.
Guh. Iron.	Wah. Fish.
Halae. Knife.	Koining Tarro.
Machanan. By-and-by.	Wylay. Sweet potatoes.
Mache. Fire.	Akua. Sugar cane.
Amakuth. Dead.	Wakeen. Beads.
Makenany. Sick.	Wagah. Fish hooks.
Esso. Good.	A. Yes.
Akung. Bad.	Hacha. One.
Nabuth. Let go.	Lo. Two.
Lodue. No more.	Kuun. Three.
Boedalah. Red cloth.	Thack. Four.
Checha. Father.	Thabumb. Five.
Buy. Mother.	Loahacha. Six.
Nacook. Son.	Loalo. Seven.
Humda. Take it.	Loakuun. Eight.
Agan. Large.	Loathack. Nine.
Enucong. Small.	Lebenetee. Ten.
Asahea. Plenty.	Hacha coach. Eleven.
Mokurru. Lie down.	Lo coach. Twelve.
Juu-mahan. Come and eat.	Kuun coach. Thirteen.
Nee. To-morrow.	Thack coach. Fourteen.
Eynee. Yesterday.	Thabumb coach. Fifteen.
Ahow. To-day.	Hachawyhanu. Sixteen.
Abah. No.	Lowyhanu. Seventeen.
Abah wata. No sandal-wood.	Kuunwyhanu. Eighteen.
Ashea wata. Plenty of sandal-wood.	Thackwyhann. Nineteen.
Thoy. A lie.	Thabumwyhanu. Twenty.
Abathoy. It is true.	

Vocabulary of the Lifu Language.

Deathan. What name.	Kongazu. Bad.
Pago. No.	Trumman. Men.
Luceah. No more.	Thubarasact. A boy.
Ekah. A shirt.	Feau. A woman.
Senna tassa. Red cloth.	Thatheen. A virgin.
Lolopeah. Good.	Maesseer. Dead.

Troamee. Come here.	Comedah. Take it.
Troddah. Go.	Leug. Firewood.
Neneap. To run.	Neu. Cocoa nut.
Lapadu. Sit down.	Winnegint. Green cocoa-nuts
Chelledah. Stand up.	Hetah. A stone.
Eeningay. A calabash.	Trohalapeca. Go on shore.
Teem. Fresh water.	Quadada. Tell me.
Nonggatha. Salt water.	Mesheenty. I'll kill you.
Hucha. A rock or shoal.	Nuuba. You.
Awitha. Give me.	Eenah. Me.
Panas-ay-du. By-and-by.	Kaka. Father.
Dohu. A chief.	Neenah. Mother.
Eah. Fire.	Nay cong. Son.
Kachea. Broken.	Memee. Brother.
Emmoimo. Sandal-wood.	Kah. Sister.
Hae. A ship.	Atowhat. Large.
Papaalie. England.	Uumah. A house.
Makalenu. To sleep.	Tromahanechan. Come and eat.
Towah. To fight.	Atreganah. A thief.
Wytheemint. Bananas.	Enowilleye. What do you say.
Koko. Yams.	Away-atce. Yes.

AMERICAN EXPEDITION, for measuring the Solar Parallax.

The readers of the *Nautical* will very shortly hear of a scientific expedition by some United States Officers, to Chiloe, the purpose of which is explained in a very interesting correspondence, printed by order of the American Government; and from which we have extracted the following letter from Lieut. Gilliss, who, we believe, is to have charge of the expedition. We are glad to see the Americans taking up scientific matters in earnest; they have a fine field before them. To emulate European astronomers is a worthy object; and, a similar series of observations obtained by Struve at Pulkowa, and Maclear at the Cape, will form an interesting comparison with those of Washington and the Chiloe observatory.

It is proposed to set on foot an expedition to the most southern available position on the western continent, for the purpose of making observations on the planet Venus during the period of her retrograde motion, in conjunction with similar observations to be made at the observatory in Washington, with a view to the more accurate determination of the Solar parallax, which involves not only the distance of our own planet from the Sun, but the dimensions of the orbits of all the bodies of the Solar system. These observations, if successfully made in the manner proposed, will present data, *solely American*, for a new and independant determination of this most important element, an element which enters into all our determinations of longitude, affecting the accuracy and safety of all such calculations, and therefore possessed of the highest possible utility, not only to the government, but to all the enterprizing citizens of our country.

The plan is one which emanated from Dr. Gerling of Marburg, well known for his Astronomical and Geodetical labours, and communicated by him in a letter to Lieut. Gilliss, dated 17th April, 1847, in which he earnestly seeks for it, the co-orporation of American Astronomers. It contemplates two series of observations, each bearing on the question of parallax; but in differ-

ent ways, and independently of each other. One series is to be made with meridian instruments at stations, as remote from each other in latitude as practicable, and will consist of differential measurements of declination between Venus and the brighter stars near its path, which are visible in the day time. To render these available in the question of parallax the distance between the observatory at Washington, and the proposed station in Chili, will afford an ample base of 6,000 miles. The other embraces differential observations out of the meridian, more particularly in right ascension, and which in cases of the planet's near approach to any star, can be made with the utmost nicety. A few instances of near approach to some of the brighter stars may be selected, when the two bodies can be followed throughout the day, and in such cases, full series of observations with an equatorial instrument, would be among the most valuable for the proposed object; and their value would be increased by combinations with others of a similar kind at other and remote stations.

For such observations it is proposed to occupy some point in Chili, as an astronomical station. So far as they may be available in the determination of the Solar parallax, or even for the confirmation of previous determinations, they will be of the highest interest. But apart from this primary object, the expedition and observations contemplated, commend themselves on other grounds to the warm interest of all astronomers and lovers of science. The perfection of these observations will require others upon other objects and the whole will be a just tribute of America, and American astronomers, to their co-labourers in a science to which our country is largely indebted for the prosperity of some of its most important interests. No such expedition has ever returned without rich fruits, even of different kinds, and gleaned from different fields from those for which it was originally designed.

The fact that a quantity, so essential to our accurate knowledge of the Solar system as the Sun's parallax, should rest for its determination on observations of a single phenomenon,—the transit of Venus in 1769, is sufficiently indicative of the high value of the proposed measure. So important for this purpose in the eyes of astronomers, were deemed this transit and the previous, but inferior one in 1761, that we find them scattering themselves over all parts of the habitable globe, wherever the phenomena could be advantageously observed. In 1761 they occupied stations from the remotest regions of Siberia to the southern extremity of Africa, in the wilds of Arabia, and on the islands of the Indian Sea. In 1769 even with greater zeal they were scattered over Europe, America, and the South Sea Islands, to observe one of the rarest and most interesting and important phenomenon, which the annals of astronomical science afford. Not only the learned societies, but the governments of Europe encouraged and aided this laudable undertaking, and even in that day American astronomers, shared in the labours, and reaped their portion of the honours of the great occasion; yet the zeal of all was not rewarded with success. Unfavourable weather at some of the most important stations either seriously impaired or entirely prevented observations. At others the observations have been regarded with suspicion, or as deserving but little confidence. And the distinguished Encke who has given the most thorough, and scrutinizing discussion of all these observations, although he assigns to his resulting parallax the small probable error of $0''.05$, yet near the close of one of his admirable treatises on the subject remarks, that had the weather been favourable at all eight of the northern stations in 1769, and had as many astronomers stationed themselves at the different points of the Friendly Islands, their 16 observed durations alone would have afforded a more accurate determination of the parallax, than the whole 250 equations of condition derived from both transits. But compared with the

transit of 1769, he speaks of the two next transits, those of 1784 and 1882, as unfavourable for this purpose, "presenting disadvantages which even the perfected state of instruments will not fully counterbalance"; and in view of the extremely rare occurrence of these phenomena, and of the unfavourable character of several succeeding ones, he intimates that for 3,000 years, the transit of 1769 may remain as the chief means from which we are to derive our knowledge of the actual dimensions of the Solar system. At any rate it will not be before 1874, that astronomers can avail themselves of a transit of Venus, for even an imperfect verification of Encke's parallax, and centuries will elapse before the occurrence of one so favourable as 1769. But even for the expiration of these 26 years, the rapid advance of science will not permit them patiently to wait. The progress of astronomy, and the interests of navigation require an earlier confirmation and redetermination of a quantity so important; and astronomers will watch with deep interest the accumulation of observations which bear upon this point; and which if even less perfect in themselves separately, will yet finally by their numbers, and the variety of circumstances, under which they shall be made, be entitled to weighty consideration.

Two methods have been suggested: one by observations on Mars, which has only been partially tried, and with but partial success; the other, the one which it is now proposed to attempt, and which offers a decided advantage in the greater proximity of Venus to the earth. It has been proposed to astronomers, from a respected and distinguished source. It comes to us recommended by other names of high authority, and by two learned bodies of our own land—the American Academy of Science, and the American Philosophical Society.

But, although, the proposed expedition of Lieut. Gilliss is for carrying out chiefly the latter method, it need not, and will not preclude the other; and the various other observations he will be able to make during the two years he proposes to devote to this work, will furnish a rich and valuable series, from which alone, entirely apart from the consideration of his main design, astronomers and scientific men in other spheres have applauded and warmly commended his purpose.

But, the main design itself is not without the highest prospect of success. The committee are informed by practical astronomers, that, taking for example the proposed meridian observations, with the nice constructed instruments of the present day, and good observers $0''7$, would be a large estimate of the probable error of each observation. The probable error then of the solar parallax deduced from such observations, at stations as distant as Washington and the proposed position in Chili will be $0''3$ to $0''7$, according to the distance at the time of Venus from the earth; and, the error of the result from an accumulated number of such observations may be rendered very small, provided no constant uneliminated error remains, which will be common to them all. But, the liability to such error can be greatly diminished by the skill of the observers, and their careful attention to all circumstances which may affect their problem; and, this liability to error will be still further diminished by combining the results of the meridian series with those from the extra meridian observations contemplated, and which will have been made under far different and more variant circumstances. These common errors, the computation of probable error does not include, and it may be doubted whether the resulting parallax of 1769, is wholly free from the effects of such. Astronomers aim even that their results should be deduced from observations as extended, made under circumstances as varying, and with means as different as possible; and, in this respect, the determination of the solar parallax, as yet stands almost alone, as the result almost of a single phenomenon.

THE CALIFORNIAN MANIA.

THE earliest accounts we have met with of the discovery of gold in California, are preserved in "*Burney's Collection of Voyages in the Pacific.*" It has been asserted that, the discovery was made in the middle of the last century; and, Capt. Shelvocke is also stated to have first found it a century and a quarter ago. Burney has, however, preserved an account which we quote here of the discovery of it, by the early Spaniards, in 1539, just 20 years after Cortes landed at Vera Cruz. That the existence of the rich district was known, is, therefore, evident, although its exact locality remained locked in secrecy, limited no doubt, but not to those who had contemplated the Mexican war, and its intended results. Burney has preserved the history of the journey of Friar Marcos de Niza, containing the account to which we allude.

"From *Patlan*, Friar Marcos de Niza, with his followers, travelled along the coast, where people came to him from islands; and, he saw some that came from the land where the Marquis Cortes had been. At the end of a desert of four days journey, he found Indians who had not knowledge of the Christians, the desert obstructing communication between them and the countries to the south.

"These people," says the friar, "entertained me exceeding courteously, gave me great store of victuals, and sought to touch my garments, and called me *Hayota*, which, in their language, signified 'a man come from Heaven.'" The principal motive of this undertaking, however, was not one of a pious or spiritual nature. It was to spy out the land, whether it was good or bad, and to bring of the fruit, that his countrymen might know if they should go up and possess it.

"These Indians," says the friar, "I advertised by my interpreter, according to my instructions, in the knowledge of our Lord God in Heaven, and of the Emperor. I sought information of other countries, and they told me that four or five days journey within the country, at the foot of the mountain, there was a large plain, wherein were many great towns, and people clad in cotton. I shewed to them metals which I carried with me, to learn by them what rich metals were in the land. They took the mineral of gold and told me that thereof were vessels among the people of that plain; that they had thin plates of gold, wherewith they scraped off their sweat; that the walls of their temples were covered therewith, and that they used gold in all their household vessels.

"I sent Estevanico another way, and commanded him to go directly northward, to see if he could learn of any notable thing which we sought to discover; and, I agreed with him, that if he found knowledge of any people, and rich country, which were of great importance, he should go no further; but, should return in person, or send me tokens: to wit, if it were a mean thing, he should send me a white cross, one handful long; if it were a great matter, he should send me a great cross, &c."

Estevanico, in his new route, very soon received information concerning the seven cities, and that the nearest was *Cevola*, which was said to be distant thirty days' journey.* Towards *Cevola*, Estevanico directed his steps, sending messengers to the father; who, the fourth day after their separation, received from him "a great cross, as high as a man." At the sight of this

* *Herrera* mentions the same distance. He writes the name *Cibola*. Dec. 6. l. 7. c. 7. *Ortelius*, in his chart, No. 5. *America, Sive Novi Orbis*, places *Cevola* in 36° north latitude, and about 7° of longitude east, from the mouth of the river *Colorado*. *Theatrum Orbis Terrarum*. Edit. 1584.

token, and on hearing the reports of the messengers, Friar Marcos set forward, following the steps of his intelligencer. The friar relates that, in this journey, by a small deviation from a direct route, he came in sight of the sea coast, in 35° north, which he saw stretched from thence to the west. Giving him credit for speaking to the best of his knowledge, it cannot be supposed that he had other means of estimating his latitude than by guess, or that he saw any sea coast beyond the *Gulf of California*.

The following extract is a fair sample of the first effects of the mania.

A correspondent of the *New York Tribune*, in California, gives the following fearful account of the effects of the plethora of gold in that province:—"As you would suppose, vice of every kind, and in the most horrible forms, prevails here. The runaway sailors work awhile, and collect a quantity of dust, which they spend with the same recklessness that they do so much silver at home. They pay seven or eight dollars per bottle for liquor, have a 'spree' from which they come out destitute, and then begin again. A great deal of sickness prevails, and as one after another dies, he is thrown aside with the utmost indifference, without even a covering of earth. There has not, as far as I can learn, been any quarrelling among the diggers. There is so much room for all to operate that there seems no necessity for any disturbance. What will be the result of all this I cannot have any idea. I shall improve every opportunity to inform you how I am getting along. I have seen the last man on board an English brig, near me, hoist his chest out alone, and scull to shore, abandoning the craft to her fate, the captain and mates and all the others having gone before."

RECENT IMPORTANT INVENTIONS.

We live in an age remarkable for the efforts which are unceasingly made to apply the discoveries of science to the economic purposes of life. At the present moment four striking instances are claiming the attention of practical men. We have the electric light threatening to cast all other kinds of illumination into shadows;—attempts on a large scale are making to employ electro-magnetism as a motive power;—we are promised boilers for steam-engines which shall be inconceivably small, through the agency of drops of water in, what is called, the spheroidal state;—and by the use of chloroform the expense of motive power is to be reduced to something like a quarter of its present cost, or even less.

The electric light with which M. Archreau some years since illuminated the streets of Paris, and Mr. Staite is dazzling the eyes of the Londoners, is certainly a most brilliant result. Up to the present time this has been produced only by the use of troublesome and costly apparatus; but Mr. Staite assures the public that he has succeeded in completing an arrangement of materials by which the electrical power can be supplied at a cost far beneath any other known method—that his battery will be simple in charging and discharging, and capable of furnishing a current uniform both in quantity and intensity for any required period. As the specification of the patentee is to be made on the 14th of this month, we shall soon have an opportunity of testing the correctness of this assertion. Some interesting researches of M. Mans, of Namur, on the mechanical transference of ponderable matter from the positive to the negative pole, when the electric current is established in a vacuum, appeared to point out other difficulties in the mechanical adjustments, which are not, we think, met by the ingenious arrangements of Messrs. Staite & Petrie.

Since the discovery by Ørsted of the magnetic power imparted to bars of iron by an electric current traversing copper wire coiled around them, numerous attempts have been made, with various degrees of success, to move machinery by the enormous force which we have thus at our command. The most remarkable experiments are those of Prof. Jacobi, who, in 1838 and 1839 succeeded in propelling a boat upon the Neva at the rate of four miles an hour. At this time an engine is in process of construction in London, under the direction of Mr. Hjorth, a country-man of the great discoverer of electro-magnetism, which the patentee supposes will give a power equal to five horses. We have seen the model, which certainly embraces many new features that promise to render the application of the power more effective than it has been hitherto. One of the electro-magnets made for the large engine, in a recent trial, supported nearly 5,000 lb., and its attractive force at one-eighth of an inch was equal to nearly 1,500 lb. As this force can be multiplied without limits, the question is reduced entirely to one of economy and convenience.

When Dumas discovered chloroform by distilling alcohol from chloride of lime, it was little thought that it would become the valuable therapeutic agent which it has proved to be. Applications run fast in these busy days; and at Messrs. Horne's in Whitechapel, we have an engine working under the combined influence of steam and chloroform,—a combination which the best engineering authorities state to possess many great advantages. It is not easy to render mechanical details familiar without the aid of diagrams; but the principles of this "combined vapour engine" may be rendered intelligible by a brief general description. The steam having done its work of moving the piston in one cylinder, escapes into another in which is a quantity of chloroform in small flat tubes. This substance volatilizes at a very low temperature; and it thus is converted into vapour of considerable elastic force by the heat of the waste steam—and is in this state employed to work a second piston. We have, indeed, two engines combined in action—one moved by steam—the other by chloroform. The professed advantages are the saving of 50 per cent. in fuel—and as all the steam is rapidly condensed in the same evaporation of the chloroform, the same water is constantly returned to the boiler, by which the necessity for using salt or impure water is avoided. The first engine of this kind was constructed in 1846, in Paris,—in which ether was then employed. This engine is still working in a glass manufactory at Lyons—chloroform being substituted. A Parisian paper informs us that M. Charles Beslay has, by order of the Minister of Marine, constructed a very powerful engine of this description, which is pronounced by a commission to be perfectly efficient. A question having been raised as to the effect of chloroform on the health of the sailors, Mr. Quoy, Inspector-General of the medical branch of the marine services, has reported favourably. We learn, however, that the English patentee proposes to use a volatile fluid which is much less expensive than chloroform, equally efficient, and less obnoxious.—*Athenæum*.

NAUTICAL NOTICES.

H.M.S. Bonetta, Gallinas, August, 1848.

SIR.—All the Admiralty charts mark the current between the Sherboro River and Cape Mount, (West Coast of Africa) as turning to the S.E., and in many of them no current is marked.

During the months of May, June, July, and the first part of August, while the S. W. winds prevail, the current runs to the N. W. 2' an hour, with a heavy swell, tending in shore.

In the latter end of August and September, the winds changing to the N. W., or northward of W., the current turns to the S. E. with a force not exceeding 2' and seldom less than one. During the calm months there is but little current if any.

Two hundred miles from the coast there is scarcely any perceptible current.

At the full of the moon, there is frequently strong tide ripple at night, which comes down with the noise and appearance of breakers.

I am induced to send these few remarks, having frequently boarded Indian men and other traders, whose masters were perfectly ignorant of the fact of these currents, or otherwise would not have stood so far over, as well as that I can nowhere find mention of them in any of the elaborate quantity of charts and directions granted by the Admiralty.

I have, &c.,

W. FORBES,

H.M.S. Bonetta, Lieut.-Commanding.

Author of "Five years in China."

To the Editor N M.

LIGHT ON UNDERSTEIN ROCK, IN THE ENTRANCE TO THE GULF OF BOTENIA.—The Swedish Government has given notice that on the 11th Dec. a Revolving Light was established on the rock called the Understein, in the Strait of Aland, or the western entrance of the Gulf of Bothnia, in lat. $60^{\circ} 16' N.$, and long. $18^{\circ} 55' E.$ of Greenwich. It stands on the summit of the rock, and in the place of the beacon, which has been removed.

The Tower is built of brick, and is painted with white horizontal stripes; the light is visible all round the compass, except when between the bearings of N. N. W. $\frac{1}{2}$ W. and W. S. W.; and being 78 feet above the level of the sea may be seen at the distance of 15 miles.

BAY OF FUNDY.—BLACK ROCK AND APPLE RIVER LIGHTS.—The commissioners of Lighthouses in Nova Scotia, have given notice, that two new lights are now established in the Bay of Fundy, viz: one at Black Rock Point, on the south shore of the Mines Channel, and the other at Hetty Point (called also Cape Capstan,) on the north side of the entrance of Apple River, on the southern shore of Cumberland Bay.

Black Rock Fixed Light.—The lighthouse, which is a square building and painted white, stands on Black Rock Point, about the lat. of $45^{\circ} 11' N.$ and three-quarters of a mile to the westward of Kennedy's Breakwater, and two miles and a half to the eastward of Giran's Breakwater. Small vessels resort to both those places, and the light will therefore be a useful guide to vessels bound to them, as well as to Spencer Island anchorage, or into the Basin of Mines.

The light is elevated 45 feet above the level of high-water. Spring tides rise and fall there 50 feet.

Apple River Light.—*Two Fixed Horizontal Lights.*—The lighthouse stands on Hetty Point, on the northern side of the Apple River, in Cumberland Bay, and about three leagues to the eastward of Cape Chignecto, in about $45^{\circ} 26' N.$ latitude. It is a square white building, shewing to vessels, approaching it from the westward, two fixed lights placed horizon-

tally. These lights are 40 feet above the level of the sea, at high-water. The rise and fall of spring tides there is 55 feet.

ADDITIONAL HARBOUR LIGHTS AT OSTENDE.—The Belgian Government has given notice, that at an early period a fixed light will be established on the extremities of each of the two piers or jetties, which form the entrance of the Port of Ostende.

The light on the western pier will be *Green*; 23 feet high, and visible at the distance of 4 or 5 miles.

The light on the eastern pier will be *Red*; of the same elevation as the former.

The green light will be shown at sunset, and extinguished at sunrise; but the red light will not be lighted till the flood tide has thrown in at least 9 feet of water between the pier heads, and will be extinguished when the present tide lights are lighted.

As soon as the present tide lights are extinguished, during the ebb, the red light will be again shewn, and continued till the falling tide has lowered the water, between the jetty heads, to 9 feet, when it will be extinguished.

In bad weather, when there can be no communication with the pier heads, these arrangements must of course be interrupted; and all vessels are cautioned not to attempt the harbour of Ostende when the tide lights are not displayed.

KENT ISLANDS LIGHT, BASS STRAIT.—Capt. Stokes, in a recent letter, speaks in high terms of this light, a report on which, with other lights of Bass Strait, by Capt. Stanley, appeared in our number for September last.

“In passing through Bass Strait, the splendid light on Kent Group was visible 34 miles from the Acheron, at an elevation of 46 feet in a wild and somewhat hazy night. On passing 8 miles on the N.W. side of these isles, the light was lost sight of on the bearings of S. 80° E., and S. 67° E., being at that short distance hidden by the hills on the western isle. It was seen 37 miles distant from the *Bramble's* deck, by Capt. Stanley's report.

CAPE ESPECHEL LIGHT.—It appears by a notice in the *Diario do Governo* of the 4th November last, at Lisbon, that the fixed light on Cape Espichel, had been renewed, and was displayed on the 20th of October last.

BERBICE LIGHT.—We perceive by a Notice to Mariners, dated October 18th, that this light vessel was removed from her station on the bar to undergo repair, and that a pilot boat was kept cruising to windward of her place while it was going forward. We have not yet heard of her being replaced in her station.

DANISH LIGHTS.—We understand that according to a decision recently, passed by the Danish Government, the light ship in the Grounds (*Drogden*) will remain at her station until the 31st, instead of the 21st of December in each year, whenever the state of the ice shall not render it necessary for her to seek a harbour of safety at an earlier period. The same commission

however, has not been granted with reference to the other Danish floating lights, which are expressly ordered to be removed as heretofore on the 21st of December.

THE WRECK OF THE MUTINE.

We have been favoured with a perusal of the following particulars of the wreck of the *Mutine*, from a private source. They are written by a young officer of that ill-fated sloop to his parents, but are so graphically expressed, and are so very interesting, that we make no apology for giving them general publicity.—

“ *Malamoco, Venice, Dec. 23.*

“ My dear——, I must now relate what I know will at least interest you—viz., the wreck and total loss of the poor little *Mutine*. Yes; she now lies about four miles from this place a hopeless wreck, little more than one-half of her symmetrical frame holding together. By the blessing of God, we were all saved, except five. But now for the full particulars. We sailed from Trieste, in a dense fog, on Friday, the 16th. Calms and baffling winds so detained us that we did not anchor at Venice until Tuesday night. The captain, with the surgeon and purser, had left the ship two nights previously, when about 20 miles off (with despatches), and the fog continuing, they were prevented from returning to the vessel; but on Wednesday, the 20th, it cleared, when immediately a gale of wind succeeded. The captain tried to come off in his own boat, but was nearly swamped three times. He then offered £50 for any boat that would convey him on board his ship, but all in vain; no one was hardy enough to accept it. The steamer, too, tried to get out, but could not. Meantime, finding it was likely to blow hard, we weighed, and leaving our anchorage off Lido, the north entrance to the Lagoon of Venice, ran down to that of Malamoco, some miles to the southward, trying to get a pilot to take us inside the Lagoon, were we should have been all safe; but it came on to blow so hard that no pilot could reach us; and, the wind shifting a point or two, we were now on a dead lee shore, with a tremendous sea, and no chance of being able to beat off, even if we made sail. By eleven o'clock that night two of our four cables parted, and as we were striking topmasts soon after, the third cable, a fourteen-inch one, snapped in twain. We were at the mercy of the remaining anchor, with 150 fathoms of chain on it; and that fast coming home, there was nothing for it but to cut away the masts. The fore-mast went first, but that failing to stop our drifting, the main-mast went too, and the little *Mutine* lay a hulk upon the troubled waters. I was—— of that middle watch (though, of course, all hands were on deck), and I shall never forget the scene—a frightful sea and surf, the ship surging and drifting fast, and a rocky coast astern of us. We now, with some difficulty, hove overboard our two shell guns, weighing about four tons, with a strong hawser bent on each; and greatly to our satisfaction, we then, assisted by the stream anchor, with 100 fathoms cable, held on for some time. We remained in this awful position until four o'clock on Thursday morning, when we began firing minute guns of distress, and as soon as day broke we hoisted the ensign, union downwards, on a stump of the main-mast. But, alas, it was a forlorn hope; for soon after this she began again to drift, the sea making clean breaches over us, and the cold so

intense, that the icicles from the sea-water hung on the bows, netting, and even on our clothes. At half past four, sick, worn out with hard work, and overcome with cold and wet, I went down and turned into the first lieutenant's bed, taking off my wet clothes, and rolling myself up in his blanket, I slept for about an hour, when the first lieutenant sent down to say I had better come on deck. I immediately got up, but as I could not get into my wet clothes, I slipped on a flannel, a shirt, a pair of drawers, and a large cloak, with an old pair of stockings and shoes. When I arrived on deck, I found the ship had drifted much closer in, and the first lieutenant observed it would be a miracle if any were saved. At length when about a mile from the shore she struck (about 12h. 30m. P.M.), and we, with all possible dispatch, hove overboard the remaining 10 guns, with the shot, water, &c., and about three o'clock, finding all our efforts of no avail, and, as we all thought, certain death awaiting us—worn, frozen, exhausted, we made one more—one last dying attempt to save ourselves, so, sending all hands to the fore-castle to the wind, we slipped our cables, and contriving by this means to get her head before the gale, we ran rapidly in for the shore. Being very light from the loss of guns, &c., the sea and wind ran us so rapidly over the rocks that the ship struck with fearful violence; but at last she was carried so close in that we were enabled to get a line on shore, and by means of it a hawser; not until, however, poor Whiting, one of our mates, lost his life in attempting to land in the jolly boat, which was pitched over the side; fortunately the rest of the boat's crew were saved; but the boat having been capsized they were frightfully knocked about.

I now went down, having previously thrown off my cloak, and having strongly tied a handkerchief round my neck, fastened in one corner of it all the stock of money I could at that moment reach, and by means of this hawser, a bowline knot round it, and a line from the shore, I assisted in landing the men, until finding that at last I could not stand on my feet from the intense cold, I was myself put into the knot, and was hauled along the hawser. By mere instinct I must have held on, for I only remember being dragged through the water head-foremost, being terribly knocked about upon the rocks, nearly drowned, and being then seized by half-a-dozen men, who conveyed me to the nearest house—that of a cobbler—and put me to bed, one of them (as recommended by the Royal Humane Society) turning in with me. After some time I returned to consciousness, when my attendants having dosed me with sundry tumblers of hot grog, and warmed my feet which were very painful, and my fingers, which are still frost-bitten, I began to feel something like myself. I must say I never experienced such kindness as from these people; the whole family vied with each other as to who could do most—tucking me in, making me broth, bringing wine, grog, &c. Of the rest of my poor shipmates, the assistant surgeon and one of the mates, (Charlton), were frozen to death, as was also the marine. The carpenter got out of the bowline knot, and was drowned, but the rest all got safely ashore, more or less injured by bruises.

Next day (Friday) we were almost all removed on board the *Ardent*, lying under the Lagoon, and I am now writing this in bed with frost-bitten fingers, and my toes so badly bitten that the doctor fears I shall lose one of my big toes, and perhaps one or two others. I think, however, I shall get over it, but I fear I shall not be able to leave my bed for some time. There is no chance of saving anything from the brig. We have lost all in her; the only things I have in the world are one shirt, one flannel, and one pair of drawers.—God bless you all, is the earnest prayer of

“Your, &c.,

—”

Abstract of the passage made by H.M. steam ship *Terrible*, from Gibraltar to Corfu in 1846.

Date.	Distance		Average.		Sail set.	Course.	Wind.	Boilers.	Pressure—steam.	Draught.		Paddle wheel.	Coal Expended.			Expended.			
	By P. log.	By obser.	No. hrs. steam.	Speed per hour.						Rev. per m.	ft. in.		By stem.	Quantity.	Hourly.	Daily.	Dist. run with 1 ton	Oil.	Oakum.	Tallow.
Aug. 9	...	Knts. h.	Knots.	9-26	9	none	S.E. b. E.	2 s	6	18 11	6 7	ft. in.	t. c. t.	c. q.	lb. ma. cwt	Knts.	lb		
10	...	139 15	9-26	9	none	E. Easterly	2 s	6th	6	18 11	6 7	28	18 1	6 1	21 31	14 6	30 3	4 50	
11	...	182 23 1/2	7-74	8 1/2	none	E. Easterly	2 s	5th	7	18 8	7 0	35	21 9	1 0	0 35	2 5	29 5	4 50	
12	...	167 24	6-96	8	none	E. S.	do	6 1/2	18 6	10 6	10 42	61	14 0	0 40	16 4	09 8	4 50		
13	...	202 24	8-41	8 1/2	square sails	E. b. S.	2 Swill	6th	6 1/2	18 4	6 8	39	10 1	12 3	19 39	10 5	11 7	4 50	
15	...	80 9 1/2	8-65	9	square sails	E. b. S.	2 s	do	7	18 3	6 7	19	2 1	11 1	17 37	13 1/2	5 0	6 4 50	
16	...	140 42	10-00	10 1/2	none	E. b. N. N. variable	2 s	5th	7	18 1	6 5	48	14	.....	.....	.....	.....	7 4 50
16	...	102 9 1/2	11-03	12 1/2	none	E. N. E.	2 s	...	6 1/2	18 0	6 4	23	4	.....	.....	.....	.....	3 4 50
Totals...		d. h										225	16					40	28 350
Average for the 2 boilers		1112 5 9													1 11 0	14 37	7 5	12	

† † hd s head sea—hy s heavy sea—s smooth—swill a little head swill.—Coal used.—Wash and Newcastle of good and middling quality.—Retribution in company; Engines frequently eased to allow her to keep company.
In this passage 223 miles were performed under sail only in 38 hours.

cs crew saved d drowned.

Vessels' Names.	Belong to.	Masters.	From.	To.	Wrecked.	When.
Active		Brodie	Newcastle	Dublin	Treswick	Dec. 3, 3d
Æolus	Liverpool	Allison	by collision	off	Rockcliff	Aug. 18, cs
Albion	Underland	Butterwick	Whitby	Ramsgate	Soroby sand	Dec. 2, cs
Alexander		McDonald	Sydney	Halifax	Marie I.	May 20, cs
Ann	5	Moon	Newport	Quebec	abandoned	Sept. 28
Ann Elizabeth	Newport	Crowe	Chepstow	Sunderland	Scroby sand	Oct. 18, cs
Anne	Sunderland	Gale	Newcastle	Delve	Elder	June 27, cs
Arachne					Trial Bay	April
Argus	Hobarton	Vatier	Cadiz	Gasp	abandoned	Aug. 20, cs
Aston	Jersey	Dodd	Dublin	Chester	off Howth	Oct. 9, cs
Astoria	Liverpool			Quebec	Fox River	Aug.
Banff			Bangor	Hillsmouth	SolwayFroth	Oct. 26, cs
Belle Isle	Sunderland	Reid	Glasgow	Calcutta	Gasper chan.	Sept. 4
Bridport	Glasgow	McCormic			Islay	Aug. 29, cs
Brothers	15	Straffon	Sunderland	London	Gunfleet	Dec. 2, cs
Cato	Waterford	Butcher	Middlesbro'	London	Humber	Oct. 15, cs
Columbia	S. Shields	Dixon	London	Newcastle	Scroby sand	Oct. 15, cs
Coronille					Sydney	Oct. 1, cs
Cottingham	Yarmouth	Rutherford			off Harwich	Oct. 18, cs
Diamond		Taylor	Demerara	Liverpool	run foul of	Sept. 28, cs
Diligence	Liverpool	Ellis	Portmadoc	Newcastle	Kentish K.	Oct. 23, cs
Dispatch	Pwllheli	Aucheson	P. Edward I.	Clovelly	Linney Head	Dec. 4
Elizabeth	P. Edward I.	Salter	Dantzic	Leith	foundered	Aug. 26, cs
Endeavour	Aberdeen	Blaney	Cedrossan	Dundalk	Gally Head	Sept. 4
Endeavour	25		Wick	Belfast	Erribill	Aug. 30, cs
Enterprize	Belfast	Ivey	Dantzic	Liverpool	Tromoe	Sept. 26, cs
Euphan	Yarmouth	Marshall			Holland C.	Aug. 22
Exmouth	Sunderland	Ross	Bombay	Calcutta	sandheads	Oct. 14
Exohange		Hoult	Seabam	Whitstable	Newcomb	Aug. 15, cs
Fate	30		in collision with Glenalb	byn steamer	Flamboro' H.	Dec. 4, cs
Forest Monarch	Lynn	Richards'n.	St. John, NB		Donegal	
Fortuna	Liverpool	Mitchinson	Konigsberg	London	Ronne I.	Sept 29, 3d
Free Trader		Bell	St. John, NB	Cork, F.A.	44° N. 50° W	Oct. 12
Goose		Power	by collision	off	Flamboro H.	Dec. 1, cs
I'll Try	35	Green	Liverpool	Stralsand	St. John's H.	Sept.
Iris	Lyme	Restorick	Lyme	St. Sampson	Guernsey	Oct. 18, cs
Isabella		Stephens	Newcastle	Cronstadt	Bonne	Oct. 6, cs
Janet	Thurso					Aug. 21
Janet Kinnear		Kinnear		G. Finland	Dolginess	Nov. 21, cs
Johanna		Falconer		London	Algoa Bay	April 5
Juventus	40	Job	Sunderland	London	Gunfleet	Dec. 2, cs
Linnet	St. Mary	Lutes	Labrador		Jedore	Aug. 24, cs
Lord Lyndoch		Taylor	Cronstadt	Dundee	G. Finland	Nov. 18, cs
Margaret and Mary	Dumfries			Liverpool	Hoyle sand	Oct. 19, cs
Mary Ann	45		Barbados	Greenock	42° N. 50° W.	Sept. 27
Mary Jane						
Mary Louisa	Greenock	Currie	Singapore	London	Carama P.	July 22, cs
Midas	Belfast	passed	abandoned	waterlogged	50° N. 37° 8' W	Nov. 11
Olive Branch	Workington	Wilson	Wick	Thurso	Sandwich B.	Nov. 30, cs
Penang	Liverpool					
Princess Royal	Workington	Sewell	Mauritius	Bristol	Mort Bay	April 1, cs
Rapid	Exeter		Cardiff	Cronstadt	Gothland	Sept.
Reaper	Lynn	Loose	Sunderland	Brancester	Thornham	July 1, cs
Regina	London		W. India	seen	41° N. 53° W.	Sept. 27.
Regina	55	found dis	masted	c. taken off	by J. Dunlop	Sept. 28.
Robert	for London	Matheson			off Ysted	June 22
St. Mary	Peterhead	Whiteside	Jamaica	Glasgow	Blowing P.	Aug. 2, cs
Septima			Alexandria	London	Gibraltar	Aug. 6, cs
Sir Edward	Sunderland		Liverpool	Baltic	Pentland Sk	Sept. 2, cs
Sophia	Liverpool		Newcastle	London	Flamboro H	Oct. 14, cs
Speculator	Newcastle	Geddis	Exeter		Loraline, CB.	Sept. 24, cs
Speedwell	Liverpool	Oman		Flensburg	New Reef	Oct. 10, cs
Sterling		Flaven	Waterford	Johns, NB	Gr. Manan	Nov. 5, cs
Swallow	Cork	Lovell	Petersburg	Liverpool	Gothland	Nov. 15, cs
Triumph	75	Bing	Macassar	Singapore	off Macassar	July 25, cs
Ury	Sunderland	Hume	Sunderland	Dunkirk	Barnard S.	Dec. 4, 3d
Victoria	Corphach		Liverpool	Lerwick	Reeve Sands	Sept. 3, cs
Victoria	Aberdeen	Maurice		Wick	Proudfoot	Mar. 20, cs
Victory	Kinsale	Macarthy		Newport	Barry I.	Oct. 3, cs
Waterloo	70	Wood			Cawood Bay	April 5, cs
Waterwitch						
Wave		Love			G. Finland	Nov. 18
W. Hutchinson	73	passed	waterlogged	by Constance	40° N. 44° W.	Oct. 2

Argus.—In contact with an American vessel, injured and abandoned sinking.

Astoria.—The Master Mr. J. Richards, by a resolution of the Consignees of the ship at Quebec, has obtained much credit for his great personal exertions in saving so much of the cargo.

Juventus.—The crew having abandoned her were picked up by the Scout Capt. Saxby.

Mary Ann.—Two passengers taken off by the Georgian arrived at Liverpool.

Midas.—Reported by the Earl of Powis, Walker from Montreal, supposed her to be timber laden.

Rapid.—Schooner, crew brought home from the Baltic by the Margaret, England, master.

Regina.—Found abandoned by Hamburgh barque, Augusta and Bertha, a piece of wood was seen in the Regina on which was marked "will you take us off".

Ury.—The rest of the crew saved by the life-boat. "Nothing could surpass the gallant devotion of the two Masters and crew of the life-boat, nor the praise-worthy alacrity with which the whole population of Southwold rendered their assistance in launching the boat.

The survey of the coast of Norway, which for several years has been going forward under the direction of the Norwegian Government, has recently been concluded, and the two last charts of a series extending nearly from Dronheim round the North Cape to the Russian frontier, in the White Sea, have just been published with the necessary directions.

This series of charts consisting of ten sheets, which include the whole coast above-mentioned, are published on the scale of three miles to the inch, are clearly and neatly engraved, and form a highly and valuable addition to Northern Hydrography. The two last sheets are the most important of the series, as the coast embraced by them, was all but a sealed district to all but Russian ships, and they derive even greater importance still from the circumstance that it once served as a refuge to American Privateers, which were enabled to inflict serious injury to our ships frequenting the White Sea, while our cruisers were unable to follow them.

ARCTIC EXPEDITION.—Nothing further has, up to this time, been received at the Admiralty from the three Searching Expeditions: indeed nothing further is likely to be heard from Sir John Richardson's Searching Expedition unless something extraordinary occurs, nor from Sir James Ross till the return of the whale ships in October or November.

Advices however from Capt. Kellett, of the *Herald*, may be daily expected *via* Panama, by which it will be known if Sir John Franklin's Expedition has fortunately passed through Behrings Straits.

LIGHTS OF STEAMERS.—The Swedish Government, in order to prevent steamers from running foul of each other in the night, has issued an ordonnance that all Swedish steamers shall henceforth, from sun-set to sun-rise, carry the same lights, of the same colours, and in the same positions as those agreed upon between France and England.

NOVEL MODE OF SHEWING LIGHT FROM A LIGHTHOUSE.—The subject of artificial light has of late years occupied much attention, and some remarkable exhibitions have lately been made of lights of extraordinary

brilliancy. We, therefore, take the opportunity of bringing to the notice of our readers, a suggestion entirely new, relative to the application of the illuminating power of a lighthouse, communicated to us by the author from the new edition of *Raper's Practice of Navigation*, now in the press.

"It is not unlikely that a light may be found sufficiently powerful, by the addition of a proper reflector, to illuminate the clouds, and, in a fainter degree, the atmosphere itself, over a lighthouse. The pale light in which a distant town appears enveloped at night, the distinctness of the forms of the clouds over a large city illuminated by its ordinary lamps, and the vivid glare diffused over the heavens by a fire, show that the atmosphere renders such reflected light visible at a considerable distance. It is merely a question of intensity. If a sunbeam were admitted through a hole in the earth, in a dark night, it would appear in the atmosphere as a column of astonishing splendour. The light suggested would exhibit no flame, and might with propriety be designated a *shaft-light*. The shaft, by the disposition of the reflector, might be directed vertically, or inclined seawards or landwards; or by attaching the reflector to a pendulum, the axis of the light might be made to vibrate from side to side, or revolve; and the effect, even on a small scale, would be a great relief to our already exhausted resources for varying the appearance of lights."

NEW BOOKS.

THE NAVIGATION LAWS OF GREAT BRITAIN,—Historically and practically considered with reference to Commerce and National Defence; by Joseph Allen, Author of Works on Naval History.—London: Bailey, Brothers, and Ridgway.

The object sought to be attained by the publication of this volume is the disabuse of the public mind of the erroneous opinions industriously propagated by enemies Foreign and Domestic. Its appearance is well timed, and without arrogating to itself any great merit, the work places at one view before the reader, the whole facts of the case. The minutes of the evidence given before the Committee of the House of Lords, extend in the original to about 900 folio pages, the whole of which is neatly and truthfully condensed into about 200 pages of Mr. Allen's production.

The volume sets out by detailing the circumstances which led to the first establishments of Navigation or Conserving Laws. It shows, by a reference to the best Histories, that England was driven to the step first taken in the reign of Richard II, by considerations of great national importance, and that the re-enactment of the principle by Cromwell was not occasioned by personal pique or spite, but in order to preserve the country from insult, and the total loss of commerce, and the carrying trade. As our Colonies grew up, the necessity for confining the trade to the ships of this country increased, and there appears good reason for believing that we are, at this day, indebted to the Navigation Laws for the preservation of our foreign possessions. The Navigation Laws have been the tie, and we may trace the disasters of our Colonies to the relaxation of our Conserving System.

The National defence question is most ably treated upon by Admiral Sir George Martin, Capt. Sir James Stirling, Rear-Admiral Sir Thomas Cochrane, Capt. Toup Nicolas, Capt. Berkeley, Mr. Anderson, and Mr. Whitwill, and last, though not least, by Lieut. John Hoskins Brown, the Registrar of Mer-

chant Seamen, whose united testimony shows that the Mercantile Navy is an *indispensable* appendage to the Royal Service.

We think enough has been said to prove that the title of the volume is well sustained, and that it deserves, and in fact has a very strong claim upon the patronage of every British seaman, and indeed of every Briton.

ANNUAL LIST OF NORTHERN LIGHTHOUSES, BEACONS, AND BUOYS, for 1849.—Adam and Blunt, Edinburgh; Longman and Co., London.

At the cost of **THREE-PENCE**, the seaman, by the yearly publication before us, is placed in possession of the descriptions and positions of all the lighthouses, beacons, and buoys, belonging to the Commissioners of the Northern Light Board; a kind of annual which, might be imitated with advantage to him, and others besides, by the Ballast Board of Dublin, and Trinity Board of London.

It is the fashion in this country to print annuals to suit the public taste: they appear every Christmas, blooming with all the beauties of artistic and literary elegance and excellence. But, what real benefit do they confer on society? save in the employment of capital and the improvement of art, compared with the important historical character of the annual before us! They go by into the shades of fiction, while the truth and real utility of this asserts its right to reference and preservation, as an historical record. Other corporate bodies, which, no doubt, very worthily exercise a control over similar matters, on the coasts of this maritime country, should also render a yearly report of the existing state of their buoys, for many of their measures relating to them, being advertised only in a local paper, pass unknown at the fountain head; or, at least, what should be the fountain head of hydrography in this island. There is an air of business in a general statement like that before us. If there were an annual report to refer to, published by authority, those who look for such information would know where to find it. But, in the present state of things they are dependent on unauthorized sources; and, if they obtain it at all, they frequently obtain wrong information. One good effect of this publication by the Boards we have mentioned, would be a check on chart-sellers by seamen themselves, who would thus be enabled to correct their charts according to the report. Approving as we do highly of the report before us, which we repeat is an example to be followed by other Boards, we think a more compact form would conduce to its more general adoption. An octavo size is handier than a large folio, and some kind of distinguishing feature might be adopted for buoys and beacons newly laid down, or changed in their places, and a kind of obituary list, established of others, which might have been entirely done away, in the course of the year. But, these are mere matters of convenience. The Northern Light Board may justly take the credit of having thus set their neighbours an example, which we hope they will not be above following.

MEMOIRS OF THE LIFE OF VICE ADMIRAL LORD NELSON, K.B., Duke of Bronte, &c.—By *Thomas Joseph Pettigrew, F.R.S., F.S.A., &c.*—Two Volumes.—T. & W. Boone, London.

It is remarkable, that, notwithstanding the several biographical histories of our great Naval Hero, from the hands of some of our most celebrated authors, followed even by "the Nelson Despatches and Letters," extending

to five volumes, a mass of information in the shape of private letters, which had passed between the Admiral and some of the most remarkable leading characters of his day, should have remained to be given to the world in the year 1819. Lord Nelson's public acts were public property, and they have long since been publicly discussed; but there were certain important facts connected with them, of which the world remained till now in ignorance: they lay concealed in private letters between him and his dearest friends, and now, when time has done its work in removing their authors from this world's stage, that they appear throwing new and grateful gleams of light on the darker shades of the picture, the historian has to pass fresh judgment on the name of Nelson! We are informed by Mr. Pettigrew, in his preface to these volumes, that it was not until he saw that the letters in question contained the *unreserved narrative* of the great events in which he was concerned, along with those expressions of opinion, which can only be found in private correspondence, that he determined on embodying them in the present work, filling up the less important parts from other works. Mr. Pettigrew has executed his task well; with a becoming modesty he approached it, and the public are indebted to him for what may be designated **THE LIFE OF NELSON**. One of the most important features of these volumes as Mr. Pettigrew, justly remarks, is the portion relating to the trial and execution of Carracciolo for which Lord Nelson has been much blamed. But as it was his misfortune then to be placed as the Admiral of the Neapolitan Squadron, it is difficult to conceive how he could have acted otherwise than he did. Many other facts of his eventful career, receive new colouring from the correspondence in these volumes, but there is one person whose extraordinary history and no less extraordinary end will reach the sympathy of many a Sailor's heart. We allude to the unfortunate Lady Hamilton, "England's Friend," as she was emphatically called, the beloved of the great Admiral. His country performed the honorable part of placing his surviving relatives in affluence, was it theirs to allow *her* to die neglected in squalid penury. Alas, alas, how would Nelson's dying moments have been embittered, had the veil of futurity been drawn aside, and revealed to him the unhappy end of his "*Guardian Angel*." Providence in His mercy spared that sorrow, to him worse than death.

There is so much of interest in the short biography of this extraordinary woman that we cannot resist transferring to our own limited pages the following extract from it. We must not omit to observe that these interesting volumes which contain so much classic lore to naval officers, that they must find their place in the library of every ship that floats, are illustrated with admirable specimens of artistic skill in the portraits of Lord Nelson and Lady Hamilton, besides a fac-simile of the writing of each on the Queen of Naples letter, signed by herself and all her children. Lady Hamilton's difficulties after Lord Nelson's death increased.

In vain, she attempted to dispose of Merton and, at length by repeated application to her friends, a meeting was held at the house of Alderman man Sir John Perring, Bart., on the 25th of November, at which were present Sir John Perring, Sir Robert Barclay, Mr. Davison, Mr. Moore, Mr. Gooch, Mr. Macklew, Mr. Abraham Goldsmid, Mr. Nichol, Mr. Wilson, and Mr. Lavie; when Mr. Dawson, Lady Hamilton's solicitor, laid before them a list of debts, amounting to £8,000, exclusive of £10,000 required to pay off annuities; and, a valuation of her property at Merton, and elsewhere, (taken at a low rate), amounting to £17,500.

An assignment of Merton, and her effects, was made to Sir John Perring, Mr. Alexander Davison, Mr. Abraham Goldsmid, Mr. Richard Wilson, and Mr. Germain Lavie; and to afford immediate relief; Mr. Davison, and Mr. Goldsmid, each advanced £1,000; Sir Robert Barclay, Mr. I. Gooch, and Mr. Wilson, each

£500; and Sir John Perring, £200. The trustees were to go to market at the time and manner they might think most advantageous; and, they formed themselves into a Committee, to follow up her claim on Government. Their efforts in the latter respect were unavailing.

Lady Hamilton removed to Richmond, and afterwards took lodgings in Bond Street. She was, however, soon obliged to secrete herself from the pursuit of her creditors; but, in 1813, was imprisoned in the King's Bench. From this confinement, after ten months, she was liberated by the kind assistance of Mr. Alderman Joshua Jonathan Smith, a man of most upright conduct, and kind heart and disposition.

Threatened with an arrest on a coach-maker's bill, which was afterwards found to be a fictitious claim, she, however, fled to Calais, remained there in great obscurity, fell ill of an attack of water in the chest, and other ailments, of which she died, January 15th, 1815. She is reported, by an anonymous foreigner, to have died in the bosom of the Roman Catholic Church; and, to have taken the sacrament on her death-bed. This writer affirms Lady Hamilton to have embraced that faith a long time previous to her decease; and, asserts also in the most positive manner that, a Roman Catholic Priest had administered to her the sacrament during her confinement in the King's Bench.

This statement is, however, unconfirmed; and, from an account given to me by an English lady, Mrs. Hunter, of Brighton, whose kindness of heart and benevolence, brought her in contact with Lady Hamilton, in the closing hours of her life, I am not disposed to credit it. This excellent lady tells me that, at the time Lady Hamilton was at Calais, she was also there superintending the education of her son at the academy of Mr. Mills. She resided in the "Grande Place," and became acquainted with Monsieur de Rheims, the English interpreter, who persuaded Mrs. Hunter to take up her residence with him in his Chateau, which was visited by many English.

When Lady Hamilton fled to Calais, Monsieur de Rheims gave to her one of his small houses to live in. It was very badly furnished. Mrs. Hunter was in the habit of ordering meat daily at a butcher's, for a favourite little dog; and, on one of these occasions was met by Monsieur de Rheims, who followed her exclaiming "Ah! Madame, ah! Madame! I know you to be good to the English! there is a lady here that would be glad of the worst bit of meat you provide for your dog!" When questioned as to who the lady was, and promising that she should not want for anything, he declined telling, saying, that, she was too proud to see any one; besides, he had promised her secrecy. Mrs. Hunter begged him to provide her with everything she required, wine, &c., as if coming from himself, and she would pay for it. This he did for some time, until she became very ill, when he pressed her to see the lady that had been so kind to her; and, upon hearing that her benefactress was not a person of title, she consented—saw her, thanked her and blessed her—a few days after she ceased to live!

This lady describes her to me as exceedingly beautiful, even in death! She was anxious to have her interred according to English custom; for which, however, she was only laughed at, and poor Emma was put into a deal box without any inscription. All that this good lady states she was permitted to do, was, to make a kind of pall out of her black silk petticoat, stitched on a white curtain. Not an English Protestant Clergyman was to be found in all Calais, or its vicinity; and, so distressed was this lady to find some one to read the Burial Service over her remains, that she went to an Irish half-pay officer, in the Rue du Havre, whose wife was a well informed Irish lady. He was absent at the time; but, being sent for, most kindly went and read the service over the body.

Lady Hamilton, according to the Register of Deaths, preserved in the Town Hall, died in a house, situate in the Rue Francaise, and was buried in a piece of ground, in a spot just outside the town, formerly called the Gardens of the Duchess of Kingston, which had been consecrated, and was used as a public

cemetery till 1816. This ground, which had neither wall nor fence to protect it, was, some years since, converted into a timber yard; and, no traces of the graves now remain. Mrs. Hunter wished to have placed a head or foot-stone, but was refused. She, therefore, placed a piece of wood in the shape, as she describes it to me, of a battledore, handle downwards, on which was inscribed, "Emma Hamilton, England's Friend." This was speedily removed, another placed, and also removed; and the good lady was at length threatened to be shot by the sentinel if she persisted in those offices of charity. A small tomb-stone was, however, afterwards placed there, and was existing in 1833. Upon it, according to a little "Guide to Calais," compiled by an Englishman, was inscribed:

..... Quæ
 calesiaë
 Via in Gallica vocata
 Et in Domo, CVI. Obiit.
 Die XV Mensis Januarii, MDCCCXV.
 Ætatis Suxæ LI.

The Register of Burials commenced only in 1819. The British Consulate contains no documents relating to Lady Hamilton, but in the office of the Judge de Paix, there is an inventory of her effects, which were estimated at the value of two hundred and twenty-eight francs; besides fifteen francs found in a box with some articles of wearing apparel, and some duplicates of plate that had been pawned.

The Earl Nelson came over to demand Lady Hamilton's property, but found only the duplicates of trinkets, &c., pledged, and which he wished to take away without payment. He declined repaying any expenses that had been incurred.*

During a visit to Calais, on his return from a residence in Germany in attendance upon his late Majesty William IV, and her Majesty the Queen Dowager, my estimable friend, Dr. William Beattie, visited the grave of poor Emma; and in the "Journal," published by him in 1831, has inserted some elegant and most feeling lines, though without mentioning the name of her to whom they apply. These we are obliged to reserve for our next number.

THE SHIP, ITS ORIGIN AND PROGRESS, being a general History from its first invention to its latest improvements, &c.—By Francis Steinitz,—London: Allen & Co., Leadenhall-street.

To say the least of it, as the world has it, this was a bold undertaking. Without enumerating half the particulars promised in the title page, the above are sufficient to convey to any reflecting mind the enormous magnitude of the project, demanding for its due execution the best information which maritime countries can supply, no ordinary amount of labour to sift and compile them, and no small capital, to introduce them to the world. So gigantic a design it would be unfair to expect to see fulfilled in a first attempt but making every allowance, we are bound to say that Mr. Steinitz, has overcome great difficulties, and evidently never tiring with his laborious task, has filled a large quarto volume of above 600 pages, with a most valuable History of the Origin and Progress of the Ship. To ourselves and

* There are various accounts relating to the payment of the funeral expenses. My friend, Mr. Rothery, tells me that his relative Mr. Cadogan, to whom Horatia was entrusted, and by whom she was taken, after the demise of Lady Hamilton, to Mrs. Matcham, made the payments on this occasion, and also afforded much assistance to Lady Hamilton prior to her decease. Alderman Smith was also generous, on this occasion.

our Nautical readers, this volume specially addresses itself, and our confined limits will impose on us the agreeable task of reverting to it in several of our future numbers. But we will attempt here a general outline of the author's plan. His first work on the Ship appears to have been written in another language, and for reasons which he gives, he resolved on its translation and publication in English. Hence, the present volume which grew, as it were to its present size from the insufficiency of its origin. Taking as his motto that "there is nothing whatever totally insignificant," he traces the origin of the ship from its earliest history, as well as the darkness of the early ages permit him, through the Egyptians, the Phœnicians, the Greeks, and the Romans, and following the English from the Norman Conquest through the times of the Crusades to the present, the Venetians through the time of Columbus to the early Portuguese. Nor have even the Chinese been neglected. But for the present we must confine ourselves to the foregoing brief notice, promising our readers that they will find an ample source of information in the work before us, relating to all that concerns the origin and progress of that noble art of man, the ship.

ADVENTURES IN BORNEO.—*A Tale of the Sea*:—Colburn, London.

One of the most interesting stories of real life that we have ever met with, in which the chequered shade of eventful days is delineated with a master's hand, fixing the reader's whole attention, until he has scanned its closing page.

NEW CHARTS.

A List of published and corrected Charts from the Hydrographic Office Admiralty, in the month of January, 1849.

- TIDE TABLES for 1849, price 1s. 6d.
 STORNOWAY HARBOUR, (*Hebrides*,) *Com. Otter, R.N.*, 1848.
 GALWAY HARBOUR, (*Ireland*) *Com. G. A. Bedford, R.N.*, 1845, price 1s. 6d.
 TANGIER, *French Survey*.
 SÆDALIK GULF, (*Archipelago*) *Capt. Copeland, R.N.*, 1834, price 2s.
 MEGALO KASTRON, (*Candia Island*) *Capt. T. Graves, R.N.*, 1843, price 6d.
 CANARY ISLANDS, *Capt. Vidal, R.N.*, 1834 and 38, price 1s.
 TABLE BAY, CAPE OF GOOD HOPE, *Capt. Sir E. Belcher, C.B., R.N.*, 1846.
 ST. PAUL ISLAND, *Capt. Blackwood, R.N.* price 6d.
 MORETON BAY, (*Australia, East Coast*) *Coms. Wickham and Stanley, R.N.*, 1839 and 47, price 1s. 6d.
 PORT CURTIS, *Ditto* *Capt. O. Stanley, R.N.*, 1847, price 1s. 5d.
 GREAT SANDY ISLAND, SKETCH OF, *Ditto, Lieut. I. Dayman, R.N.*, 1847, price 1s. 6d.
 NORTHUMBERLAND TO PALM ISLES, (*North-east Coast*) *corrected to 1848, Capt. Stanley, R.N.*, price 3s.
 CALLAO, BOQUERON OF, *Capt. Belcher and Fitz Roy, R.N.*, 1840, price 1s. 6d.
 SAN JUAN DE FUCA STRAIT, *Capt. Kellett, R.N.*, 1847, price 2s.
 PORT SAN JUAN, DUNCAN ROCK, NEAH BAY, *Ditto*, 1847, price 1s. 6d.
 SOKE INLET, (*Vancouver Island*) *Ditto*, 1847, price 1s. 6d.
 BECHER AND PØDDEB BAYS, *Ditto*, 1846, price 1s. 6d.
 ST. NICHOLAS ISLAND, *Coronados and Colnett Bay, Ditto*, 1847, price 1s. 6d.

[It is our painful duty to record with our obituary, the loss of that excellent officer Lieut. Gordon, lately commanding the *Royalist*. The high estimation in which he was held by the Hydrographer to the Admiralty, amply confirms the following outline of the important services he was rendering to seamen, when he was overtaken by a fever, which terminated fatally. It is copied from the *Singapore Times*, for which we are indebted to an unknown friend.]

LIEUT. DAVID MACDOUGAL GORDON, R.N.—It was our painful duty on Friday evening last to follow to the grave the remains of the late Commander of H.M.S. *Royalist*, Lieut. Gordon, whose death was caused by fever brought on by incessant and unremitting labour in completing the Admiralty survey of the Coast of Borneo. In the death of Lieut. Gordon the Hydrographical department has lost an energetic, persevering and talented officer, who fell a victim to over attention to the duties of his situation, and engaging in toils, far in excess of his physical strength; toils, which undermined a naturally robust constitution and hurried to the grave, one whose mind was so engrossed in completing the surveys he had undertaken as to forget the demands of health, and the relaxation indispensable to the human frame under a tropical sun.

Lieut. Gordon was the second son of Colonel MacDougal Gordon, of Park House, Banff, in Scotland. After serving seven years in the Mediterranean as a Midshipman and Mate, he left England in 1842, in H.M.S. *Wolf*, to join the *Agincourt*, bearing the flag of Rear Admiral Sir Thomas Cochrane.

Whilst on board the flag-ship he distinguished himself as a gunnery officer, and his talents recommended him to the notice of Admiral Cochrane, then naval Commander-in-chief on the India and China station, by whom he was appointed assistant-surveyor, to Captain Collinson of H.M. Brig *Plover*. This situation brought out the mental energies and talents of the deceased: he was actively engaged in surveying the group of islands adjacent to Chusan, and elsewhere on the coast of China. After serving as a mate for six years, Mr. Gordon, on March 24th, 1845, was promoted to the rank of Lieutenant. During the period taken up in these surveys on the coast of China an incident occurred which may be cited as an example of his extraordinary zeal, intrepidity, and perseverance. The circumstance took place at an island near Chusan, where the *Plover* was anchored. Mr. Gordon was sent to survey the back of a peninsula as far as he could proceed so as to return to the ship by dusk; the presence of several reefs made it impossible to make the circuit by that time. At dusk, to the utter astonishment of all on board the *Plover*, Mr. Gordon was seen returning from the opposite direction to that from whence he was expected. After having reported himself, he, in answer to the enquiries as to how he managed to traverse the peninsula, said he thought it best to make a day's work of the survey; having finished it, he with the assistance of his boat's crew, carried the boat about half a mile overland! A mind so resolute, and capable of contending with, and overcoming difficulties, required only a wider sphere for the exercise of its talents.

On the departure of H.M. brig *Plover* for England, Capt. Collinson intimated to the Admiral the high qualifications of Lieut. Gordon as a surveyor, and the opinion of one so capable of judging received due respect. Mr. Gordon was immediately placed in command of H. M. schooner *Young Hebe*, in which he rendered invaluable services to his country, by making exact surveys of the islands, channels, and passages at the back of Hong Kong. This latter task was so highly approved by the naval Commander-in-Chief,

that H. E. resolved to employ so indefatigable and talented an officer in a wider field, and accordingly appointed Mr Gordon to the command of H.M.S. *Royalist*, in which vessel he surveyed the west coast of Formosa during the N.E. monsoon; a task which, in addition to the difficulties of the undertaking, was rendered still more onerous by the weather: during the survey the ship was battered down for six weeks. The successful labours of Lieut. Gordon pointed him out as the most competent officer to complete the survey of the Coast of Borneo, to examine those parts which had been omitted by Sir Edward Belcher. Exposure and the lack of fresh provisions made inroads on the strength of the whole ship's company, and the intense application of the Commander, in completing his survey of the rivers of Borneo from Sambas to Labuan, seriously affected his health. The *Royalist* was ordered by the naval Commander-in-Chief to Singapore, to enable her officers and ship's company to recruit their health; on her passage the vessel was dismasted, and narrowly escaped total destruction: reaching Labuan in safety, under jury-masts, the *Royalist* was towed over to Singapore by the H.C. steamer *Auckland*. On arrival at Singapore, Mr. Gordon was seized with an attack of remittent fever, which supervening on a constitution already enfeebled by exposure in a tropical climate, in a few days left its victim prostrate: he died on the morning of December 2nd. His earthly course had been marked by a kind, amiable, upright disposition, and his end realized the peace which virtue assures to those who follow in her steps. His remains were followed to the grave by his Honor the Governor, and other civil authorities, the officers of H.M. sloop *Arab*, the Flag-Lieutenant and Secretary of the naval Commander-in-Chief, Lieut. Col. Carthew, and officers of the 21st M.N.I., and most of the European inhabitants of Singapore.

SHIPWRECK OF THE LADY KENNAWAY—The King of the Belgians has conferred the Order of Leopold upon Capt. Jepsen, who commanded the Belgian corvette *La Meuse*, on the Portuguese coast, when the English vessel *Lady Kennaway* was wrecked, on the 19th of November, 1847, and the passengers were on the point of perishing. Capt Jepsen immediately went to the succour of the crew and passengers, and by dint of great exertion, and at the peril of his life, succeeded in rescuing from certain death the crew and passengers, to the number of twenty-six persons. He has also received from the British Government a magnificent large gold medal, in testimony of esteem and gratitude, and the crew of *La Meuse* has been presented by the British Government with the sum of £10.

WHITEHALL, Jan. 15.—The Queen has been pleased to direct letters patent to be passed under the great seal of the United Kingdom, constituting and appointing the Right Honourable Sir Francis Thornhill Baring, Bart.; Rear-Admiral James Whitley Deans Dundas, c.B.; Maurice Frederic Fitzhardinge Berkeley, Esq., c.B., Captain in her Majesty's navy; Lord John Hay, c.B., Captain in her Majesty's navy; the Honourable William Francis Cowper; and Alexander Milne, Esq., Captain in her Majesty's navy; her Majesty's Commissioners for executing the office of High Admiral of the United Kingdom of Great Britain and Ireland, and the dominions, islands, and territories thereunto belonging.

QUARTERLY NAVAL OBITUARY.—Retired Rear-Admiral John M'Kerlie. *Captains*—C. C. Askew, P. H. Bridges, W. J. Purchas, J. Reynolds, Sir R. Oliver, R. Russel. *Commanders*—W. Wilbraham, R. M'Coy, W. Chasman, A. L. Warner, D. R. T. Mapleton, T. Hodgson, W. C. Barker, J. F. Wharton, T. B. Young, J. Roche, A. Bisset. *Lieutenants*—W. Fosse, G. Sanford, J. Hudson, (a), W. Tullis, W. Sutton, C. W. Ross, G. Frazer, J. H. Jackson, W. Fothergill, C. Jackson, A. M. Shairpe, F. D. Quin. *Masters*—M. Calman, R. Oglesby, T. Phillips. *Chaplains*—R. J. Halke. *Surgeons*—J. Stewart (b), J. Low, R. H. Brown, R. M'Crae, R. C. Swann, J. Stilow, D. Macmauns. *Assistant Surgeons*—James Todd, G. G. Simpson, W. C. Torrance. *Paymasters and Purser*s—B. Bard, W. Perry, J. King, (b), W. D. Garwood, C. Hillyar. *Clerk*—John Bell. *Royal Marines*—Captain G. Wolfe.—First Lieutenants T. S. Perkins, R. Blacke-ney.—Second Lieutenant G. Loftus.

METEOROLOGICAL REGISTER.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory, From the 21st of December, 1848, to the 20th of January, 1849.

Month Day.	Week Day.	Barometer In Inches and Decimals		Fahrenheit Thermometer In the Shade				Wind. Quarter. Strength.				Weather.	
		9 A.M.	3 P.M.	9AM	3PM.	Min	Max	A.M.	P.M.	A.M.	P.M.	A. M.	P. M.
21	Th.	30.34	30.30	26	32	25	33	SE	E	4	3	b	b
22	F.	30.32	30.32	26	37	24	38	NE	NE	2	4	b	b
23	S.	30.36	30.26	28	31	26	33	E	SE	2	4	bc	bc
24	Su.	30.11	29.97	27	33	23	34	NE	SE	2	3	b	bc
25	M.	29.90	29.99	41	45	31	46	SE	SE	2	2	bed [2	bc
26	Tu.	30.08	30.02	46	48	40	49	S	S	4	4	o	o
27	W.	30.16	30.18	43	46	41	47	SW	SW	2	2	bc	or 4
28	Th.	30.02	30.06	40	43	38	44	NE	N	4	4	bc	bc
29	F.	30.21	30.20	39	41	37	43	N	N	2	2	o	o
30	S.	30.14	30.10	36	38	35	39	NE	NE	1	3	ogd [2	od [4
31	Su.	30.16	30.18	35	38	32	38	NE	NS	3	2	o	od 4]
1	M.	30.16	30.16	32	30	29	33	NE	E	4	5	o	qo
2	Tu.	30.12	30.02	23	25	22	27	SE	E	2	4	b	b
3	W.	29.74	29.69	22	26	20	30	E	NE	3	2	o	bc
4	Th.	29.76	29.82	31	33	30	36	NE	E	2	2	o	bc
5	F.	29.79	29.86	34	33	32	35	NE	NE	2	2	odr [1] [2]	orhs [3] r [4]
6	S.	30.02	30.04	29	32	27	35	NE	NE	2	2	bc	ors [3] s [4]
7	Su.	30.08	30.06	29	31	26	36	W	S	1	1	o	bc
8	M.	29.61	29.57	27	39	35	40	S	S	4	3	or [1] [2]	or 4]
9	Tu.	29.54	29.54	28	44	36	45	NW	NW	2	2	bcm	od g]
10	W.	29.08	29.00	46	48	37	49	SW	SW	5	6	qbc	bcmr [4]
11	Th.	29.18	29.50	37	37	36	38	NW	N	7	7	qor 1] [2]	qo
12	F.	30.15	30.05	31	35	30	44	E	SW	3	4	bcm	qops 3] [4]
13	S.	29.78	29.72	48	51	44	52	SW	SW	5	5	qo	op 4]
14	Su.	29.53	29.43	52	53	51	54	SW	W	5	6	qop [2	qod 4]
15	M.	30.07	30.02	35	42	34	43	W	SW	2	2	bc	qop 3
16	Tu.	29.93	29.81	36	46	32	47	S	S	1	3	bc	o
17	W.	29.77	29.75	49	52	44	54	SW	SW	2	3	bc	or [3
18	Th.	30.06	29.98	43	48	38	50	SW	SW	3	5	bc	qbc
19	F.	29.98	29.96	49	52	48	53	SW	SW	5	3	qo	bc
20	S.	30.12	30.20	47	50	45	51	SW	SW	1	1	bc	o

DECEMBER 1848.—Mean height of Barometer=29.934 inches; Mean Temperature=42.2 degrees; depth of rain fallen=2.70 inches.

NOTICE TO CORRESPONDENTS.

OCEANUS in our next.

Hunt, Printer, 130, St. Alban's Place, Edgware Road.

THE

NAUTICAL MAGAZINE

AND

Naval Chronicle.

That future pilgrims of the wave may be
Secure from doubt, from every danger free.

MARCH, 1849.

THE LIGHT ON CAPE L'AGULHAS.

At length the Cape is lighted! And yet we must qualify the announcement by acknowledging that we have received no statement of the fact. We are left to form the conclusion on intelligence which has reached us direct from the place, regarding the efficiency of the new light, which it is stated was to be exhibited in the commencement of this year. Let us hope that new year's day witnessed the event;—that the Cabo Tormentoso of old, the much dreaded Cape of Storms, added another friendly beacon to guide the mariner on his venturesome path.

The establishment of the Cape light has called forth the best exertions of that talented and energetic Astronomer, Mr. Maclear, in not only determining its position astronomically, but also in fixing a series of stations trigonometrically, by which the shore and its approaches have been examined. In his operations on this service, Mr. Maclear was most ably seconded by his assistant, Mr. Montagu.

We understand that H.M.S. *Dee* left Table Bay with the light apparatus and stores, with Mr. Rees, the master of the *President*, Mr. Cave, acting-master of the *Nimrod*, and returned on the 27th of September leaving Mr. Skead to assist in completing the drawings of the survey which had been made by these officers. In his report of this service Mr. Maclear says, "The officers charged with the execution of the soundings have performed it in a masterly style, with energy and cheerfulness, and I acknowledge my obligations to these gentlemen for their personal at-

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tention and advice. These soundings were not referred to headlands or the features of the shore, but to fixed beacons on the shore, on high land above it, whose positions with respect to the lighthouse required to be well known." Mr. Maclear proposed, after many consultations with the officers, (and we understand that his proposal has been adopted) that the building of the lighthouse should be painted with alternate white and red zones. The white becomes invisible through fog, and the red appears suspended in the air. In the day time it will be very significant, whether projected on the hill as seen from the south, or in the air as seen from the east. Another proposal was also made by Mr. Maclear, and which being also approved of we may point out to the special notice of seamen, until further accounts are received. He observes "as a general rule for the distance from the lighthouse in the night, let the lower part of the lantern glass in certain directions be coloured red, so that when viewed from shipboard, if the light should be red, the vessel must keep off until it becomes white, she will then be out of danger", a caution which has been adopted elsewhere.

The following directions are drawn up for the guidance of seamen passing L'Agulhas light.

Cape Agulhas is situated in latitude $34^{\circ} 49' 45''$ S., and longitude $20^{\circ} 0' 45''$ E., and is nearly the southernmost point of Africa, the land immediately west of it projecting a little to the southward of the Cape.

It is a low rocky projection with reefs lying off it to the distance of one-third of a mile; these reefs break heavily in strong winds. When first seen from either the eastward or westward, the land in its immediate vicinity appears high; is even and round, forming two distinct prolonged hummocks, which are connected; but at a distance appear separate. The land, both to the eastward and westward of this double hummock is very low, which renders the Cape easy of recognition.

On the first rise of the land to the northward (N. 30° W., 520 yards from the Cape,) a lighthouse has been erected, shewing a brilliant fixed light at the elevation of 132 feet from the mean level of the sea, and which can be seen in any direction seaward, between E. and N. $57^{\circ} 15'$ W., at the distance of six leagues in clear weather.

From the Cape the land trends to the E.N.E. as far as Northumberland Point, between which and the Cape are two deep indentations, the south-westernmost of which is named St. Mango Inlet. The reefs extend from the shore about one-third of a mile, and break heavily in strong winds.

Northumberland Point is low and sandy, and lies N. $86^{\circ} 30'$ E. three miles four-tenths from Cape Agulhas. A very dangerous ledge of rocks extends S. $37^{\circ} 30'$ E. from the point, and a detached rock was fixed while breaking, by the intersection of lines observed from favourable positions, which place it S. $58^{\circ} 30'$ E., one mile two-sevenths from Northumberland Point, and S. $81^{\circ} 30'$ E., four miles seven-eighths from the lighthouse. The extreme of Northumberland Point reef, bears S. $77^{\circ} 30'$ E., four miles and a half nearly from the lighthouse.

Northumberland Point is the western horn of Struys Bay, which is formed by a slight bend of the coast to the westward, and terminates at Struys Point which bears N. 79° 30' E., from ten to twelve miles from Northumberland Point.

Shelter may be obtained in the bay during westerly and north-westerly winds, (although with a heavy swell when blowing hard,) but none is afforded with the wind between south-west, round to the southward, and east.

With any of these winds it is unsafe, if not impossible, for a ship to ride in this bay, for the sea rises to such an extent as to break in 7 and 8 fathoms. This was observed on two occasions in H.M. steam-vessel *Dee*, while standing off and on, waiting for the weather to moderate to enable her to anchor. At the time of anchoring, although the wind had subsided for several hours, the water nearly broke in 7 fathoms, when the anchor was let go, and at the place from whence she had put to sea three days previously in 4½ fathoms, the sea was breaking heavily.

In a small sandy bay or cove to the north-west of Northumberland Point, and which is sheltered by a projecting shelf of shingle from each extremity of the cove, is the landing-place. A jetty has lately been constructed from pieces of wreck, and renders landing very easy, but at the outer horns of the abovementioned shingle there is only water sufficient for a boat at a quarter flood, when the weather is fine. There are three or four wooden houses at the head of the jetty which point out its position from the bay.

The marks for anchoring in Struys Bay, are the large houses near the beach W. ½ S., and the sandy extremes of Northumberland Point S.W.b.S. in 5 fathoms sand. Here the bottom is clean, while to the westward, and nearer the reef where the water is smoother, the bottom is foul; rocks interspersed with patches of sand. Here it is unsafe for a vessel to anchor, for the cable is liable to snap suddenly from fouling the rocks; this occurred to H.M. steam-vessel *Dee*, while lying there in a light south-westerly wind, but having the usual swell.

Vessels from the westward intending to anchor in Struys Bay, should not bring the lighthouse to bear more westerly than W.b.N. ½ N., until Northumberland Point bears N.W. ½ N., then steer N.N.E. or N.E.b.N. till the large house in the bay bears W.N.W.; this will lead clear of the outer and detached reefs of Northumberland Point. Then proceed to the N.W., and bring the anchoring marks on.

The whole of the coast from Northumberland Point to Struys Point is low and sandy; but at a short distance from the beach there is a line of sand hills varying from 50 to 150 feet in height. The greater number of these hills are composed entirely of sand, but some are crowned with dark coloured bush. This coast feature extends to the eastward as far as the next point east of Struys Point.

The land near the beach in the neighbourhood of Struys Point is also low, and there is no high land sufficiently near the sea to prevent the

low feature from rendering the hills to the northward of Cape Agulhas, a very remarkable object from seaward.

Struys Point is the eastern extreme of a number of sand hills, and forms as already stated the outer horn of Struys Bay. This point is far more dangerous than Northumberland Point, for the reefs lie much farther off the shore, and there is no remarkable high land to enable the mariner to determine his position. A variety of causes prevented this point from being included in the survey which was made at Cape Agulhas; but it was observed from the summit of the sand hills over the point, that the reefs extend to seaward about three miles, breaking with great fury in a strong south-easter. The same appearance in the colour of the water was observed here as off Northumberland Point, viz. changing from brown to light, and dark green to seaward, from which it may be inferred, together with the shoalness of the water in the offing of Northumberland Point, that the lead will always warn a ship of the approach to danger, as well as the colour of the water, which is remarkable.

Coming from the eastward in the night, if the weather is clear, the light on Cape Agulhas will be seen five or six miles before Struys Point is reached, and no ship should stand so far to the northward after having once seen the light as to bring it more southerly than W.b.N.

Keeping the light on this bearing will lead a vessel about two miles to the southward of any danger off Struys Point.

Care should be taken in approaching the land before the light is discovered; as in hazy weather, or from the spray in a fresh breeze combined with the distance of Struys Point, (about fifteen miles,) the light may be obscured, and a vessel get inside the line already mentioned.

Should a vessel seek refuge in a north-west gale in Struys Bay, it would be advisable that she put to sea immediately the gale abated, for the wind frequently changes in a few hours from a strong north-wester to S. or S.W., in which case a vessel would scarcely be able to work out, in consequence of the heavy sea that rises in a short time with these winds.

From Northumberland Point westward the reefs extend about one-third of a mile, and break heavily when the wind is from S.E. In one or two places it breaks farther out, but in no place exceeds half a mile.

During the time the examination of the coast was being carried out, no tide or current was observed in Struys Bay, nor about the coast to the distance of two miles and a half from the shore, as far to the westward as Point E. of the chart, but it is confidently asserted by fishermen and residents at Struys Bay, that a very strong current frequently sets to the westward round Northumberland Point.

The tides were observed at the jetty in Struys Bay once, and twice at Agulhas, at full and change days; the results of these observations give the time of high-water, 2h. 50m., and the rise and fall 5 feet.

Ships approaching the land near Cape Agulhas or Struys Bay, in hazy or foggy weather, should on no account neglect the use of the

lead, or go within 20 fathoms, particularly at night in foggy weather, for the high land of Agulhas is often invisible in the day time, when the sand hills of Struys Bay, and even the breakers off Northumberland Point are distinctly seen.

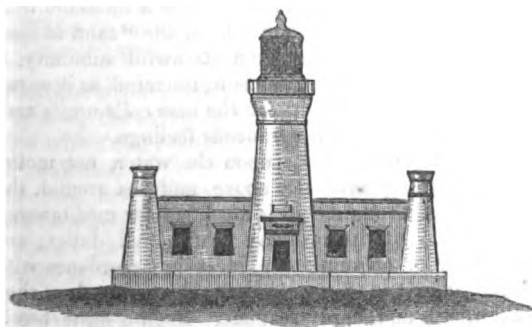
On these occasions it is almost impossible to know whether you are to the eastward or westward of Struys Point, as the bay eastward of the point has the same features as Struys Bay.

In concluding these observations it may not be out of place to remark, that no vessel should approach nearer than three or four miles, for should it fall calm, and the vessel be within that distance, the heavy swell which constantly rolls toward the shore, would render her fate almost inevitable. The only resource in such a case, viz. anchoring, would most likely prove unavailing, for the nature of the bottom combined with the swell, would in all probability cause the cable to part. The fate of a wreck in St. Mango's Inlet under these circumstances tends to strengthen this statement.

Ships from the westward will first see the light on a S. 57° E. bearing.

Although the survey of Cape Agulhas extended only five miles westward of the Cape, it was observed that the sea broke a long distance off Gunners Quoin Point. Care should therefore be taken not to approach too close to the land in endeavouring to make the light.

All the before mentioned bearings are by compass.



Lighthouse on Cape Agulhas.

Mr. Maclear observes respecting the building "that it appears to be well executed and sufficiently massive." "The dome (he says) I am told is composed of hard bricks (clinkers). It is perforated on one side to form an entrance into the lantern, there being no other method of access to the latter from below. This opening is objectionable in a mechanical point of view, for it disturbs the equilibrium of the dome. On the other hand, it is less objectionable than perforating the wall, composed of a softer material.

"Every thing being in a sufficiently forward state last Saturday, and the weight of the lenticular apparatus which is to rest on the crown of

the dome having been ascertained; about double the amount, or ten thousand one hundred and eighty pounds, consisting of blocks of granite and two cases of lead, were placed upon the granite block fixed on the crown for the attachment of the stem of the apparatus, and still remains there, without having produced any visible flinching or crack. I am therefore, of opinion that the building and dome are sufficiently strong, for the support of the machinery they are to carry, and that the machinery may be erected without further delay."

In conclusion, we trust in our next number to be able to announce the commencement of the light, which was intended to take place on the first of January.

NAUTICAL SKETCHES.

The Calm at Sea.

"But hope can here her moonlight vigils keep,
 And sing to charm the spirit of the deep:
 Swift as yon streamer lights the starry pole
 Her visions warm the watchman's pensive soul."

CAMPBELL.

During the pilgrimage of a sailor, there are a thousand things which give rise to deep reflection. Among others, the "calm at sea."

The storm, however impressive from its awful sublimity, leaves but little time for reflection. At the moment, the mind, as it were, is thrown back upon itself, and the necessity of the case calls up its action in one direction to the exclusion of all extraneous feelings.

But when a lonely vessel floats upon the water, not motionless, but stationary, with nothing save sky above and sea around, the mind is open to a variety of thoughts; it is an hour for meditation, a sort of holiday in the round of its ordinary professional duties; and as such, scarcely ever fails of attuning the ideas in accordance with the surrounding serenity; the effect, we have often noticed on the officer as well as on the rough and hardy seaman: Such a scene has its interest as a picture:

The day, bright, without a cloud to mitigate the fervour of the sun's intensity, now wanes; the solemn shades of evening steal on, and darkness spreads over the waters, whilst above, the stars in countless thousands bespangle the canopy of heaven: the effect on the mind of all is indescribable; but though the feelings take the tincture of the impressive calm which breathes around, there is one thought ever active,

The stars bid him hope, because mutation is visible there; star after star descends from its high place and vanishes in the west: hence the mariner's conviction that change will come.

Let us gaze awhile upon those heavenly orbs, so "spiritually bright",

as Lord Byron has so poetically and beautifully expressed their splendour.

“How strangely clear shine those radiant lights
That, look so coldly* down upon this earth,
Amid the gloom which shrouds the moonless nights—
Now,—and, remotely, from creation’s birth!

“How mysterious seems that vaulted roof.
That, limitless, spreads beyond mortal ken,—
Awful in its profound convincing proof
How vast His works,— how little those of men!

“Yet how attractive are those thousand eyes
Of Heaven!—as if scanning the deeds of man—
Tracing his pilgrimage—as each hour dies—
Until the close of his allotted span!

“Watching his dreams, fancies, passions—all wild—
As if drove by fate irresistible!
In might a giant,—in weakness, a child,—
E’en to himself incomprehensible!

“But, look up again to that blue expanse,
How the soul thrills as feelings warm arise,
Whilst no thought’s expression could enhance
This all-transcendent glory of the skies!

“Oh! how beautiful seem they! Who would dream
Untutor’d, that all are orbs like this round globe,
Whilst, to the eye, they the merest sparkles seem,
Upon the grand ethereal azure robe!”

But, the mariner’s conviction of change is not his alone, it belongs to the entire species; the savage without any pre-conceived knowledge of the revolution which every earthly thing undergoes in due season, has his intelligence awakened.

The calm at sea is a phenomenon that has great power over the imagination. We have nothing to do with Mr. Locke’s refutation of the theory of innate ideas. Ideas, however, rise in the mind spontaneously, and often so strange as, apparently, to have no sort of connection with external objects or circumstances. Men dream whilst awake, but what are dreams, properly so called? It has been asserted that dreams never occur during profound sleep, probably from the supposition that under the condition the memory is dormant. The assertion may be questioned, though it would not be an easy matter to prove either; like sleep, the dream is a phenomenon the cause of which is not clearly comprehended. But, if the latter be a malady, its origin seems not to be altogether confined to the head, but has its range in the disordered stomach, which acts through sympathy upon the brain;—that is proved in drunkenness, therefore, beware of grog!

* Their light does not affect the thermometers.

That a calm should affect the imagination may easily be believed. Think of — “the lone ship, the world of waters circling round, and bounded by the sky, nothing but the heavens and the ocean visible, as if the vessel stood besides the only solitary thing in the creation! If external objects make impressions, these must have their force, and the more, as being few there is nothing to distract attention.”

Besides, the calm, the stillness, almost solemn, and often profound, save the creaking occasionally of the ship's furniture, or the flap of the sails, has a powerful influence on the animal spirits, especially within the torrid zone.

In situations of this sort, the imagination is affected by the loneliness of the thinking being*; and in addition to the serenity of the air, there is the overpowering fierceness, within the tropics, of the sun's rays, darting down a flood of glorious light, too dazzling to be borne without cover for even a very short time. Then, the oppressive oven-like heat, acting upon the body as a vapour-bath, creates a determination of blood to the head, upon the least exertion, stupifying the intellects until they become feeble, and almost incapable of action; indeed, from incautious exposure the effect has often been a *coup de soleil*; and, under any circumstances, in the absence of wind, langour is produced, and not unfrequently from enervation, an irritability of the temper. Excitement, which gives buoyancy to the spirits is entirely banished, and the sympathy between the body and the mind, in extreme cases, almost robs the latter of rational ideas; there is nothing, external at least, to cause their action, a healthy action, and with the profound rest of the elements, the mind does not under its influence sympathize; and the only pleasing sensation produced by thought is, the *hope* of change, and which even the incalcescent state of the temper is unable to smother; no, not even in the “horse latitudes” under a six weeks' trial; or the partially oblivious condition of the seat of thought during slumber, entirely to banish,

And thus, the light, Heaven directed, shines
To the last! nor fails us e'en with our death!
Lambent o'er our grief,—it our joy enshrines—
Until the heart's last sigh perisheth!
Such, such is hope.

To man, what a blessing is hope, the halo of the heart? True, it is said to be deceitful, and often false; that is to say according to finite reason. Perhaps if we knew all, or were capable of comprehending all, so to our advantage; indeed, the proof sometimes appears clear and distinct from some sudden turn in our affairs.

But let dissatisfied man complain as he will, still it is a blessing, confirmed in this, where confirmation be required, that he is always calling it up to cheer him in his pilgrimage. What would he do without it?

* Man is frequently solitary, without being alone. To constitute a state of solitude, it is sufficient that the mind is entirely absorbed by those ideas which originate in its own reflections.—*Zimmerman*.

It is the very life-spring of the soul! the buoyant float of the heart that keeps it from sinking into the unfathomable depths which despair would lay in his path, and into which he would fall were it not for the light of its flambeau. Yet, the ingrate man is but too often thankless!

Pope, I think it was who said of Hope, "— nor quits when we die." The sick man hopes for life; but should he feel the conviction that death is stealing over him, whilst reason lasts, he hopes for the better life, and thus it clings to him to the last. Hope is a merciful bestowal; prescience, which pertains alone to the God-head, if possessed by man, as he is in other respects constituted, would overwhelm him in misery.

There is no stronger confirmation of the value of hope, than the avowed feelings of the seaman in such a situation as we have attempted to describe. In what direction would he turn his thoughts if he had not such a help to support his spirits under the severe trial of weeks of profound calm at sea? To Heaven with uplift hands! That is hope! there emanates it!

But may not the physical calm be made subservient to moral good? Is it not a time, when not a breath of air moves, for deep sober reflection at sea? If we were then to ask ourselves the simple question, "why we hope?" it might lead to a train of others in the right direction, from which, assuredly, if there be any gratitude in our nature, we must profit.

We commend the subject to our brother tars when becalmed.

OCEANUS.

DEEP-SEA SOUNDINGS.—*Atlantic.*

THE following statement of an attempt at obtaining deep-sea soundings has been addressed by Capt. Barnett of H.M.S. *Thunder*, to the Hydrographer of the Admiralty. Capt. Barnett after observing that the latitudes and longitudes of the places tried from, were most carefully determined, says:—

You will perceive that on the last occasion the attempt was made with a line of iron wire, the suggestion and contrivance of Lieut. Mooney of the *Thunder*. About 1000 fathoms of the wire remained perfect after the experiment, and conceiving it would become useful for a similar purpose hereafter, I have had it carefully reeled on again, well oiled and protected by a cover of painted canvass, and left in charge of the storekeeper at Sheerness.

Abstract of deep-sea soundings between St. Thomas and Bermuda, 10th July, 1848, lat. 25° 55' N., long. 66° 0' W.—no current.

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	h. m. s.		m. s.
Let go - - -	1 50 50	2000 fathoms interval	2 27
100 fathoms interval	54	2100 " "	1 12*
200 " "	1 00	2200 " "	2 30
300 " "	1 25	2300 " "	2 36
400 " "	1 30	2400 " "	2 35
500 " "	0 30*	2500 " "	2 44
600 " "	1 34	2600 " "	2 44
700 " "	1 32	2700 " "	2 55
800 " "	1 40	2800 " "	2 55
900 " "	1 45	2900 " "	2 54
1000 " "	1 51	3000 " "	3 58
1100 " "	1 55	3100 " "	4 19
1200 " "	2 01	3200 " "	4 41
1300 " "	2 05		
1400 " "	2 13		
1500 " "	2 09	Time, commencement	1 50 50
1600 " "	2 12	Do. ending	3 02 24
1700 " "	2 12		
1800 " "	2 18	Whole interval	1 11 34
1900 " "	2 24		

The weight employed was 250lbs. of pig ballast. The first 500 fathoms of line was Massey's deep-sea; the second 500 fathoms common hand-lead line; the next 1000 fathoms two strands of deep-sea line; the next 500 fathoms one strand of deep-sea, and the remainder cod line.

The line broke at about 3250 fathoms.

Abstract of deep-sea soundings, between the Western Islands and Newfoundland Bank, August 3rd, 1848, lat. $41^{\circ} 19'$, long. $44^{\circ} 16' W.$, current N.W.b.W. two knots an hour.

	h. m. s.		m. s.
Let go - - -	10 52 28	2200 fathoms, interval	2 18
100 fathoms interval	0 48	2300 " "	2 13
200 " "	1 00	2400 " "	2 12
300 " "	0 55	2500 " "	2 21
400 " "	0 59	2600 " "	2 22
500 " "	0 52	2700 " "	2 13
600 " "	1 13	2800 " "	2 33
700 " "	1 27	2900 " "	line fouled 2 55
800 " "	1 29	3000 " "	2 29
900 " "	1 36	3100 " "	2 28
1000 " "	1 32	3200 " "	2 24
1100 " "	1 47	3300 " "	2 33
1200 " "	1 51	3400 " "	2 49
1300 " "	1 54	3500 " "	3 07
1400 " "	1 56	3600 " "	3 28
1500 " "	1 57	3700 " "	3 38
1600 " "	2 02		
1700 " "	2 02		
1800 " "	2 06	Commenced	10 52 28
1900 " "	2 07	Ended	12 07 55
2000 " "	2 11		
2100 " "	2 17	Whole interval	1 15 27

* Probably here there was an error in the marks.—† The sudden increase of the interval here is very remarkable, and cannot be accounted for.

The line was placed on the reel very nearly in the same proportion as to size, as in the previous experiment. The whole of the line having run out, a boat was dispatched to the ship for more; but before her return it broke about 300 fathoms below the surface, after holding the boat with the reel for nearly half an hour against a current of two knots. This is noticed because the reeling of the small part of the line on last, is, I believe, directly contrary to the mode hitherto adopted.

The same weight was also employed as before.

On the same day the following experiment was made with a line of iron wire, 4000 fathoms in length, varying in size from No. 1 to 5, the total weight of which was 661 lbs. wound on a small iron reel in a similar manner; that is, the smaller part of the wire being reeled on first, (the suggestion of Lieut. Mooney,) and with a weight attached to it of 61 lbs. A hand lead would have been better.

	h. m. s.				m. s.
Let go - -	9	29	27	1400 fathoms interval	0 57
100 fathoms interval	1	39		1500 " "	0 53
200 " "	1	28		1600 " "	0 49
300 " "	1	18		1700 " "	0 57
400 " "	1	16		1800 " "	0 43
500 " "	1	09		1900 " "	0 55
600 " "	1	01		2000 " "	0 54 broke
700 " "	0	59			
800 " "	0	58			
900 " "	0	58		Commenced	9 29 27
1000 " "	0	58		Ended	9 50 20
1100 " "	0	57			
1200 " "	0	45		Whole interval	0 20 53
1300 " "	1	05			

The great difficulty to overcome in these experiments, more particularly with the iron wire, is the increased impetus given to the reel, when the weight is let go, whereby the line is thrown off more rapidly than it is carried down, and if great care be not taken, is broken by the jerk it will receive, when the impetus of the wheel is stopped, or nearly so. To avoid this we have employed men pressing on the fore part of the reel, with paddings of old canvass for the protection of their hands, which answers the purpose tolerably well, and with a little attention will prevent the too rapid motion of the wheel. But a better contrivance is wanting, especially when a correct notice of the intervals is required.

With the iron line, the difficulty of regulating the motion is still greater, from the extreme rapidity with which it is carried off, and which of course increases instead of diminishes, as in the case of the experiment with the hempen line, although the wire is not so readily thrown off. In this case it broke by the jerk, from our not being prepared with the means of regulating the motion, the wire cutting through everything.

We may remark that the wire had been prepared and placed on the reel previously to our leaving England for the West Indies in November, 1844, and remained there untouched for a period of three years and

a half, when on being examined preparatory to its use on the homeward voyage, nearly 500 fathoms of it was found rusted and unserviceable.

The idea of employing iron wire instead of rope is entirely due to Lieut. Mooney, the assistant-surveyor, and although but one opportunity occurred of testing its value, I am of opinion it will be found a ready way of obtaining deep-sea soundings.

On the latter occasion the following temperatures at different depths also were obtained.

Barometer 30·49, air 75°, surface water 70°.			
At 25 fathoms . . .	68°	At 285 fathoms . . .	50°
50 do. . .	64	350 do. . .	49
100 do. . .	59	600 do. . .	46
200 do. . .	55		

VISIT OF H.M.S. SAMARANG TO BORNEO in search of the crew of the Premier,—extract of a letter from Capt. Sir E. Belcher, K.C.B.

QUITTING Manila on the 10th of December, I shaped a course to shave the Apo Islands, and was becalmed thirty-five hours in that region, but soon made up for lost time by a smart breeze which brought us to Sooloo on the 15th. I mentioned in my former letter, I think, that I noticed a very dangerous rock and several islands, not marked on the charts, on my passage past the Calamianes. I now passed within a mile of a low rock near the Cuegos not placed on the charts, and which *might** have brought me up at night. These two dangers render this channel awkward until explored.

Much jealousy and party feeling at present exist at Sooloo. I had invited the Sultan and Chiefs to visit the *Samarang*. The former cannot go afloat by law and usage, but the prime minister was instructed to accept the invitation for the latter. On the day appointed he excused himself until the following, and then on the latter day sent a message, stating, "That the sultan had forbidden him." I had contracted a friendship with one of the chiefs, (Datu Danielle,) and visited him at his country-house, and he, in return promised to pay me a quiet visit on board. This Datu is a non-opiumist, and endeavours to lead all his adherents in the same laudable course. He is the leader of the independent party, and powerful, although not more than 26 or 28 years of age. They are endeavouring to weaken his influence by cross-marriages,

* This rock in the fairway of this passage, if accurately fixed might be made the keystone of the channel. It is very low, not more than six feet above water, and possibly about fifteen feet diameter. A good look out would almost ensure it being seen in fine weather at night by the luminous appearance of the ripples about it, and in bad weather by the sheet of spray. It is as unfortunate that previous bad weather prevented my having sufficient data to fix it *well*.

viz. by his brother and a sister of the sultan's; and again by the son of the prime minister to his sister*. In the first case the brother must go to his wife, she being of higher blood. In the second, his sister goes over to the prime minister's son. This would weaken his party by the loss of two—the females, perhaps, the most important.

Datu Danielle was not weak enough to be put off by the tricks of the sultan, or his prime minister, but came to the house of Mr. Wyndham, (in state,) where I was, and embarked in my boats. I foresaw that this would cause a stir; and hardly were we seated at a cold collation, adapted to the taste of Mahomedans, when the prime minister and all the chiefs of his party were reported "alongside." So *public* and *official* had been his refusal, backed by the denial of the sultan in *my presence*, that I deemed it improper to wait on him. However, he rapidly found his way to the cabin, evidently labouring to hide his chagrin, and made himself quite "*at home*."

The ship was literally crammed with the various retainers of the different chiefs, dressed in all their gorgeous finery, which I can only compare to what you see at the theatres; silk, gold, and velvet, from head to foot; and withal exhibiting great taste on the part of their wives or sisters, who pass the greater part of their time working at embroidery. After inspecting the ship they retired to the shore, where I accompanied Datu Danielle, in order to ascertain how the sultan would deal with him, as well as to give them a hint that I was on the alert. They summoned him, and tried to browbeat him for visiting me "without the sultan's permission;" but he very boldly replied, "That he was not a *slave*, and knew of no law which forbade him to return the civility which he had received from the captain of the British ship-of-war." This stopped the affair: finding him resolute they then changed their course to *caressing*, and persuaded him to tell all he had seen to the sultan, and others, who had not been so fortunate as himself, in not only viewing quietly, but having all matters clearly explained to him. Great fear prevailed amongst the *better halves*, when all the chiefs were afloat, as a rumour which had reached the shore that they had been made prisoners; and, I was informed that the principal ladies were *wo-manning* their boats to release them!

Several suspicious piratical prahus took their departure about the same moment. This diversion produced a very salutary effect, by expediting the prahu intended to accompany us, and rendering the people more civil. Something very decisive ought to be done in their neighbourhood. The island of Bang-en-ini, a little to the eastward, is the noted pirate nest throughout the Eastern Archipelago. At Sooloo they assert that they have no connexion with these pirates, (generally termed Balliginia,) but during our stay several of their boats came in to sell slaves, captured among the Phillippines, and to buy rice for their future cruizes. I have a sufficient clue to their haunts and connexions, to punish them if

* By the custom of the island the higher by blood, *male* or *female*, takes precedence.

the Government approves, but it will require caution, secrecy, and the aid of steamers. They are a desperate race, and prefer destroying themselves to submitting to capture. The honest party here would aid by information, and if the evil have root in Sooloo, as the sultan denies all knowledge or participation, their punishment or expulsion could not be assumed by him as an insult.*

On the 20th we were joined by our prahu, decorated with the Sooloo colours, and on the following morning sailed from Sooloo. The pace of the *Samarang* soon jeopardized our prahu (in tow), and we were compelled to make a jolly-boat of her, hoisting her up to two heavy spars we projected over the stern. I found her crew to consist of ten persons; the captain and one of his crew very intelligent and good pilots. She had also a *chargé* on board entrusted with a letter to the Sultan of Curan: this personage proved to be a young priest, who had performed his pilgrimage to Mecca, but who, nevertheless, could not keep the 7th or 10th commandments, and was thus undergoing a kind of transportation very much against his *stomach*.

After experiencing light variable airs we sighted the Island of Maratua about eleven on the night of the 24th. Our pilots mistook it for Pulau Panjang, and fortunately were too timid to allow me to run. At daylight we bore away, and as they were still in error, passed round its eastern dangers, which carried us a day to leeward at least. The *safer* channel is also past the western sides of Maratua and Kakuban, where very slight coral fringes project. The breeze having freshened from the northward, compelled us to beat up towards Curan mouth.

On the 26th, about noon, we had reached the great bar, the water shoaling quickly from 30 to 15 and 5 fathoms, soft creamy mud, but the land more than ten miles within us. This rather puzzled me, as I had been led to believe that the *Samarang* could enter the river with ease. I determined, however, to disencumber myself of the prahu, and having re-equipped her, sent one of the barges to tow her into the river's mouth, and suffer her to proceed. The other barge I employed sounding for a channel, but after several times leading up to 2½ creamy mud, and observing her signals for 3 fathoms within, I found that nothing but a dash would help us to a berth before dark. I therefore made up my mind, it being still young flood, to cut our own channel; and about five o'clock not having had *properly* less than a quarter less 3, found the depth increase to 5, 7, and 10 fathoms, and before sun-set the *Samarang* was anchored in a safe land-locked berth, within the river, in 7½ fathoms. Here another difficulty presented itself. All the sides of the river were thick mangrove and mud, and to obtain a position for observing, I had to cut down the largest mangrove trees, by saws, and driving three strong nails in an equilateral triangle, into the stumps, place my heavy three-inch plates of slate on them, and the instruments above all. (This may prove an useful hint to others to provide themselves with such slates and nails for such dilemmas.)

* Since this was written the Spaniards have annihilated this nest of pirates.

I succeeded in my observations, and on the morning following shifted the ship about eight miles further up the river; carrying from 5 to 10 fathoms close to the banks. Anchoring the ship where two great branches met, I determined on exploring this Archipelago in the hope of finding a native to direct us, (having lost our Sooloo friends the first night.) With the customary luck or foresight of

“The sweet little cherub that sits up aloft, &c.”

for surveying vessels, I found that we had reached our extreme point; as a bank, dry at low water, would have impeded our moving a cable further. Two days were expended exploring the most inviting branch westerly, but without success. Having victualled the flotilla for seven days, we started afresh; our force consisted of two barges, two 6-pounders; two cutters, two 3-pounders, (brass); gig, rocket tube, and seventy-one men.

At dawn on the 30th we quitted the ship. Having passed through several reaches, which certainly did not promise much, we suddenly fell into the main stream, affording a direct reach of at least six miles, and the water perfectly fresh; its width being about half a mile. We now moved on with fresh spirit, and as we advanced, the scenery improved wonderfully; the dull insipid mangrove and nipa palm yielding to the luxuriant timber and foliage, beautifully varied, as it always occurs in this country at the point where the salt water yields to the fresh. Hills and mountains gradually improved the scene, and about 10 A.M. we were fortunate enough, just as the flood tide and the energies of our crews were exhausted, to fall in with a deserted village, situated upon a commanding knoll which afforded sound ground, and a most eligible site for securing the latitude and longitude. This also proved a desirable resting place for our crews, now five hours on their oars; but, little did they rest, novelty kept them on the move, and every nook and corner was explored.

On the highest point, situated about 60 feet above the level, we found the tomb of one of the chiefs, covered by a house, which on its first appearance, was mistaken for a battery. The situation would have been very commanding, and difficult to storm. All the houses were partially destroyed, apparently by fire, the fruit as well as many forest trees, cut down, and every appearance of destruction, as by an enemy. (From later information I am led to believe this to be the work of the dependants of the Sultan of Gunung Taboor.)

Upon the change of tide, about 4 P.M. we moved onwards, and at 8 came to for the night in *order of battle*, and well prepared for surprise. My place of rest was the second barge, the same boat in which we were attacked off Gillolo. We were destined to be disturbed, as the sound of gongs very much to the *former tune* brought us to quarters about midnight, and kept us on the *qui vive* until daylight, but no enemy appeared.

After breakfast we moved onwards, and about 8 A.M. got a glimpse of a house and human beings; shortly after succeeded by two towns, on

which the Dutch colours were flying. On coming near the first house, we were informed that the town nearest on the flat, was Gunung Taboor; that on the hill on the left fork of the river Sambiliong. To the Sultan of Gunung Taboor my affairs led me, and about half-past eight we dropped our anchors abreast the sultan's palace after communicating with the prime minister, and having agreed to return his salute of 21 guns to the flag of Her Majesty, which I insisted he should first salute, under his *own* colours, and *not Dutch*, (as I could not recognize that flag on his forts, without Dutch authority to support it). I landed and visited the sultan,—our landing, and the *state* in which we proceeded would form an admirable caricature. The state umbrella, scarlet with gold trimmings, was carried over my head, before me were two *drummers** in scarlet, and two tabor men similarly clad. I was conducted by the prime minister, having my left hand placed in his, and his right hand under my right arm; each officer having his *familiar* also; and thus we reached the presence, where we found the sultan and chiefs, &c., ready to receive us in his hall of audience, a long but convenient matted shed apart from his house. The seats were the small boxes they usually kept their valuables in, covered with neat little cloth covers, embossed with red figures on a yellow ground, similar to our table covers. The sultan and one or two chiefs were well clad, not so gay as at Sooloo, and the rest fairly so. There could be no mistake about our reception, it was eagerly kind, and his anxiety to prove his friendship was manifested in every possible manner. He informed me, "that the Europeans had been taken away from Sambiliong by a Dutch schooner of war on the 26th of October last;" and produced a Dutch document to that effect. He also produced several papers purporting to be treaties and correspondence with the Dutch authorities at Benjarmassin, and also shewed a gold-headed cane and Dutch flag, presented to him from the same quarter. He was excessively anxious to know my reasons for declining to salute him under the Dutch flag. I informed him "that unless he declared himself subject to the Dutch that he had no right to wear that flag, and that if any power at war with Holland visited his town, that they would inevitably fire on them, and treat them as enemies." This alarmed them: he then asked permission to hoist the English flag, and begged that I would give him one. To this I replied "That Great Britain never allowed her flag to be displayed where it might be insulted, and that wherever it was to be found displayed, there he would always find power to support it."

I now requested his assistance by pilot or guide to recover the unfortunate Lascars, still said to be at Bulungan. He readily assented, and ordered one of his chiefs, a relative, with his prahu to accompany us, although at the same time at war with the Sultan of Bulungan, as well as that of Sambiliong; all arising from disputes about the crew of the *Premier*. Intending to return here, and finish my affairs, finally, I lost

* With the *identical brass drums* taken from the East India Company's servants at *Balambanganin*.

no time in returning to my ship in order to finish affairs at Bulungan, where I had reason to expect that I should experience some difficulty.

Having been joined by our prahu, commanded by Tuan Hadji,* we moved down the river Pantai, and steering E.S.E., the opposite course to that on entering, we reached the sea about midnight, when having hove to for our boats, and hoisted the prahu on board, (about 40 or 50 feet in length,) we found by the negligence of the leadsman that the tide had put us on the mud; as it was then low water, we quietly awaited the return of our boats, and with the rising tide slipped away to sea. In the morning, the wind favouring, enabled us to pass Pulau Panjang: about noon we noticed the remains of the wreck of the *Premier*, on Karang Ujang,† and by four anchored off the mouth of the Sabanoon, distance to the river's mouth about eight miles. We quitted the ship about five, with the boats, taking ten days provisions, the force the same as before, with the addition of our prahu also well armed. Shortly after dark we grounded on sand, and it was some time before we succeeded in finding a channel: about nine we reached the mouth of the river, the boats having joined, went to rest.

At dawn we were again in motion, the river wide, but dreary mangrove and nipa; water fresh. In the Borneon rivers it may be assumed as a law that you may safely approach the nipa side of the stream, and find deep water up to them; but be cautious of the mangrove. Having ascended the Sabanoon about fifteen miles, we branched off suddenly to the right, and shortly after found ourselves at the mouth of a second stream (oomara), open to the sea, the water, however, perfectly fresh. The whole of the interior of this part of the country is but one great Archipelago, and when these occur in masses, such as that of the Curan districts, and Bulungan, where no communication offers without coming upon salt water, they take the name of Tanna Besar (great land).

We now commenced our journey on this river. About 2 P.M. we descried a canoe, and sent our boat with the interpreter to bring her to us. The native proved to be a friend of Tuan Hadji, who was bound to Curan: we gained no information. However, shortly after dark we noticed lights on the river above us. Now Tuan Hadji shewed his address, giving orders to the people in the prahu to play a peculiar tune on the gongs and drums, he advanced in the bow of my gig, singing a song or hymn, which he said would be answered. The people in the strange canoe answered him, and not long afterwards, we were visited by several others, in one of which was one of the principal chiefs, who was requested to dispatch a swift canoe to Bulungan to tell them "not to be afraid;" for I learned that they were much frightened, and were sending away their women and children, and dismantling their houses. We came to an anchor for the night, and at dawn were again on the move. The river now began to be very interesting, although not exhibiting the per-

* Tuan Hadji is Priest.

† "Karang Ujang" tip of the coral.

fect lake scenery of the Curan district. Large patches of cleared land, and the huts of the Sagai people were scattered along the banks, and the inmates now no longer in fear, paddled alongside of us, and at times, the principals were allowed to get in abaft, and chat with our guide. About ten large canoes containing the Sagai people (or Dyaks of this region,) dressed in the most fantastic manner began to meet, and accompany us; their curiosity much excited, and all very anxious to get on board; but this we could not permit, our men being sufficiently fagged without being impeded by their canoes.

At noon we anchored to dine and dress, so that we should show as men-of-war's men ought. After dinner we moved on for Bulungan, we were met by some of the state officers, one of whom, Lord High Admiral I believe, a brother of the sultan, came on board. On our reaching the lower end of the town he imperatively ordered us "to anchor;" this was not obeyed: a dispatch boat came off with another message, a second followed with similar disobedience; I desired him to tell the sultan "that my visit was to him, and that I should anchor in the most convenient position for visiting him." Considerable alarm prevailed, until ranging up within twenty yards of the muzzles of his guns, we let go our anchors. These guns, about ten, (two heavy iron, the remainder brass leilas,) were loosely mounted on the bank, and any attempt to reload would be certain death from our musquetry. The prime minister (an Arab priest,) came on board, and arranged that they would, in pledge to friendly disposition, salute Her Majesty's flag with 21 guns, which I promised should be duly returned. My reason for insisting on the previous salute from them was the doubt of their returning my salute, and thus raising a fresh disturbance perhaps at the 20th gun.

We now witnessed the absurdity of all their parade; not a gun was loaded! and it was sometime before they collected the ammunition.* They had but one rammer, and were compelled to raise the guns in their arms at an angle of 30 to 40 degrees to put the powder in; of shot they had none! musquetry none, but of sumpitans and sagais to use them, plenty! It took them about twenty-five minutes to fire their salute of 21 guns, it was returned by *one* of the barges in *two minutes and a half!* very much to their astonishment. The termination followed by a Congreve rocket into a neighbouring mountain. After this we landed, and proceeded to the palace, but not in the state that was observed at Gunung Taboor. The reception room here was very dismal and dark, but furnished with an imposing throne, and surrounded by steps &c. Seats, however, precisely in the same style as at Gunung Taboor were prepared for us. The sultan, who is about fifty-five, and rather corpulent, received me with about as much warmth as I take to be in his constitution, professed himself warmly my friend, and anxious to be on the best terms.

Upon opening the question relative to the Lascars, I could perceive

* Which I afterwards ascertained they had purchased from the Bugis traders.

that he was not quite sure of his own power, and he therefore begged a few minutes to explain himself. "Some he could get in two days, or perhaps less, but two, who were three days journey in the country could not be promised under six days." I suspect that his ministers calculated on starving us out of the six day pair; but as I had fortunately brought ten days' provisions, I was quite prepared for him. At length he promised finally, to deliver ten to me in two days, and the remaining two in six days. To this I consented, taking up my abode in a deserted house abreast the boats. The sultan appeared to be very much relieved, and promised to afford us supplies. He explained that our friendship was two fingers, *he* was father, *I* was son. However, nothing but wild pigs came to us, and their demands for fowls, &c., were ridiculously high.

I had here a good opportunity of seeing much of the Sagai people. They are a finer and larger built race than the Dyaks of Sarawak, or the Kadyans of Borneo Proper. Their skin is fairer and softer, their eyes occasionally blue; they wear large rings of metal, generally four in each ear through the lobe. These are about $1\frac{1}{2}$ inches in diameter, and about $\frac{3}{16}$ ths in thickness; the upper part of the ear is also perforated and filled with a long tiger's tooth. They explained to me that this is not solely for ornament, but for defence:—thus, two rings turned up, and toggled by the tiger's tooth, and the other pendant form a guard against a parang, which may save the head. The parang differs from the kris, it is very slender at the hand, and broad at the point, carrying its weight to the point, and seldom longer than two feet: it is also concave on one, and convex on the opposite side; adapted therefore to clearing woods.

The fighting dress is a quilted scarlet jacket, trimmed generally with yellow tape. The head dress is generally monkey skin, capped by a brazen ridge with about three inches side projections, forming altogether a kind of helmet. This is surmounted by feathers of argus, pheasant, toucan, or other birds. At the loins, guarding the hinder part, is a matted tail which corresponds to the tail of a late fashionable coat, and serves to protect the sumpit arrows, add to this the shield and blowpipe, or sumpitan, and you have the Sagai or Dyak of this region.

I formed a friendship with the chief, a very nice fellow, much resembling our pet Dyak chief at Sirambo (Sarawak). He informed me that he would convey a letter for me to Borneo Proper, and therefore I sent one as an experiment. He gave it ten days to reach. I enquired if he would take me, he replied "Yes, if you will put a white cloth round your head I will do the same, and thus we can pass through all the tribes safe.—I will answer with my life for yours." This post I understand also from Gunning Taboor is practicable—*nons verrons*.

A LEAF FROM LIFE IN NAPLES.

In a certain latitude and longitude, to be found in any map (sold by all respectable booksellers), there stands a certain city—a city not without

soul—a city, like Bacchus, ever fair and young. It is surrounded by the freshest green country, fairest plains, thickest and softest foliage—the plumage of the earth—and rests, like the nest of a sea-bird, on the borders of the ocean. A bright, broad, blue bay heaves lazily and voluptuously before it. At a modest distance stands a mysterious mountain, over whose head roll, in sombre vapoury wreaths, clouds of smoke; but the smoke is not as the smoke of towns—it hangs not heavily like a pall, but vanishes far into the air. Once that smoke was worse—when Vesuvius put on the BLACK CAP to pass sentence upon the doomed cities. Now, the mountain is but a show for the gazers of Naples—a piece of scenery from an old tragedy, to amuse and interest the leisure of a gay and indolent people.

And how gay, and how bright the scenes, where that comedy of life is acted! Naples is the gaudiest picture in Nature's magic lantern; there poverty itself is brilliant, and superstition sparkling; all the rags are bright, and all the black—ebony; for the sun is the poor-law commissioner, and keeps the paupers happy; and as to the superstition, if there are such beings as saints, which we in England naturally doubt, why, what place on earth are they more likely to love to watch over than Naples? It is a creed that the people there form naturally from what they see around them; and “if to love foolishly is better than not to be able to love at all*,” so, to worship foolishly may claim a similar superiority.

Well—one morning, some weeks after the date at which we left the *Baboon* flying to the Bay of Biscay, there might have been observed, at the window of an hotel in Naples, an elderly gentleman, of dignified appearance. He had just breakfasted very luxuriously, and had come forward to the window, to look out upon the bay, over the beautiful gardens which stood between the road in which the hotel was situated and the sea. These beautiful gardens, among whose trees glisten the white forms of marble nymphs (the very chastity of whose appearance, in such a place, is more voluptuous than all that colour could effect elsewhere), form, as it were, the flounces of the city's dress.

The old gentleman threw open the window, and sniffed in the air luxuriously: it is probable that he would have enjoyed it more, but that he was in the habit of taking snuff. However, he did enjoy it very much, as was evidenced by his soliloquy.—“What a scene! Ah, if one could but eat it!” He was a materialist philosopher, this old friend of ours, and referred all pleasure to the pleasures of the senses. He put an uncommonly vulgar construction on what people call love; and stoutly maintained, that every idea of Beauty, Good, or any other abstraction, was nothing but a fanciful, vague exaggeration of an actual sensual pleasure. For example—when his son, with whom the reader is, as will shortly appear, already acquainted, used to talk, as some young men will, about the Ideal and the Beautiful, he used to cut him short with—“Pray, sir, what does your Beautiful mean?—I will tell you. Your cousin Polly, (by-the-by, Tom, she has £5000) is a pretty girl; she has

* Pendennis, No. II.

a good nose, bright eyes, mouth small and rosy; yet altogether she is not a beauty; she does not reach your Ideal of the Beautiful. Well, sir, just shape her nose till it grows more Greek—give a little more lustre to the eye—chisel the mouth slightly; do this in imagination—there is your Ideal. That is your process. But, remember, that Polly, as at present existent, is the basis of the Ideal, the Ideal is in reality her, somewhat altered.—Now, don't go off into any gabble about innate ideas. What have you in you but what the spoon put in you?"

This last query generally used to silence the youth, particularly as the enthusiasm of the father used to partly vent itself in sending the bottle round with a jerk along the mahogany.

This old gentleman (to come to details) was Mr. Chilton, senior, parent of our friend Chilton, of the *Baboon*, prime-minister under the limited monarchy of King Dobbs. He was a widower, with no other son; a country-gentleman, of good family, and some £4000 a-year. He always lived abroad, and was very fond of convivial society. He used to be nick-named "Toe" Chilton, because (as was asserted) he was in the habit of forming the acquaintance of strangers, by the singular and original plan of treading on their toes, and begging their pardon. It was no wonder that his acquaintance was extensive, under these circumstances, considering the populousness of most European cities; nor considering the prevalence of gout among the higher orders, is it remarkable, that he had twice been knocked down by a crutch, and once winged in a hostile encounter arising therefrom. He usually followed up, what may very properly be called his first step to intimacy, by asking his new friend to dinner; and being a gentlemanly, well-informed old Englishman, secured, in course of time, a terrifically large connection, and was never at a loss for a house to breakfast, dine, or sup at, all over Europe; so that his life, spent in an interchange of friendly hospitalities, was one perpetual round of good dinners and agreeable parties; and while yet in the very spring of existence, as regarded his body generally, he had advanced to autumn unquestionably—in the tip of his nose.

A strange father for the enthusiastic, sarcastic, bold, and eccentric youth of the *Baboon!*

Having cooled his countenance (which altogether was not unlike the setting sun) in the breeze from the bay, Toe Chilton walked down stairs, and marched out. He took his way to a reading-room, where English travellers were in the habit of going to peruse the journals of their native country.

His appearance there was not very agreeable to some of those assembled, for he was in the habit of at once entering into conversation with anybody he could catch, which rather spoiled the pleasure of any other gentleman who happened to be reading at the time. There was therefore an audible sigh from an elderly gentleman, who was engaged on the *Edinburgh Review*, when the portly figure of Mr. Chilton appeared at the door.

The elderly gentleman was a clergyman of a serious turn: let the reader fancy his feelings from the following little scene—

Elderly gentleman (reading to himself).—"The notion promulgated by Hume, that our idea of power, as *cause* producing effect, is, in reality, only derived from our having seen certain operations succeed each other in nature——"

Toe Chilton (to a friend).—"Ha! good morning, captain. What a capital dinner Limsdale gave us last night! What Burgundy that fellow has to be sure!"

Friend.—"I am glad you are come, Chilton. I have something to show you here. Here is the *Malta Snail*, of the — instant."—*(Exit elderly gentleman).*

The elderly gentleman having disappeared, the conversation became gradually more noisy, inasmuch as the talking couple very soon found themselves alone in the room. Then Mr. Chilton asked what it was that had attracted his friend the captain's attention in the *Malta Snail*?

"Why, sir," said his friend (a half-pay captain in the navy), "they say that the Mediterranean has been visited by a dangerous pirate. A set of young fellows are going about in a slashing schooner, armed to the teeth. They call her a yacht, but, by George! they might as well call my bull-dog, Nelson, a King Charles's pup!"

"Well—what of it?" quoth the philosophic Toe Chilton. "They can't take Naples—can they? I fancy that the fort here would blow them out of the water."

"Yes; but suppose they should capture any of the gentlemen's yachts, cruising about at this season of the year? There's Mr. Mango and his family—three such daughters!"

"Ah!" exclaimed old Toe, with a twinkle in his eye, which seemed to indicate that he, for one, should not view it as any very heinous offence. "But, however, you saw it in a Malta paper. Well—remember how they lie. Why, they announced that I was going to marry a widow—when I was there!"

"Now for the point, or rather upshot of the story," continued his friend. "If I did not know that you had no relations——"

"No relations!" cried his companion. "I beg your pardon. What put that into your head?"

"Why, here we have known each other these ten years, and you have never alluded to one of them!"

This was the actual fact; for Toe Chilton's affection for his son Tom was not of the paternal sort. He liked him very much as a companion and friend—gave him money—paid his debts—never presumed to dictate to him—and always told him that he was a deuced clever fellow, and a credit to his family. But you would never have thought that they were relations, or anything but friends and boon companions. The interest they felt in each other, in fact, was not tender. It was kind—and kind only.

"Oh, perhaps not," continued Toe; "but I have a deuced fine son, sir—Tom Chilton; and that reminds me, that I have not heard of, or from the fellow for a long time. I should like to see him; and if I had

him to dinner, I would give him a bottle of Burgundy—a capital fellow is Tom!”

Here some glimpse of a paternal feeling *did* irradiate Toe's soul, and he went into touching reminiscences of Tom's childhood, which infinitely amused his friend, the captain.

“The boy, sir,” quoth Toe, “began his career by killing his mother.”

The captain started.

The old gentleman skilfully paused, to let the remark have its due weight, and continued—“She died in bringing him forth, and I brought him up in my chambers, in St. James's Street. What an awful nuisance he was, to be sure, when I used to have friends to dinner. Jack Lesley rocked his cradle one night, after three bottles, and rolled the poor little devil out. Then, the nurse that I got to attend him, used to go out, and leave him by himself, and the neighbourhood was alarmed by his howling. He was a clever fellow from the first, and punned in small-clothes, I verily believe.”

“That reminds me of a remark of my uncle Toby, when his brother was haranguing on precocious children,” interrupted the captain.*

Chilton senior's enthusiasm died; and he concluded with—“Just fancy me growing paternal!”

“Now, for my remark, long pending,” said his friend: “the *Malta Snail*, which loves a sounding period, concludes the article about this so-called pirate, thus:—‘We hear, from a gentleman who has arrived from Gibraltar, that this dangerous vessel is commanded by a youth called Chilton, one of those desperadoes occasionally appearing in the world, the torch of whose genius shines only to scorch their fellow-creatures—men, who live without respect, and die without lamentation.’

“Bravo, Higgins!” concluded the captain; “the horse-whipping from that fellow in the Heavy Baboons has improved his style.”

Here the captain paused, probably afraid that the sudden announcement would shake and startle old Toe.

That worthy, however, betrayed no emotion, but coolly remarked—“Ah, that's sure to be Tom! he was always of an eccentric turn, and I should be surprised at nothing he did. If Tom founded a monastery, or established a seraglio, called out the Pope, or ran away with the wife of the Archbishop of Canterbury, it would surprise me equally little. But Tom is a clever fellow, and I like Tom.”

Having made this remark, the father rose, and the two old gentlemen left the room together.

Many a shake of the hand, from the slight formal pressure of the fingers, to the friendly crushing grasp of old acquaintance, did Toe Chilton exchange, as he walked along the pleasant road which leads towards Baia—many a nod—from the sharp short jerk of recognition, to the

* Uncle Toby's remark, however, we dare not quote, in the present moral age. By-the-by, very few people read “*Tristram Shandy*” now, which is probably the reason that we hear some living writers talked of, as equal and superior to Sterne.

profound obeisance of respectful salutation. He knew, in fact, almost every body, and was stopped every now and then, with—"Ha! Chilton—here? I thought you were in Milan;" or, "Dem it! who would have expected to see you, old boy? heard you were at Palermo!" A slight smile would glide over proud faces in English carriages, as he came in sight, excited by reminiscences of his appearance at great balls in his yeomanry uniform. To figure in that military garb at royal balls and everywhere else, was his one weakness (Burgundy he would not admit to be one); and then, he was so fond of dancing, and made himself so conspicuous when he did dance, by the peculiar energy of his movements, that, what with his singular figure and singular uniform, human gravity could not stand the spectacle. Indeed, his friends, sorry to see so really sensible and so thoroughly jovial an old boy expose himself to ridicule, used to resort to harmless artifices to prevent the exposure. A further bottle would be artfully produced by his host, or asked for by his guest, when the hour of dressing for a ball drew near. His servant used to receive instructions from intimate friends of Toe to take away his master's sword furtively; and of course, Toe could not think of going to a ball, any more, than of marching into action, without his weapon.

It would be difficult to do justice to his feelings on this occasion, as, walking along the road, he met party after party of pleasant acquaintances, or old friends. His spirits rose proportionately; and he soon found that he succeeded in the great object of the day—getting an appetite. His next consideration was where to dine. He was not of the vulgar order of *bon vivants*, who think it their duty, and make it their pride, to dine out, like Gulosulus in the *Rambler*—whenever they can get a chance. No. It was his first object to take home a friend to dine with him—his second one, to go out to dinner at the house of another. Accordingly, as the hour drew near, he stopped in his walk, and addressed his friend Captain Ropesby, with a request for the pleasure of of his company to dinner.

"Really, Chilton, I must go home. You know I have my family here."

"But, my dear Ropesby I dined with you the day before yesterday. I did you that favour—do me one now."

The captain smiled.—"Don't you think you could, just for once, dine by yourself?"

"God bless me!" said Toe, with a look of terror at the mere suggestion; and his friend remembering with compassion how Toe had once, in his desolation, taken home a gentlemanly-looking stranger, who had made him fuddled, and subsequently removed himself with the spoons, consented to go.

Three hours afterwards, their friend, Mr. Limsdale, called at Chilton's hotel, and found the friends seated at their dessert. The table was enveloped in a golden web of sunset light, that streamed through the window.—"How do you do, Ropesby? How are you Chilton?" he said; "I have come to ask you to go to the opera: my box is at your service—come along!"

"Quite impossible!" ejaculated Toe lazily.

"My dear fellow, do. Sapphini is in such voice."

"So am I," said Toe, commencing a fragment of King Cole.

Mr. Limsdale renewed the request. "What, my dear friend—leave Burgundy like this?"

Mr. Limsdale knew that there was now no chance of moving him, and departed.

THE ARCTIC EXPEDITION.

[Extract of a letter from Capt. Kellet, of H.M.S. *Herald*, dated Mazatlan November 26th, 1848.]

I ARRIVED here on the 24th inst., after a run of thirty-three days from Petropauloski, the principal parts of the time in a westerly gale. I am, as you may suppose, exceedingly anxious to know what has become of the *Floer*, neither having seen, nor heard of her, nor can I find any notice of her in the papers here.

At Valparaiso, Panama, and Oahu, the only places at which Commander Moore was likely to touch, he would find information as to my movements, all of them pointing out Petropauloski as a definite rendezvous.

After quitting that port, on the 14th of August, on my passage to Norton Sound, I was becalmed to the westward of St. Lawrence Island, close in with Point Tchaplín.

We communicated with the Tchoutchi, who evidently are in the habit of seeing ships; the American whalers frequently fishing on this ground. From this, as clearly as I could make out, no ships had passed to the northward this year.

By the 2nd of September we arrived off the Russian settlement of Michaeloski, situated on the mainland, close to the eastward of Stuarts Island, where I procured a very good interpreter.

The situation of this settlement is in the most exposed part of the Great Sound, for a ship of this class. A vessel from 12 feet draught of water could anchor in the smaller bay of this settlement, and be well protected from winds N.b.W. as far as east.

We were detained long in this Sound, by the contrary winds and indraught. Over the whole of it there is not more than from 10 to 13 fathoms; very soft mud, and sand.

Immediately on getting into the middle of the Strait we were enveloped in a dense fog, and very narrowly escaped running on shore on the Western Diomedea Island, the surf being first heard.

I anchored off Chamisso Island on the 1st of September, and found the natives had quite deserted the Sound. I wayed again on the 18th, and went out to Hotham Inlet, and Cape Krusenstern, but I found the natives had lately left for their winter quarters, or, to hunt reindeer, of

which we saw many herds going south. At Spaforeif Inlet we were more fortunate, we found them here pretty numerous, one man particularly was very intelligent, and could converse freely with our interpreter. He said, "he had just returned from the northward, that he had not heard of, or seen any ships, or white men. Some of his tribe," he said, "had seen some white men inland, one of them having a gold band on his cap, they were south of us, somewhere in the neighbourhood of Norton Bay."

At Michaeloski, I heard of there being an American party in their neighbourhood, runaway seamen no doubt. These must be the white men spoken of by the Esquimaux. I examined the Ice Cliff in Escholtz Bay, and was very successful in procuring elephants' tusks of a very large size, and the fossils spoken of by Captain Beechey, but none new. I had not time to examine Buckland River; my boats went near the entrance of it, but found no natives, and not a vestige of them near the ice cliffs, further than the stumps and poles of drift wood, which are to be found on every sandy beach throughout the Sound.

On my first visit to Chamisso Island, I found Captain Beechey's mark still standing; but very shaky. This winter would have certainly brought it down; the board with the *Blossom's* name was lying at the foot of the pole. I erected another mark with her name, in exactly the same position as before. You can fancy our anxiety when on approaching this island, we observed a second mark, and just in the position I directed Commander Moore to place one, should he arrive before me. It proved to be one placed by the Russian American Company's Expedition in 1838.

The setting in of the winter was so evident, as Captain Beechey admirably describes it, that I felt with him, that it only required a calm to freeze the surface of the whole Sound; besides I did not know what might be going on outside me. I do not consider the weather of Kotzebue Sound, inside Cape Espenberg, and Hotham Inlet, to be any criterion to go by, in estimating what is to be found outside of that line; inside it, we had invariably until the end of September, easterly winds, N.E. to S.E.

On the 29th of September, I again wayed from Chamisso Island, although the wind was dead foul, and the weather severe and dreary. The north-west winds had now continued to blow for several days, increasing in strength hourly.

We repassed the Straits on the 2nd of October, in a north-west gale, with heavy snow showers at eight in the evening, having got a glimpse of the Diomedea Islands at 4 P.M. Going to the westward of the Diomedea Islands insured me smooth water, and enabled me to carry sail. All the weather surface of my rigging was a mass of ice, and the leeches of my sails filled with frozen snow; it would, indeed, have been difficult to shorten sail, had we wished it.

I had a long passage back to Petropouloski, where I touched to land the interpreter I got at Norton Sound, and to ascertain if the *Plover*

had made her appearance there in my absence. I left a letter there, previous to my proceeding through the Strait for Commander Moore, telling him I should return to Petropauloski if I did not meet him to the northward, thinking it possible that he might have arrived after, and might not consider it possible to pass the Strait so late. The Russians, and the American captains of the whalers, at Petropauloski tried, to persuade me the season was too far advanced; and the governor assured me I should be frozen in.

At Petropauloski I swung ship, and with more successful results than I have ever been able to obtain before.

I hope to be able to sail from this on the 1st of December, and shall proceed at once to Panama, touching perhaps at Acapulco, and Realejo for provisions, as I hope to be able to keep my crew entirely on fresh meat during my passage down.

By his instructions, Captain Kellet was desired to proceed to Behring Straits, there to meet the *Plover*, and having assisted to secure her in some convenient harbour, to return to the southward to give intelligence of the spot in which he had left that vessel, it being intended the *Plover* should send her boats along the American coast to communicate with the party which will descend the Mackenzie River, under the command of Sir John Richardson.

Owing to calms and long detention of contrary winds in Norton Sound, it was not till the 1st of September, that the *Herald* arrived at the appointed rendezvous in Kotzebue Sound. There she remained till the end of the month, waiting for the *Plover*; which vessel not arriving, Captain Kellet again wayed and re-passed the Straits on the 2nd of October, arriving at Mazatlan on the 24th of November.

By letters received from Callao it appears that after a tedious passage, the *Plover*, being an excellent sea boat, but a very dull sailer, had only reached that place on the 8th of July. It was therefore not possible for her to arrive at Behring Straits before the departure of the *Herald*, and the probability is that she will have to pass the winter at Petropauloski, or Sitka, and proceed this spring, on the opening of the ice, to explore the north coast of America with her boats.

In the meantime the *Herald*, having refitted, will immediately sail for Behring Straits, with provisions and stores for the *Plover*, which ship will, if necessary pass the next winter in Kotzebue Sound, or some other convenient spot, which may be selected for that purpose.

NOTES MADE ON A PASSAGE TO THE PORTS OF SAN BLAS AND
MAZATLAN, on the Coast of Mexico.

SUPPOSING a vessel, bound to the western coast of Mexico, safely round Cape Horn and running before the southerly gale which almost constantly

blows along the shores of South America, she ought to shape a course so as to cross the equator in about 98° or 99° W. long., so that when she gets the N.E. trade she will be at least six or seven degrees to the eastward of her port,—San Blas or Mazatlan; and have at the same time a sufficient offing from the Galapagos Islands to avoid their currents and variable winds.

We crossed in 105° W. long., having been recommended to do so by somefold merchants at Valparaiso, and were consequently, although a remarkably fast sailing ship, a lamentably long time making the distance. Several days' log of the ship shews, as follows

March 24th,	San Blas	672	miles distant.
“ 25th,	“	646	“
“ 26th,	“	657	“

Our track led us to be exactly in the same longitude as our port, when we got the trade, and it hanging well to the northward, we were constantly increasing our distance until in the latitude of San Blas, when an inshore tack of course shortened it. But by the course I have recommended, the first of the N.E. trade will drive the vessel into the meridian of her port, and she will thus daily decrease her distance.

Care must be taken in standing in for the land not to get to leeward of San Blas, as there is a strong southerly current along the coast, especially off Cape Corrientes. If possible keep San Blas on an E.N.E. bearing. The Tres Marias Islands off the port of San Blas are convenient points for making; and here a master could leave his vessel in perfect safety to water while he communicated with his consignees, or got his overland letters from his owners at home. There is a safe mid-channel course between the middle and southern islands: we brought a saddle-shaped hill on the main, a little south of San Blas, one point open of the south island, and steered by compass N.E.b.E.

The Two Pedro Brancos, that of del Mar and de la Tierra, are excellent marks for the roadstead, which, by Beechey, is in lat. $21^{\circ} 32' 20''$ N., long, $106^{\circ} 16' 50''$ W., a good anchorage for vessels awaiting orders; (for which purpose San Blas is now almost alone visited, except by English men-of-war, and Yankee clippers for smuggling purposes,) will be found with Pedro Branco del Mar, N. 70° W., de la Tierra, N. 43° W., and village in the Estero, N. 26° W.

Since the days of Hall and Beechey, the town of San Blas, has very much changed. Its population of 20,000 have dwindled to 3000 residents, and their unwholesome appearance, fully accounts for the decrease of residents; and nearly all its trade has been transferred to its rival—Mazatlan.

The large town of Tepic, in the interior, with a small factory, owned by an English merchant, causes a small demand for European luxuries, and a cargo or two of cotton; which petty trade is carried on during the six healthy months in the year. A great deal of smuggling is carried on from the neighbourhood of this port, the extensive bay, to the southward affording great facilities to the men-of-war's boats in that employment.

The town is built on the landward slope of a steep hill, almost perpendicular to seaward, and its crest crowned by the ruins of a custom-house; but this being about three-quarters of a mile distant from the beach, a large assemblage of huts has been formed at the landing place in the Estero del Arsenal, for the convenience of supplying the shipping: the occupants being for the most part grog vendors, fishermen, and an agent to the harbour-master.

In the Estero del Arsenal, small craft of less than 10 feet draught will find convenient anchorage, means of heaving down, &c. The watering place is at least three miles distant from the above anchorage, and to assist the boats in this heavy work, it would always be advisable to shift the vessel into such a position that they might make a fair wind off and on whilst the daily sea breeze blows.

The watering place is at the northern extremity of a large open bay south of San Blas; the beach is shoal, and the casks have to be rolled three or four hundred yards through the jungle to a stream of water. This stream during the spring tides is liable to be found brackish, but even then we succeeded in obtaining supplies, by immersing the empty cask with the bung in such a position that only the fresh water (which of course would be on the surface) could enter.

By rigging triangles with spars in such a position that the boats could go under them to load, we succeeded in embarking daily 32 tons of water.

Many useful and ornamental woods are to be procured on shore, for the mere trouble of cutting, especially *lignum vitæ*. Fresh beef we found good in quality. Game moderately plentiful; oysters good and plentiful; vegetables scarce and expensive. The climate may be summed up by the word execrable.

On the 1st of November, the dry season commences, the temperature rises steadily, and the land yields all its moisture, until by the month of May the heat of the atmosphere resembles that of an oven, and the air swarms with mosquitoes and sandflies. The sky cloudless, the land and sea breeze regular, but not refreshing.

Early in June; heavy banks of dark lowering clouds charged with electricity collect on the high lands in the interior, lowering masses of clouds hang to seaward. The change is fast approaching, and before the 16th of June the rains commence and deluge the land, accompanied by heavy squalls and a tumbling swell from seaward. All vessels now leave the coast unless able to take shelter in the Estero, though of late men-of-war in eager search for freight have held on, and found that the gales do not in the winter "blow home". At this season all the inhabitants whose means afford it, quit the coast for the interior.

For the first month or six weeks the parched land absorbs the rain, but by the middle of August it becomes moist and swamp; the haunt of alligators and aquatic birds. In September the action of the sun on water-soddened land, generates fever of the most violent nature, and it behoves those who arrive early in the dry season to be careful of exposure to the malaria.

Passage from San Blas to Mazatlan.

Leave San Blas with the first of the land-breeze, and after passing Piedra del Mar, endeavour to steer such a course as to be enabled to make a good inshore tack with the sea-breeze on the morrow; taking care not to stand closer to the shore than 8 fathoms in a large vessel, or 5 fathoms in a smaller one; or, should the sea breeze be found to have much northing stand well off, when a continued wind instead of the land and sea breezes will be obtained, and the strong southerly set inshore be avoided. The *Collingwood* made the inshore passage in April 1846, and had light airs with frequent calms, being generally too far off shore at night to benefit by the land breeze; she consequently was five days going 120 miles, whilst the *Spy* did it in two days and a half by going well to seaward.

The *misnamed* port of Mazatlan is easily recognized by the two bluff headlands which form the entrance to the river, the northern and more conspicuous of the two, Cheston, being an island, and affording a little shelter from the northerly breezes which prevail from January to May. To the westerly and southern breezes it is perfectly open, and has the only recommendation of being good holding ground. The coasters run up the river off the new town of Mazatlan, which has risen to considerable importance within a very recent period, notwithstanding the disadvantages it labours under from the paucity of supplies, both animal and vegetable; and from water being both bad and scarce.

Mazatlan is now the outlet for the products of the valuable mining district of San Sebastian, and imports directly and indirectly large cargoes of English goods. The general healthiness of the climate as compared with its more ancient neighbour San Blas, has materially tended to an increase of its population. The town, from being built on the crest of some heights, clear of mangrove and swamp, had an air of cleanliness and pure ventilation rare in Spanish America.

Vessels must invariably moor in the roadstead, open hawse to the W.S.W., and too close a berth to Cheston Island is not advisable, as the squalls sweep over it with great strength. The *Collingwood* drove, though she had 50 fathoms on each cable.

Watering is attended with great risk at all times in this place, especially at full and change, the boats having to cross the heavy surf of the bar formed between a long spit which runs down the centre of the river, and a bank joining it from the south shore. Several boats and lives are annually lost here. In pulling in care should be taken to cross the surf pretty close to the middle ground, and when through the first rollers to pull over to the south shore, and keep it on board up to the watering place. In coming out no casks ought to be allowed in the head sheets, everything depending upon the buoyancy of the boat; inattention to this point, caused the loss of two lives, to my own knowledge.

The water is procured from a number of wells dug by seamen, on a low alluvial island, formed on a quicksand in the bed of the river; none

of them are consequently more than 10 feet deep. The water is by no means sweet, being merely sea water, which undergoes a partial purification in filtering through the soil.

Supplies of all sorts come from the neighbourhood of San Blas; and as the bullocks are driven that long distance, and on arrival they are immediately killed, from the want of grass, the beef is necessarily lean and bad. Pork, fish, and oysters are however plentiful; vegetables are scarce. The river abounds in turtle of excellent quality; wood of various descriptions, principally hard, was plentiful, and at a short distance oak and cedar might be obtained.

Old Mazatlan, which lies about twenty miles up the river was well known to ancient navigators, as far back as 1587. "Master Thomas Cavendish in the talle shippe *Desire*, 120 tons, refreshed his gallant company before cruising off Cape Lucas, for a Spanish galleon; and Don Sebastian Vizcaino, in an expedition to convert the Californians to the catholic faith, recruited his squadron in the Bahia de Mazatlan."

A vessel anxious to keep on the coast of Mexico, or in its neighbourhood, during the bad season, cannot do better than run over to the Bay of La Paz on the west shore of the Gulf of California, and but little to the north of Mazatlan. This splendid harbour is formed by the main land of South California on the starboard hand going in, and a long chain of islands with shallow passages between on the port hand. The most eastern island is Espiritu Santo.

North end of Espiritu, lat $24^{\circ} 30' N.$, and long. $110^{\circ} 22' W.$, with a large rock due north of it five miles.

In approaching this bay from Mazatlan the Island of Cerelbo will be first made, high and mountainous; north end lat. $21^{\circ} 23' N.$, long. of south end $109^{\circ} 45' W.$, from it Espiritu Santo will be seen bearing about W.b.N. The bay is at least thirty miles deep, and for the first twenty miles a deep bold shore on either hand, no bottom with 20 fathoms close to the islands. Large vessels anchor under the Island of San Juan de Neponnek; but small ones anchor within half a mile of the village of La Paz: fish, water, turtle, cheese, and fruits are to be obtained here; and cattle also in the wet season when pasturage is to be found on the coast. Snakes are very numerous and venomous.

A knowledge of the tides or currents in the neighbourhood of this port would be very serviceable; it has been much frequented by the Americans during their operations against Mexico. A vessel bound to California, could only have one object in making the Mexican coast, *en route*, namely, that of communicating with her owners, by overland despatch through Mexico, and as that is a possible occurrence I will give the few following notes for general guidance.

A vessel making the passage northward, from San Blas, had better make an inshore track until she reaches the latitude of, or sights Cape Lucas, the southern promontory of South California, as she will there get the true wind, which blows almost without intermission along the line of coast from the northward. A west, or may be a *south* of west

course will only be first made good, but as an offing is obtained, the wind will be found to veer a little to the eastward. However, it will always be the object to make headway, and get out of the tropic without any reference to the longitude, as a strong north-west wind will soon in 25° or 28° N. run off the distance, provided you have sufficient northing.

The attempt to beat up inshore amounts to perfect folly, if it does not deserve a worse name, a strong current accompanying the wind; and the latter must be taken into consideration when running in for your port with westerly winds.

A vessel bound to Monterey ought to make the high land of Santa Cruz on the northern extremity of the bay, and then shape a course for the anchorage. A man of war in 1846 was nearly cast away by standing for Cape Rinas, the southern extreme, and being set into the dangerous bay of San Carmelo in one of the thick and sudden fogs peculiar to this coast.

The anchorage of Monterey is in a small elbow formed on the northern side of Cape Rinas. With north-west winds, there is sufficient scope from the Santa Cruz shore for a considerable sea to get up; but, with good ground tackling a vessel need not hesitate to ride out any gale; the offset from the shore which is steep to, and the kelp, materially increasing her chances of safety. The shore should not be approached nearer than 10 fathoms, and the vessel moored open hawse to the north-west.

Bearings from our anchorage were as follow; Point Santa Cruz, N. 45° W., land of Cape Rinas, N. 62° W., the pier head S. 22° W.

Watering at Monterey is attended with much trouble and inconvenience. The Americans promised to improve it by carrying the water to some point near the landing place, but the present gold mania has most likely destroyed their projects.

Supplies in the shape of beef and mutton are plentiful, good, and were cheap. The climate all the year round allows of the most successful salting. Vegetables grow in profusion at Carmelita; and potatoes, though small, are good: cheese is to be got in any quantity.

Wood for planks or spars is plentiful, though not of the first quality; but from the little port of Santa Cruz a superior quality of pine is obtainable, it growing to a very large size. Santa Cruz boasts of a ship-building establishment, and many of the schooners trading on the coast have been launched from the yard of an enterprising Frenchman, residing there.

From the pine forest about Monterey we cut three top-gallant masts; the trees requiring little trimming as the following dimensions will show; diameter of tree at base 3 feet, whole height of tree 110 feet, height of first branches from the ground 70 feet. These top-gallant masts when fidded, stood tolerably well, and were only set aside in consequence of getting very superior spars from Pugets Sound.

The sportsman will be well repaid in the neighbourhood of the town, indeed the whole country is one great game preserve from elk to quail.

I had forgotten to mention that the American oak grows here in vast profusion, and affords excellent crooked timber for knees, &c., and is moreover first rate fire-wood.

Should a vessel, however, be bound to California direct, I would cross the Equator in the Pacific Ocean in about 100° W. long. Cross the N.E. trade with a top-mast-studding-sail set, and thus pass into the limit of the westerly winds about 300 miles to windward of the Sandwich Islands, and once in them take good care to keep to the northward of my port, for as you approach the shore the wind will draw round north, and the current to the southward increase.

SHEARD OSBORN, *Lieut. R.N.*

P.S. Of the noble harbour of San Francisco I am not able to speak from personal experience. Captain Beechey will be found an excellent guide upon that head, and he has in no way exaggerated its capabilities. It has only two drawbacks, that of a narrow entrance in an unsheltered line of coast, where fogs are both sudden and dense, and the sudden manner in which the rollers set in on the bar at the mouth. A merchantman however is not so likely to miss his port when its being correctly made depends principally on knowing his latitude.

THE MALAY RAYADS.

THE custom of living on the water is common in various parts of India. It is in some countries occasioned by necessity; those people who are called Rayads, or Banka, and in the neighbouring seas, adopt it by choice, and preserve it in situations which would afford a more comfortable mode of life. I transiently noticed their manners and peculiarities in the bay of Jibus and Klabbet: they are here also distinguished among the Malays by the name *Orang-laut*, which literally signifies persons inhabiting the ocean, or sea-people.

I am not able to determine their range in the Indian Ocean; it is probable, that they are dispersed through all the countries where the Malay language is current: their principal rendezvous at present is at Linga, Rhio, and the numerous islands in the neighbourhood. They have always formed part of the subjects of the Malay princes during their prosperity at Malakka and afterwards at Johore.

Those Rayads who have preserved their manners pure, inhabit small prows, which carry their possessions and families. These are of the size and kind of the vessels distinguished among the Malays by the name of prow *Kakap*, probably from their supposed resemblance to a fish of the same name in their form and motion; they are equally adapted to rowing and sailing. Their appropriation is uniformly the same: the posterior part is employed as the kitchen; and here a small furnace is permanently fixed; the central space serves for their usual occupations

during the day, and for their rest at night: several large mats which are rolled up during the day time form its principal furniture. Their interior parts contain a small chest, in which they preserve their things of value. During the night, and in bad weather, the vessel is covered by a light mat, (or kajing,) which when not used is folded over the posterior part. The furniture of each prow is very simple. One harpoon with a shifting point, and a spear-like instrument for searching crabs in the sand; some empty cocoa-nut shells with ore, and paddles in proportion to the size of the vessels are always found; besides these I noticed in all the vessels I visited a drum, and a comb of uncommon size: most prows carry a favorite cat. A number of long wooden lances, as their common weapon of defence, are always placed in conspicuous parts. These they wield with much dexterity. The larger prows (especially those intended for warlike purposes,) are provided with rantak-kas, firelocks, spears, and Malay cutlasses.

Each prow carries a large sail. The day is spent in small excursions on the ocean, at night the vessels are anchored near the shore, or fixed to a pole; smaller vessels are generally drawn upon the beach. When opportunities allow they seek the shelter of small bays or outlets of rivers. The food of the Rayads is principally derived from the ocean, and affords an additional reason for the propriety of their name. They often subsist for many days successively on fish, crabs, oysters, or muscles, which they consume indiscriminately, but they are extraordinarily fond of vegetable food, and whenever they have an opportunity of indulging their appetites in eating rice, their voracity is excessive, and all of them devour double the quantity that will suffice another Malay. The constant diet of fish gives their stomach an uncommon capacity, and the gentle stimulus of vegetable food is very gratifying to them. The places they occupy, or have lately visited are easily known by the remnants of fish, by piles of shells, &c., and are also indicated at a greater distance by a nauseous odour. Cleanliness is by no means one of their qualities. Those I observed were rarely exempt from irruptions of the skin, and several complained of diseases of the bowels.

All their occupations have relation to the element on which they live; they spend their time chiefly in fishing or in preparing fishing tackle of various kinds. The preparation and arrangement of the leaves of a species of pandanus for sails is the business of the females. Those which have attached themselves to a particular spot, have acquired some degree of industry. Part of the produce of their enterprise is dried and exchanged for rice and necessaries.

In the bay of Klabbet I observed a number of small prows engaged in darting trepangs, a species of holothuria, which being boiled, and subsequently dried becomes a favorite article of diet among the Chinese, and is sold with considerable advantage to individuals of that nation for the China trade. They also derive some emolument from the collection of agar-agar, a sea weed of the genus tremella, which is employed as condiment in the food of the natives in general.

A BALL AT MALTA.

It was the close of a very fine day in Malta, in a year which it is unnecessary to specify, as all years are pretty much alike in that interesting island; the sea-breeze had set in, just as it was no longer wanted to cool the heat of the day; the gulls had gone to roost about the rocks near the edge of the water; the natives of the island were attending vespers; and the English inhabitants preparing for dinner. Such is the difference between a barbarous and a civilized people. As the evening advanced, the shadows thrown by the tall masts of the men-of-war faded from the surface of the water. At last the sun-set gun boomed from the Admiral's ship; down went the top-gallant-yards and colours of the squadron; the hammocks were fixed below, and every thing looked as if the night was to be passed as dully as usual. Not so, however; a great event was to take place: the hearts of hundred; beat high with anxiety, in fact, that night the Governor was to give a ball! The palace of the old Grand-masters of the famous Knights of St. John, was lighted up to receive a different set of guests. In Malta (as elsewhere) the "age of chivalry is gone"—an age of Military Captains, Dockyard Officers, Naval Men, and Mercantile Agents has succeeded to it, and the glory of the land is "extinguished for ever."

On board the *Caliban*, to which vessel your humble servant, the writer, belonged at that period, very extensive preparations were being made. Captain Baggles was arraying his portly frame in his full uniform coat, and his servant was polishing up the four yards of leather, which was called the gallant officer's sword belt. Baggles hates balls, which he looks on as calculated to deteriorate the service. He sighs for the good old times, when vessels were fifteen months at sea, and the very admiral in command had not a tea-pot, and after dinner (he himself being provided with the best port and claret,) will tell you that Collingwood had nothing but Tenedos wine to drink, and that many times, he (Baggles) had seen the gallant old fellow hanging his old coats and waistcoats out of his cabin ports to air; which fact, no doubt was the real cause why these gallant old boys always beat the French.

Down below the Lieutenants were busy preparing for the occasion. De Checksby, the marine officer, was attiring himself in his cabin, and wondering as he twirled his whiskers before the glass, what kind of girls the Miss Lumbers (daughters of Sir Ajax Lumbers, K.C.B., &c., &c.) were; while they (if we may be allowed to speculate on such great personages) were by no means thinking of poor De Checksby, but speculating on the qualities of the gallant commandant of artillery. In the cock-pit, the Midshipmen were striving to look elegant in the face of adverse circumstances; perpetual cries were heard of pass the word for Brown or Jones, according to circumstance, and young Belfield was audible over half the ship, demanding from his servant (with some reasonableness it must be admitted) "how the devil his patent leather boots had got into the sand-tank." At last all preparations were over; Timson, the master's assistant, had gone through the ceremony of "extreme unction" by putting bear's grease on his hair, shore boats were called alongside; and the reader may now be introduced to what the editor of the *Malta Pop-gun*, (who by the way was disgracefully screwed in the course of the night,) called the "rank, fashion, and beauty of the island."

The ball has begun, the first few dances are over, and the excitement of the music and the motion had brought the company to as near an approach to natural and unaffected behaviour as an artificial state of society will permit its members to display. Let us, therefore, look round and examine the scene. Our old friend Baggles is moving about stately and serene. He has cautioned his daughter not to dance with Midshipmen; and thus avoiding the degradation of seeing her in the company of young Furnival, of the *Harold*, whose father is the leader of the opposition; or Hylton, of the *Cavendish*, whose ancestor fought at

Bannockburn, has managed to commit her to the care of old Higgl's, of the *Jackdaw*, a worthy gallant snuffy old Lieutenant of 1818. She must find him a very pleasant partner, for he is a great nautical authority. He is teaching her how to fish a top-tail yard when sprung; and I shouldn't wonder if he was to offer her a pinch of snuff presently.

That knot of old naval officers in the corner looks very grave and professional. And no wonder, they are talking of the court martial that is to be held on Tuesday, on Lieutenant Plummer for loosing the *Bustard*.

"Dummee sir" says Ricochet, "I never heard such a lubberly piece of work. Lose a ship in a gale of wind on a lee shore." He'll be broken like a rotten stick. I never lost a ship."

Ricochet is perfectly right there; for with a proper estimate of his professional capacity, he trusts every thing to his master and first Lieutenant. But how can you expect a man to be a great seaman, if he spends half his life on the turf? and on the turf Ricochet would have been to this day, but for that celebrated Derby, when *Ranting Roarer* astonished every body by running first. Ricochet was heavily let in. Two or three gentlemen shot themselves, and he condescended to take command of the *Regina*. Its a fine thing to have relations in office.

While this amiable group are talking, the waltzers whirl past. How poor little Timson, our master's assistant, got coupled with that fat woman, (Mrs. Huggs, of the Dockyard,) I'm sure I can't guess. He looks at me imploringly, but in vain. I shake my head mournfully, he is doomed, she bears him away in triumph. Poor fellow, he has looked forward to this occasion for weeks, with anxiety, thinking how happy his mother, widow of Lieutenant Timson, (who was lost in the *Stormy Petrel* brig, going to Halifax, where the Admiralty had sent him, because no one else would go, and he dare not refuse,) would be when she heard that her son had been the guest of a Governor, and in the same room with a Lord! In his anxiety to cut a good figure, Timson has put on a stock, so tight that he feels as if standing on the drop, and momentarily expecting to be turned off. But the waltz is over. He has escaped this old woman of the sea, and is now retiring to the refreshment room, bent on getting some brandy and water if possible. A party of Midshipmen who are there, eating ices, and talking very loudly of "devilish nice girls," (although these youngers feel remarkably abashed in the presence of ladylike women; and no wonder, for till within the last year or two, they saw nobody, but their Grandmothers,) regard Timson with a supercilious look, and mutter "bung"; for the reader must know, that the master's assistants of the service are of an inferior class; and a man must be very ignorant of society who does not see that they will be snubbed in consequence, altogether irrespectively of their personal qualifications. One of the youths I have thus introduced as sneering, is a fair young man with curly hair. His comrades treat him with certain deference. Why? Is he more witty? No. A better officer? Pshaw! what then? He is an honorable, the Honorable Mr. Wimpole. That is a passport to consideration, and to (what people esteem more highly) pecuniary debt. How a title spoils a man! This young Wimpole, born a Jones, would have been unaffected and studious. But Providence giving him a fictitious claim to respect, took away the necessity of exertion; and a dunce, an honorable dunce, very much respected, and decidedly dull, he will remain to the end of the chapter. There is a good story told of him, however, tending to show his brass. He was at a ball given by the Governor-general of India; and was sauntering up the room with all the listlessness of want of thought. He passed the spot where the viceroy was standing.

"Ah," said his highness, "Mr. Wimpole! I knew your father, Lord Oxtail."

"Yes," rejoined the youth, "I believe my father *did* know you *before* you rattled!"

Fancy this stroke falling on a whig magnate ! Wimpole was a clever fellow after all.

Let us resume our glance at the good people of Malta, in the ball room. The night is advancing. Baggles begins to yawn, and look wistfully in the direction whence the announcement of supper may be expected. Another waltz begins. The tall, handsome, dashing-looking-man, waltzing with the violet-eyed girl, (how refreshing it is to see blue eyes in the south, like finding a new planet!) is Captain Ransacker, Sion Ransacker, of H.M. steamer, *Hoskett*. His father is a plain, douce, honest Scotchman, of moderate income at Aberdeen. What a filial contempt Ransacker has for him! I believe he would cut him if he came into the room now, for Ransacker is a "dashing" fellow; and plunges himself into debt to give lunches and suppers to "gentlemanly dogs" of the 2nd stifes, or the Heavy Baboons regiment. He sinks his parentage in that august company, or if he does allude to it, talks of his old father in a way that would astonish that respectable man, so great does he make him out. He once entitled him "Ransacker o'that ilk!" Lucky fellow! that he did not see how his guests laughed with each other over their Champagne Glasses!

At the ball of which we are writing, the Military looked as usual, stiff, vacant, gentlemanly, and supercilious. There is something painfully elaborate in the appearance of a military man in full uniform. He looks as if he had been born in it, and as if to divest him of it, would be a fatal shock to his system. On this occasion some of them were thinking how very different the company was at *their* houses in London; or they talked to each other at intervals between the dances, and wondered who the devil that tall man in plain clothes was, and what he would give his daughter: or perhaps they were meditating upon a recent occurrence which had shocked the island from its propriety; and which was neither more nor less than the flight of an officer, who was terribly in debt, and who had himself lowered over the ram-parts in a basket, and so got safe off to a ship outside the harbour.

The elderly portions wished themselves quietly at home, the middle-aged paid delicate attention to the women with money: the very young among them sighed for their rooms, brandy and water and cigars; while a portion of both services we may add, thought of a certain little room, in the upper part of one of the Cafés, sacred to roulette, monte, and other games, in honour of the deity whom we may call the *bad* goddess.

Conspicuous among the naval portion of the guests, was a little round figure in the uniform of a Lieutenant. This was Lieutenant Kinahan, of the *Roarer*, steamer. We are aware that Providence created Kinahan, but to give him the command of a steamer, that was reserved for the Whigs, and even they would not have done it, but that his electioneering influence was considerable. Being of an indecisive character, and totally ignorant of steam, he was at the mercy of the engineers under his command; so that if it did not suit these worthy fellows to go to sea at the hour named, it was perfectly in their power to detain the ship, by inventing imaginary obstacles in the machinery! If the washing of the chief engineer was not ready, he had nothing to do but report a "screw loose," and there the vessel was tied, till it came off. As a last resource, poor Kinahan's only plan was the following; when the "screw loose" was reported, he used to go below, and tell the steward to take the cold pie, and a bottle of porter, to the chief engineer; by which, that important functionary used to suffer himself to be prevailed on to allow her Majesty's service to have the benefit of the services of the *Roarer*.

The dockyard people danced as those do who have few opportunities, and of whom, it may be said, that it would be better for society, if they had none. Those who were in no way connected with either service, such as our worthy friends Criggles, agent to the house of Gripe & Co., (or *merchant*, as he, and those who eat his dinners call him); Mr. Cockatoo, merchant; Mr. Blunder, travelling for the benefit of his health, and the injury of his creditors; &c., &c., assumed a

look of superiority to both. They let their daughters dance with officers according to their rank. Miss Cockatoo had just plighted her faith for the fourteenth time, and looked very interesting, particularly to those who knew her history. Among other female notabilities were the Miss Glaciers, one of whom composed waltzes, (by-the-bye, I never heard them played), and talked of all the literary celebrities of the day by their christian names abbreviated such as Tom, Dick, &c. I firmly believe, that if Dr. Johnson had been alive, she would have spoken of him as her old friend Sam. Then there was Mrs. Colonel Bellicoss, who had the reputation of being in command of the —tha, and who no doubt would have come in uniform if permitted. She marched her daughters (regular amazons of great ferocity) to the supper-table in military style, left-wheeled into the room, and attacked a pie with great skill.

To attempt to describe the supper would be ridiculous, a supper "to be appreciated" must be eaten. The Armies of Xerxes did not drink up the rivers on their way, with more eagerness than the midshipmen did the Champagne. There was some dancing afterwards, but the officers grew noisy, and the ladies tired, and the flowers got broken, and the band drunk; and the man who would stay in a ball-room at day-light in the Mediterranean is "unworthy of the name of Briton."

So we all returned on board, and as I had to keep the morning watch, I set the crew about their work, and falling a-sleep on a gun-slide, dreamed that I was waltzing with the main-mast, drinking Champagne out of the binnacle, and making love to the capstan.

THE AMERICAN ICE TRADE.

THE American Almanack for 1849, has, from the pen of N. J. Wyeth, Esq., a very interesting article upon the trade of the United States, or rather of Boston and vicinity, to which his inquiries have been confined. The trade, we are told, was commenced in 1805 by Frederic Tudor, Esq., of Boston, who made a shipment from Saugus to St. Pierre, Martinique, in a brig called the *Favorite of Boston*; the speculation resulted in a loss of 4,500 dollars. He continued his operations until 1815 with varied success until he made a contract with the Government of Cuba, which proved profitable. In 1817 he extended the trade to Charleston, next to Savannah, and in 1820 to New Orleans. In May, 1833, his operations extended to Calcutta, by a shipment in the ship *Tuscany*, which was the first ever made to Calcutta, and the foundation of a now very profitable and extended business. The increase in the trade was small, the shipment reaching in 1842 only 4352 tons, all shipped by Mr. Tudor. The objections of shipowners to take ice, and the want of information as to the best means of packing it so as to preserve it, kept the trade small, but perseverance and ingenuity soon removed all obstacles; and in 1847, the shipments coastwise from Boston, reached 51,881 tons, forming part of the cargoes of 49 ships, 39 barks, 45 brigs, and 125 schooners with a foreign export of 22,591 tons, 21 ships, 24 barks, 38 brigs, and 15 schooners, all 74,478 tons. The coastwise shipments are, in all the seaports from Philadelphia to Galveston and Texas; while the foreign market includes, besides the West Indies, and the West coast of South America, Mauritius, Isle of Bourbon, Maula, Calcutta, Madras, Bombay, Ceylon, Hong Kong, Whampoa, Batavia, and Liverpool.

The freights of the trade are perhaps greater than any other in the world, inasmuch as the article shipped is of no value, except that incident to labour

and machinery. The freight paid on the 74,478 tons shipped in 1847 from Boston, is estimated at 20 50 dollars per ton, or 187,195 dollars, and the tare 2 dollars per ton 146,956 dollars. There were also shipped in ice from Boston several cargoes of perishable materials, valued at 72,500 dollars, which could not have been taken to market without the ice. To all this may be added 100,000 dollars for profits to those engaged in the ice trade, and we have a return to the country of 507,661 dollars. The ice thus shipped is the outward cargoes of vessels seeking freights, thus enabling them to make a profitable voyage, and at the same time affording this luxury to the South at a small price. In the early part of the ice trade, the manner of fitting vessels was very complicated, and consisted in forming an air-tight chamber inside the hold of the vessel, filling the space between the chamber and the ship's side with tan, shavings, &c. The process is now made very simple, and a layer of sawdust between the ice and the ceiling of the ship, is the only protection. The sawdust used at Boston is brought from Maine, and no less than 4,600 cords were used in 1847 at a cost of 2 50 dollars per cord.

The price at which ice is sold to the consumer varies very much. At Havana, where it is a monopoly, it costs $6\frac{1}{4}$ cents per lb. ; at New Orleans $\frac{1}{2}$ to 3 cents, which has stimulated the consumption to 28,000 tons in 1847 against 2,310 in 1832. At Calcutta the price has not been over 6 cents per pound, and is now $2\frac{1}{2}$ cents. The consumption of ice in Boston and vicinity for 1847 was 27,000 tons, costing the consumers 72,900 dollars, and yielding a profit to seven houses which supply the market of 18,135 dollars. The capacity of the storehouses for ice was, in 1847, equal to 141,332 tons, exclusive of those at Charleston and East Boston, where temporary deposits are made.

The season for gathering ice is very short, not over twenty days in a good season, when the ponds have the active appearance of a harvest field. In 1847, about 650 dollars was paid daily for the services of men, and 230 dollars for that of horses employed to secure their crop. In the infancy of the trade, common agricultural implements were used to gather the ice; but the progress of the trade has brought into use machines as closely adapted to ice as the spinning machines for cotton. Horse power and machinery are now used to scrape the accumulations of snow from the tops of the ponds, to allow the ice to freeze thick and solid. Machinery is also used to cut it into blocks, to draw it to the ice-house, and stow it when there. The trade is no small one, as is shown by the statistics and illustrates in the most striking manner, how profitable a trade can be created by the ingenuity of commerce from materials that in themselves are without the least value, but rather an obstruction to ordinary business.

Among the shipments from New York in September last, as an experiment, was a basket of peaches packed in ice. They were as fresh and as highly flavoured when they reached London as when they left New York,—and this little experiment, we predict, will prove the beginning of a trade by which American fruit will be sold as readily in Paris and London as at home. Honour to the “universal Yankee nation,” who commenced and pushed this enterprise to its present profit and success.—*N. Y. Express.*

THE NAVIGATION LAWS.

The Ministerial measure of last session for the repeal of the Navigation Laws has been amended in one important particular during the recess. The

measure of 1848 proposed that the coasting trade of Great Britain should be protected as before, but that any vessel might bring any cargo from any foreign or colonial port to any port of the United Kingdom. It was forbidden, however, that the foreign or colonial vessel, after unloading part of its cargo at the port of entry, should proceed to a second or third port to discharge the rest. The measure, as amended by Mr. Labouchere, and brought before the House of Commons on Wednesday last, carries out the principle of Free Trade to a full extent. It still preserves a portion of protection to the coasting trade, but allows the foreign or colonial vessel to deposit any portion of its cargo at the port of entry, and to proceed with the remainder to another port. As a waste of freight might occur by the sailing of a vessel with only a portion of cargo from one British port to another, foreign vessels may complete their cargoes at the first port, and dispose of them in the second. For the more effectual protection of the revenue against smugglers, the liberty of carriage granted under these conditions of foreign or colonial vessels will be restricted to vessels above a hundred tons burden. Such, in few words, is the measure for the repeal of the Navigation Laws which Government has brought forward; and upon which, if we may judge by present appearances, the old and obstinate battles of Free Trade against Protection will be fought with undiminished animosity by the respective champions of each case. A preparatory skirmish took place on Wednesday, when Mr. Herries, as Protectionist leader, announced his intention to give the measure his most strenuous and determined opposition. By mutual consent, however, leave has been given to bring in the bill, with the understanding that no further discussion shall take place until the second reading. In the meantime, the measure is left for the study of the honourable members, and for the consideration of the country generally.

NAUTICAL NOTICES.

POSITIONS IN THE ST. LAWRENCE.

Charlotte Town, Prince Edward Island, Jan. 8th, 1849.

SIR.—It has occurred to me, that the Merchant shipping bound to the St. Lawrence, might desire some well determined positions in the St. Lawrence, and I therefore send those of the following principal places, which I have fixed under circumstances so favourable, that I do not think any subsequent observations can alter their relative positions beyond half a second of time :—

<i>Nova Scotia</i> .—Ballantyne Cove, East side	°	'	"		°	'	"
of Cape George	45	51	55	N.	61	55	12·5 W.
Lighthouse, North entrance Gut of Canso	45	41	49	"	61	29	20·5 "
Eddy Point at South entrance Gut of Canso, station on North extreme	45	31	39·7	"	61	14	58·5 "
<i>Arichat Harbour</i> .—Station on Jerseyman Island, North point	45	30	29·6	"	61	3	18 "
Arichat, R.C. Church Steeple	45	30	56·6	"	61	1	58·8 "
Cranberry Island, Lighthouse	45	19	58·6	"	60	55	40·8 "

	°	'	"	°	'	"	
Canso, R. C. Church Steeple	45	20	18.1	N.	60	59 12.5	W.
Cape Breton.—St. Ardoise, R. C. Church Steeple	45	36	53.6	"	60	46 10.4	"
Port Hood.—Observation Station, Smith Island	46	1	03	"	61	34 02	"
Sea Wolf Island, North point	46	22	08	"	61	15 30	"
Chetican Point, South extreme	46	36	27	"	61	3 22	"
Cape St. Lawrence, Station on North extreme	47	2	59	"	60	36 03	"
Cape North, North extreme	47	2	40	"	60	25 23	"
St. Ann's Harbour.—Station on Beach Point, West side of entrance	46	17	33.5	"	60	32 52	"
Point Cunet.—Boulardise Island, North extreme	46	20	33.6	"	60	17 40.3	"
Sydney Lighthouse.—On Flat Point, East side of Spanish Bay	46	16	21.3	"	60	8 00	"
Scatari Lighthouse	46	2	17	"	59	41 01	"

I am, &c.,

HENRY W. BAYFIELD, *Captain,*

Surveying the Gulf of St. Lawrence.

Note.—Observation Bastion, Quebec, being assumed to be in $71^{\circ} 13' 30''$ W.

REMARKS on Entering and Leaving the Harbour of Francisco, California.

[The following remarks on entering the harbour of San Francisco, may be useful to masters of ships bound to that place. They are derived chiefly from Mr. Richardson, Captain of the Port, and also an experienced pilot for that Harbour.]

Ships coming in from the south Farallones should run in on a N.E.b.E. $\frac{1}{2}$ E. course, and bring point Lobos on the same bearing (N.E.b.E. $\frac{1}{2}$ E.) in order to cross the bar in $6\frac{1}{2}$ fathoms, and to keep as nearly mid-channel as possible, there being a bank of 4 fathoms on the south shore, outside, which has generally a heavy swell on it. There is a similar bank also on the north shore, extending at least 5 miles out.

Between these two banks there is anchorage in 10, 12, and 15 fathoms, as you draw in. After getting inside, and having passed the Fort, you can anchor any where in as far as the Alcatrazes, their being no hidden danger.

In going for Sansalito with a light wind and ebb tide, it will be very advisable to steer directly for Angel Island, as the tide sets strong against Sansalito bay, and tends to heave the ship into deep water.

A ship leaving Sansalito, should avoid being set into Lime Rock bay, by standing over towards the Fort point, and from the Fort point stand across to the northern shore to keep out of the eddy current in the S.E. bay, outside the Fort.

The ebb makes on each shore at least two hours before it sets out in the stream, and therefore a ship should not leave the anchorage until the tide had fallen a foot, by the shore. These remarks apply chiefly to vessels leaving with a foul wind.

If the wind be fair, and of sufficient strength to render the ship perfectly under command, she can then start at the last of the flood.

The ebb tide makes from Yerba buena Bay, across towards Lime Rock, thence into Mile Rock bay, (so that ships going out, have not unfrequently been set between Mile Rock and the main), and from that bay it runs to the N.W., round point Lobos.

Outside the Fort point the ebb sets to the N.W., round point Boneta, and the flood runs to the S.E.

San Francisco, Nov. 1st, 1846.

If the Farallones are not made, and the position of the harbour not very certain, some difficulty may be experienced in discovering the entrance, particularly from the northward. It may, however, be known by a long sandy strip of land just to the southward of the entrance, which has much the appearance of a hay field, and also not far from this shore, is a remarkable rock, having an arch in it.

To the northward of the entrance are three or four rocks, close in shore, very white on their tops, and at nearly equal distances from each other.

It is to be hoped that these remarks, however meagre, may be of service in hazy or foggy weather, and when close to the land, in assisting the stranger to find out the entrance to this magnificent port.

R. M. I.

Portsmouth, Feb. 3rd, 1849.

*Bahamian Cottage, Feb. 9th, 1849,
Lower Road, Rotherhithe.*

SIR.—I have to inform you that there is an Island laying nearly midway between the Duperre islands, at the south end of the Great Natuna, and north Haycock island, not laid down in the Admiralty or Horsburgh's charts, nor mentioned in the Directory.

On October 9th, 1848, *Bahamian*, working down the China Sea, at noon, latitude observations $3^{\circ} 39'$ N. longitude, chronometer agreeing with the bearings of the islands on the west side of Great Natuna, $107^{\circ} 52'$ E.; at 6 P.M., southern extreme of Great Natuna, bearing E.N.E., was surprised to see a small island, in appearance like a cone bearing S.S.W. Determined to take a nearer view of it, stood on the southern tack till I brought the island that I could fetch it on the next board, and at 1 A.M., passed close to the north side of this island, at 6h. 30m. A.M., having tacked at 4h. The north Haycock island in sight, bearing S.W.b.W. $\frac{1}{2}$ W., Peaked island, N.b.E. $\frac{1}{2}$ E., Low island, S.b.E. to south, and the Small island, bearing E.b.N.

Thinking it my duty to make this known, I took a note of it from my log, when I left Liverpool, yesterday, and shall be happy to answer any enquiries you may have to make on my return to Liverpool.

I am, &c.,

W. H. HAWKINS, Master "*Bahamian*."

To the Editor N.M.

FASTNET ROCK.

Cove of Cork, Feb. 7th, 1849.

SIR.—A notice appended to a letter from Mr. Hoskyn, in the *Nautical*

Magazine of this month, on the subject of Irish Lights, is calculated to puzzle instead of enlightening your readers.

It is stated that, "the light on the Fastnet Rock near Cork, has been extinguished, and that the sea had broken over the rock so rudely as to render it impossible to inhabit anything but the basement story."

No light has yet been exhibited from the rock, except the fires and candle-light of the workmen.

During the gale alluded to, the scourging of the sea rendered the wooden habitations too hazardous to abide in, and the people took refuge in the basement story of the lighthouse, which is all that is yet erected, and is covered in to afford shelter under such circumstances.

The suffering from cold and wet for 25 hours in winter was sufficiently nauseating to induce them to leave the rock, (by the hooker which daily attended them) until more settled weather.

W. H. C.

[The following notice which is from the same source as the former, places matters in a proper light on this subject.—Ed.]

The Fastnet Rock being situated at the point where vessels homeward bound generally make the Irish coast, and being (as it were) its most southern outpost, it has been recommended by Captain Wolfe, R.N., and the officers carrying on the Hydrographic survey, that the light should be removed from Cape Clear, to the rock in question, and in accordance with this suggestion, the erection of the new lighthouse commenced in May last.

It will be remembered that in Nov. 1847, the New York line of packet-ship, *Stephen Whitney*, was lost, with 97 of her passengers and crew, within three miles of the Cape light, and it is supposed from her track leading so near the Fastnet, that the ship would have been saved had there been a light thereon; the Cape light being obscured by the fog on that night, from its great elevation of 459 feet. The summit of the rock barely affords space sufficient for the necessary sheds or shelter for the workmen. The iron tower for the light, the foundation of which has been completed, and its base filled up with solid mason-work, and secured with all possible care, is 19 feet in circumference, and it is intended to raise it to 75 feet to the summit of the lantern, 14 of which have been already completed. The sheds were very strongly constructed and secured to the solid rock by massive chains, and 17 persons took shelter therein during most of the summer; a large steam-vessel acted as a tender, and conveyed stores and provisions thereto, but such is the exposed situation of the rock, that for several days no communication could be kept up but by a letter bag hauled through the surf. Several of the workmen, from the dangerous nature of the employment, gave up their situations and returned to Dublin, it being the opinion of the inhabitants at the Cape and Crookhaven that nothing could remain thereon in a heavy winter's gale.

The foreman and a few others remained at their post until the gale of the 26th of December, when they were compelled to quit their sheds and seek shelter in the iron tower, which, most fortunately, had been roofed over for the winter, as a last place of refuge. The effect of the sea in that gale baffles all description; all the sheds were filled with water, and one of them has been washed down—derricks and cranes, with other materials, swept off the rock, and a large anvil of 3 cwt. and upwards, taken off its summit as if it were a feather; and notwithstanding all that has been written about the

height of a wave, the men affirm that the sea ran several feet higher than the roof of the tower before it broke, and that the waves that passed the rock out of breaking distance were far more than 10 feet above their level, which was nearly 100 feet above high-water mark.

Water casks secured in the crevices of the rock, bolted and lashed down, were swept away, and as the sea broke it would leave the men in total darkness for several seconds, with a difficulty of respiration, and as the spray descended on their roof with immense weight and crash the light and air both came in together.

Two days after the gale, they were taken from their perilous situation at considerable risk by means of life preservers, and pulled through the surf by lines from a boat outside the breakers. The foreman, a very intelligent man, is now at Crookhaven preparing the stores for the spring or fine weather. He has no apprehension as to the stability of the tower, which is of cast-iron, in large pieces, and screwed together, beautifully cast, and of amazing strength.

CAUTION TO MARINERS.—THE JOHN RENWICK ROCK, *Coast of Chili, Ship Struck and Sunk.*

London, February, 14th, 1849.

MY LORDS.—The commercial interest of this country has ever enjoyed your Lordships' especial attention, particularly as regard any matter that has a tendency to encrease the stock of geographic knowledge, or add to the treasure of hydrographical science. It is under this conviction that I have presumed to trouble your Lordships with this notice of a rock, on which the vessel under my command, (the "*John Renwick*") struck, and became a total wreck in twenty four minutes, on the night of the fourth of July last, past, while on a voyage from the island of Ascension, on the coast of Africa, towards Conception Bay, on the coast of Chile. In the chart, which I have presumed to lay before your Lordships, in conjunction with this letter, your Lordships will at once perceive how dangerous a position the said rock occupies, being 37° south latitude, and 74° 44' 30" west of the meridian of Greenwich. I also beg leave to inform your Lordships that its situation on the chart was determined by the intersections of the several bearings, which together with the soundings were taken some days after the wreck. I passed eight days in a small boat on the adjacent coast, in order to ascertain with as much certainty as possible the exact situation of this formidable danger. I have now to request, that your Lordships will do me the honour, to believe, that in the liberty I have taken, I am prompted by a sense of duty, and that I am with the utmost respect.

My Lords, your Lordships'
 Most obedient and devoted,
 humble servant,
 JOHN H. BELL,
 Master Mariner, *Mercantile Marinae.*

To the Right Honourable the Lords Commissioners of the Admiralty.

[We record the foregoing caution. But it is fair to inform our readers, especially those skippers who are bound to California, that Capt. Bell's position of the said rock does not pass current on the coast of Chili. The commodore of the Chilian Squadron is not afraid of it, nor Lloyd's agent at Valparaiso

either, nor does it pass current among our naval officers; in the Pacific, and should it turn out to be at the north extreme of the reef off Isle St. Mary, it will be entitled to its place in our cabinet of *Curiosities in Hydrography*, some account of which we gave in our volume for 1844, and to which we shall return with a few more similar contributions in another number.]

ADDITIONAL HARBOUR LIGHTS AT OSTENDE.—Notice was given from this office on the 27th of December, that the Belgian Government was about to establish additional Harbour Lights at the entrance of the Port of Ostende, and it now appears by a recent communication that those lights were first shown on the 21st of January.

Seamen will therefore observe :—

1. That the Green light on the Western Pier is intended merely to indicate the position of the Pier-head.
2. That the entrance of the harbour must not be attempted, unless the Red light of the Eastern Pier is also shown.
3. That when both of these lights are shown, they signify that the depth of water, between the Pier-heads, is more than $8\frac{1}{2}$ and less than $14\frac{1}{2}$ English feet.
4. That as soon as there are $14\frac{1}{2}$ feet of water, between the Pier-heads, the Red light will be extinguished, and the two usual tide Lights will be shown; one of which stands on the end of the Sea-wall, and the other on the Sand hills, near Fort Imperial.
5. That these tide Lights will in their turn be extinguished when the tide has again fallen $14\frac{1}{2}$ feet water; at which time the Red light of the Eastern Pier, will be re-lighted, and kept burning till the water falls to $8\frac{1}{2}$ feet, when it also will be extinguished.

Note.—A Black Buoy, marked with the white letters P.O. has been lately placed in 16 feet, at low water, on the W. end of the Bearland, (or Strooms) Bank, off Nieuport, with the following bearings, Furnes Tower, S.S.W. $\frac{1}{2}$ W.—Nieuport Tower S.b.E.—Middelkerke Steeple, S.E.b.E. $\frac{1}{2}$ E.—Ostende Light, E.b.S.—Bearings by compass.

AZORES ISLAND.—*Sunken Rock.*—Her Majesty's Consul at the Azores has reported, that a dangerous reef of rocks on which the sea breaks heavily, has been recently discovered about midway between the Islands of St. Michael and Terceira, by three Merchant vessels, viz: the *William*, of Bangor, and the *Plymouth*, of Boston in the United States; and the *Tres Amigos*, of St. Georges, in Portugal. The places assigned to the rock by these three accounts vary in latitude between $38^{\circ} 16'$ and $38^{\circ} 18' N.$, and in longitude, between $26^{\circ} 41'$ and $26^{\circ} 50' W.$ of Greenwich; but from the mean of these positions the eastern high land of Terceira bears N.b.W. by compass 27 miles, and the western end of St. Michaels S.E. $\frac{1}{4}$ S. 45 miles.

As these reports, made by three different vessels and within a few days of each other, substantially agree, there seems but little reason to doubt the existence of a very formidable danger to navigation in one of the most beaten tracks of homeward-bound vessels, and the less so, as it is well known that more than one submarine volcano has thrown up rocky islands from the bottom of the sea in that very region.

Mariners, therefore, cannot keep too vigilant a look-out when passing through the group, but more especially when between the Islands of St. Michael and Terceira.

HALF MOON CAY LIGHT.—A notice dated Belize, June, 24th, says the new light at Half Moon Cay, was lighted for the first time, on Thursday night last. It is represented as being very brilliant and very superior to the old one.

H.M.S. *Childers*, returned to Hong-King on the 28th of October, after a preservation most miraculous. By the violence of the gale, she was driven on the Prata Shoal on the 10th of that month, but at the moment of reaching the outer barrier a tremendous wave lifted her so far over it, that she struck only once, and partially, losing her rudder and false keel. Within the barrier she anchored in smooth water, where she lay 15 days. Her boats had been carried away with one exception, her main-mast was gone, guns, shot, &c., thrown overboard. With the single small boat that was saved, they were enabled after long and tedious sounding over the reef to find a channel deep enough for the brig to reach the outer waters.—*Hong Kong Register*.

It is also stated that H.M.S. *Scout* has met with an accident in the River Min.

DEATH FROM LIGHTNING.—On Sunday last, Rees Jones, chief mate of the schooner *Margaret and Rachel*, of Limerick, was struck dead by lightning. The vessel, which was bound to this port from Limerick, encountered a heavy storm after her departure, and on Sunday night, when she was off Tory Island, the storm increased, accompanied with thunder and lightning. The deceased was engaged in clewing up the top-sail, and stood by the chain, when a flash of lightning struck the vessel, ran along the chain, and coming in contact with the deceased, knocked him dead upon the spot. A boy, named Evan Jones, who was standing near the deceased, had his hand severely burnt by the lightning. The schooner arrived here on Wednesday night.—*Liverpool Mercury*.

BOTTLE PAPER.

NEW YORK—August 19th: Current—Gulf Stream.—“This was thrown from her Britannic Majesty's sloop *Electra*, on the 18th of March, 1848, when on the passage from Sacrificios to Cat island. The lighthouse at the south-east Pass of the Mississippi, bearing W.S.W. about 18 miles.—A. W.”

The above slip (observes the *Galveston News* of the 27th ult.) was yesterday picked up on the beach, within a mile of this city, securely enclosed in a bottle. It must have drifted from shore within a day or two. The point where it was thrown into the Gulf Stream is probably about 300 miles to the E. of this place, so that it has been carried to the W. by the current for the past four months, at the rate of nearly three miles per day. This, we suppose, is the point wanted to be determined.

No. 3. Abstract of the passage made by H. M. steam ship *Terrible*, from Corfu to Gibraltar in 1846.

Date.	Distance		No. of days and hrs. steam.	Average.		Sail set.	Course.	Wind.		Boilers.	Draught.		Immerision of Paddle wheels.	Coal Expended.			Expended.			
	By P. log.	By obser.		Speed per hour.	Rev. pr. m.			Direction.	Strength.		Pressure—steam.	Mean.		By stern.	Quantity.	Hourly.	Daily.	Dist. run with ton	Oil.	Oakum.	Tallow.
Aug. 21	31	...	0 3½	8:86	10	Fre & aft along the Variable sls obcily land		Variable	2	2 s	2 5&6	8 18 10	47 2	ft. in. lbs cwt. q. lb	27 2	7 2	3 8 50		
21...22	218	...	1 0	9:08	10½	none	W.b.S. S.	W.S.W.	2	s	2 do	8 18 8	57 0	34 71 8 2	14 34 7	6 34	5 8 50			
22...23	234	...	1 0	9:75	10½	none	W.N.W. Westerly	W.S.W.	2	s	2 do	7½ 18 6	7 6 10	44 181 17 1	18 44 18	5 21	7 8 50			
23...24	...	...	187 1 0	7:79	10	none	W.b.N. W.N.W.	W.S.W.	3	hd s	2 do	7 18 3	9 6 7	50 42 1 3	9 50 4	3 73	8 9 50	
24...25	...	...	176 0 19½	9:10	10	none	W.b.N. N.W.	W.S.W.	3	s	2 do	7½ 18 11	11 6 5	43 102 5 0	25 54 5½	4 02	7 8 50	
25...26	...	...	36 0 4½	8:47	10	none	W. N. S.	W.S.W.	2	s	2 do	7½ 18 0	12 6 4	13 82 3 2	0 52 4	3 89	4 8 50	
26...27	211	...	1 0	8:79	10	none	W. W.	W.S.W.	2	hd s	2 do	7½ 17 9	14 6 1	55 72 6 0	14 55 7	3 81	5 8 50			
27	92	...	0 11½	8:18	11	none	W.b.S. W.	W.S.W.	2	s	2 do	7½ 17 7	15 5 11	25 132 6 3	17 56 5½	3 49	3 8 50			
Totals	...	1185	5 14½											274	9		42	65	400	
Average			8:82	10½															

½ hd. s. head sea—s. smooth—Coal used:—Newcastle, Welsh, and Sunderland of middling quality.—Retribution in company; Engines frequently eased to allow her to keep company.—In this passage 123 miles were performed under sail only in 24½ hours. In Tables Nos. 1 & 2, col. Wind, for "steam" read "strength"; in No. 2, opposite 15th & 16th for "140" read "240" for "42" read "24".

Continued from page 102,—cs crew saved—d drowned.

Vessels' Names.	Belong to.	Masters.	From.	To.	Wrecked.	When.
Agnes Lee	75	N. Shields	Alexandria	Liverpool	Cardigan B.	Ja. 11, 10d
Agnes	Hull	Clarence	Sunderland	Hull	East Coast	Sept. 24.
Ailsa	Annan	Marshall		Richibucto	Bay Fundy	June 11, cd
Amelia	Faversham	Blair		Faversham	Off Bridg't'n	Sept. 24, cs
Ann	Limerick	Hedly		Quebec	Anticosti	Sept. 26.
Ann	Dartmouth	McFie	in contact	with G. Tell	Off I. Wight	Oct. 2, es
Anne	80	Williams			Shingles	Aug.
Ariel	Cowes	Yacht			Off Leghorn	June 2.
Belleisle	London	Caldbeck	Genoa	Southamp'tn	Hooghly	Sept. 12.
Benares			Glasgow			April 20.
Britannia		Townsend			C. Brazil	Oct. 27, 1d
Britannia	85	Nicholls	Rio	Bahia	Kentish K.	Sept. 19, cs
Britannia	Sunderland	Egglestone	Shields'	Naples	Hogstia	Aug. 10, cs
Capricorn		Corney	Jamaica	London	Jamaica	Sept. 22, cs
Captain Ross		Williamson		Greenock	Seven Stones	Sept. 29, cd
Caroline	Newport	Gothay	Barnstaple	Barcelona	Lefoo	Feb. 13.
Castlereagh	Sydney	Silver	Sydney	Lefoo	Bermouth	Jan. 15.
Cestrian	90	Armstrong	Bonny	Liverpool	Eoss Bay	Jan. 8, cs
Ceylon		Lepanu	New York	Glasgow		
Chieftan	Glasgow	McDonough	London	Riga		
Commerce	Limerick	Halliday	Galway	St. Johns	Nova Scotia	May 24.
Defiance		Steer	N. Orleans	Liverpool	M. Missisipi	June 19.
Eleanor	95	Hudson	Hartlepool	London	Gunfleet S.	Sept. 29, cs
Fin McCoull	Hartlepool				Tuskar	Sept. 29, cs
Flora	Aberdeen				Foulla L.	Oct. 30, cs
Ganges			Archangel	London	at sea	Sept. 25, cs
Genl. W. Nott			Honduras	Swansea	34° N. 63° W.	May 22.
Gipsev	100	Lock	Cuba	Bahia	45° N. 31° W	Aug. 19, cs
Glasgow	Bath		London	Boston	Margate S.	Mar. 1, cd
Gowrie	Waterford	Perkins	Liverpool	Madras	Covelong	June 21, cs
Grace		Woof	Newcastle	Tonningue	Off Scarbro'	July 21, cs
Helena	Perth	McAllum	Galatz	Leith	Foundered	Dec.
Jackey	105	Grant		Montrose	abandoned	Dec. 17.
James Reid	Leigh	Goodall	in contact	with Dolphin	off Shipwash	Sept. 30, cs
Jane	Whitby	Goddard	logged and	abandoned	37° N. 37° W.	Sept. 3.
Jane	Sunderland	Annisson	Hull	Coquimbo	C. Verds	Sept. 8.
Jane Augusta	Halifax	Passed water		Petersburg	Stalcar	Sept. 25, cs
John Geddie	Dublin	Howitt	Liverpool	Petersburg	Tonkahun	July 5, cs
John Kenwick			Bell	Valparaiso	Nargoe I.	Sept. 3, cs
Kingston			Neeve	Liverpool	Orkneys	Oct. 3, cs
Lowca	Whitehaven		Dobson	Hull	Gloucester	June 10.
Lee			Greaves	Havana	Rio S. Frans	July 30, cs
Malvina	115	Alexander	Monte Video	Cork	Latheren B	Sept. 24, cs
Margaret Scott		Watson			abandoned	Sept. 25, cs
Mary Ann	Liverpool	Nelson	Whitehaven	Cardiff	38° N. 65° W.	Aug. 31, cs
Mary Hibbert		Wilson	Bermuda	St. Stephens	abandoned	Nov. 7.
Medusa		Davis	Quebec	Belfast	at sea	July 18, cs
Nankin	120		Calcutta	London	Cork sand	Sept. 24, cs
Patty		Lewis	London	Woodbridge	C. North	Sept. 18, 6d
Peel's Own			Hull	Richibucto	C. Breton	Aug. 30, cs
Peru		White	Sunderland	Wallace	Ronaldsha	Oct. 1, cs
Penang	Liverpool	Hawkins	Cronstadt	Liverpool	Cumberland	Oct. 17.
Prince Charlie	125		Liverpool	Riga	North Sea	Oct. 9.
Rosebud	Glasgow	North	Hamburgh	Quebec	Castlehorn	June.
Royal Sovereign	London				Granville B.	Sept. 7.
St. Vincent	Glasgow	Mowatt	Sydney	N. Caledonia	Lefoo	Feb. 13.
Sarah	Sydney	Seagrove	London	Cork	Foundered	Nov. 9, cs
Speculator	130	Williams	Bangor	Whitstable	Goodwin	Oct. 3, cs
Superb	Caernarvon	Hughes	Shields	London	Gunfleet	July 20, cs
Syph	Seaton	Linn	at Falmouth	Nov. 10, hav	ing sunk	at sea.
Ulster	Belfast	crew landed	Newcastle	Aberdeen	Aberdeen C.	Jan. 8, cs
Union	Stonehouse		Newcastle	Aberdeen	Aberdeen P.	Oct. 21, cs
Velocity, steamer		Stuart	Cronstadt	Bristol	Hasbro' s'nd	Sept. 24, cs
Villa Nova	136	Williams		Bristol	Newfound'nd	Aug. 27, cs
Waterwitch	Jersey	Ballhalke		Zante	Atlantic	Oct. 11, cs
William Tell	Workington	Farren	Quebec	Whitehaven	Leosoe	Oct. 26, cd
William	Hartlepool	Reetz	Baltic;		abandoned	Sept 4.
William Hinch	140	Sheridan	St. John	Cork		

The Canal del Arsa is situated in the Gulf of Fiume on the Istrian Coast, and is the shipping port of the coal mines in that district. Although such a magnificent harbour with plenty of fresh water, it has never been surveyed until now. Even Capt. W. Smyth, who surveyed most of the harbours of the Adriatic, omitted the Canal del Arsa. It is not noted in the Italian charts.

The coal pits are situated about four miles from the wharf, and when the *Terrible* was receiving her coal, they were sending down about twenty tons per day. The coal is well adapted for steam purposes, more particularly when the Tubular Boilers are used. The pits are very rudely worked at present.

BALTIC AND NORTH SEA CANAL.—*Hamburg, Jan. 24.*—A gigantic enterprise is at this moment in contemplation, namely, to unite the Baltic and North Sea, from Kiel to the mouth of the Elbe. Without such communication between the two seas, independent of foreign ports of the Sound and the two Belts, the maritime power of Germany cannot prosper as it should. A few months since the Central Power sent Captain Moring, deputy to the National Assembly, to the place, for the purpose of obtaining exact information. The captain has accomplished his mission with great zeal and skill. He proposes that the line of communication should go from Kiel—one of the best ports of Europe, if not of the world—to Brunsbüttel, at the northern mouth of the Elbe, and on the other side to Cuxhaven (the Southern Mouth); and that this junction should be effected by means of a canal of a perfectly simple construction, without sluices, which should traverse the soil of Germany alone, and be protected against every attack by the Eider and the Oder Canal.

The result of the preparatory examination shows that the ground itself offers but few obstacles, the country being very flat, and in no part much above the level of the sea. The proposal that the work should be carried on by the Imperial troops, who will probably be assembled in great numbers in the Duchies during the spring, is highly approved.

Jan. 9th, 1849.

LIGHTNING AT SEA.—Sir.—Many communications have appeared in the pages of the *Nautical Magazine*, relative to the effects of lightning in ships, the following account of the damage done by it to H.M.S. *Glory*, 98, off Cape Finisterre in 1805, when on our way to form a junction with Admiral Sir Robert Calder, is not I think unworthy of record. The accident occurred only four days before the action off Ferrol, and when it is remembered that the combined fleet under Villeneuve was superior to the British fleet, and that our defeat would have been most disastrous to this country, the absence of such a ship as the *Glory* would have been severely felt.

I am, &c.,

A GLOBY.

To the Editor N.M.

On the 18th July, 1805, weather lowering with every appearance of a gathering storm, at 6h. a.m., reefed. At 9h. tremendous thunder and lightning, wind and rain. At 9h. while close reefing the top-sails, the ship was struck by lightning which carried away the main-top-gallant-mast, shivered the main-top-mast, and so seriously damaged the main-mast, that

it was with difficulty secured for further service by lashing and strapping it together with hawsers and studding-sail booms. The main-sail, fore and main top-sails were split, and almost every man in the main-top more or less injured; several men were struck down off the bunt of the yard and the cap into the top, but happily no lives were lost. She returned to Plymouth for a new mast in August following.

The Annual Report of the R.N. Annuitant Society, for the last year is out. From it we learn that the society prospers, that it has now a capital of upwards of £148,000, and that it pays annually to its claimants no less than £8,000, thus in the space of 26 years, a body of Officers, the greater part having little or nothing but their pay, have accomplished an unparalleled task—they have, from the formation of the Society, managed to subscribe, from their slender incomes £266,650, and to have relieved the Widows, Orphans, and other relations of their deceased brother Officers with Annuities amounting to £110,238. The total expenses of this society amount to £9,374, or about £360 per annum, which shews management of most admirable economy.

2,458 Members have been enrolled, of whom 1,412 have died or left the Society, leaving only 1,034 to uphold the establishment.

Surely such an Institution deserves the support of every Naval Officer; if he be in affluence, he does not require its aid, for himself or his family; but the young ones of some poor relative may, and if he has none of those, he may extend his kind sympathy, and subscribe for the good of the Widows or others of his poorer Brother Officers.

LIGHTS IN PILOT BOATS.—A notice to mariners is contained in Tuesday night's *Gazette*, ordering that on and after the 1st of March next, all the boats in the service of pilots licensed by the Trinity Board, in the several ports in the English Channel, on the east coast of England, and in the river Thames, shall be distinguished by a green light at the mast-head, and in addition thereto by a flare-up light, shown at intervals of fifteen minutes. Pilot-boats in the service of the said pilots, at the several ports in the Bristol and St. George's Channels, by a white light at the mast-head, and a flare-up-light, at intervals of fifteen minutes.

BRITISH v. AMERICAN OCEAN STEAMERS.—A passage across the Atlantic against the strong winds and heavy seas which prevail in the depth of winter is sure to try the strength of sailing capabilities of steamers. Whatever the success in summer, with light and favourable breezes, it is only when the waves are "lashed by storm" that vessels are fairly put upon their trial. The British and North American Royal mail steam-ship *Europa*, Captain Lott, which sailed from New York on the 10th instant, and Halifax on the 13th, reached the Mersey yesterday morning a little after nine o'clock, making the passage from New York to Liverpool, at this boisterous season of the year, in less than twelve days! This, all things considered, is the most astonishing passage on record. The *Europa*, on her passage out, left the Mersey on the 16th December, four days after the American steamer, *Hermann*, sailed from Southampton for New York. The *Europa*, after mak-

ing the detour to Halifax, reached New York on the afternoon of the 31st of December, but the *Hermann* only arrived at Boston (for which port she was compelled to run, being short of coals) on the 4th of January, four days after the *Europa* reached New York! Again, the American steamer, *Washington*, sailed from Southampton on the 20th of December, and did not reach New York till 19 days after she started. The British and North American steamer, *America*, which sailed hence on the 30th of December, reached Halifax on the 10th instant—a very rapid passage, considering the season of the year and the difficulties to contend with. Instances of superiority of British steam vessels over those yet built in America now so frequently occur, that we should think that Brother Jonathan was pretty well satisfied that he is no match for Uncle John in this department. We are glad to see a friendly rivalry in these matters, for by it the public are sure to benefit, and talent, skill, and enterprise, meet with their due reward. The public will be gratified to learn that two new vessels, which will surpass all the others in size, splendour, and speed, are about being laid down by the British and North American Company, to replace the *Acadia*, and *Britannia*, which have been sold.

CALIFORNIA.

THE following is an extract from a letter from Panama. “New Granada Panama, Dec. 24, 1848.—Some persons appear to doubt the truth of the Californian discoveries; we were also very sceptical three months ago, but the arrival of her Britannic Majesty’s frigate *Constance* at Valparaiso last month (November), confirmed all the startling prior reports, with many additions. For example, a gentleman (to whom Captain Courtenay, of the frigate, had given a passage), a botanist, went from the bay of San Francisco in search of plants or bulbs; in the course of his journey he came on the diggings, trowel in hand. He at once set to, and with his own hand and so small an instrument took out 1,500 dollars worth of gold in three days. One of his largest pieces, weighing $1\frac{1}{2}$ ounce, he presented to Capt. Courtenay. That you may not think I have made a mistake in figures, I will give it you in words—fifteen hundred dollars in three days. The Governor of California reports 40,000 dollars worth the average daily arrival at San Francisco. The fanatic Mormons, about 1,200 in number, first discovered the precious metal during their march, and are said to have extracted an immense quantity of it before it became known. Governor Mason, in his report of August last, says, from all he has learned he believes 13,000,000 dollars or 14,000,000 dollars worth had been extracted to that date. The vessel that brought the messengers was supplied, through the good offices of the governor, with a new mainmast. The carpenters who made the spar, upon some complaint of the captain, during the operation, threw down their tools, exclaiming indignantly, “We are losing money by you.” They were then receiving three dollars per hour. They have already grog-shops; the price of a glass is a pinch, so you may imagine the state of things there. The pinch must be worth at least two dollars. The sensation and commotion created all along the coast, from the north to the south, even to the most insignificant interior towns and villages, is without precedent. Numbers of vessels started—from Valparaiso, 9; Pisco, 1, with aguadiante; Callao, 4; Payta, 3; Guayaquil 3; Buenaventura, 1, of 50 tons; Panama, and many others going from all the aforesaid ports. It is supposed by some that they are supplied with goods

for the present, consequently many are now going there with small coin, from 20,000 to 200,000 dollars, to purchase the gold. The last account of sales was from 7 dollars to 8 dollars the ounce, which has sold in all cases at 18 dollars, 18 dollars 1 cent, and 18 dollars 2 cents at Valparaiso. This fact is proof of the purity of the metal. Several commercial houses are writing to England for clerks—their old ones having cleared out for the diggings at California.

LUXURY OF A VOYAGE TO CALIFORNIA.—We copy the following account of a vessel preparing to sail for California, from the *N. Y. Sun* of the 20th December.

“Music and Literature are not to be outdone by prosy toil in migration to the gold regions.” A band of musicians have organized to go out in the packet ship *Apollo*, lying at the foot of Chambers Street, also several printers who take with them press, types, and paper, and will publish a weekly journal during the voyage. A place is to be set apart in the *Apollo* for various amusements and exercises, for the recreation of the passengers. A debating club is also forming, with several other projects, which will agreeably divide the time which otherwise passes heavily at sea. We had a peep yesterday at this vessel—carpenters and painters were up to their eyes in adding every possible convenience and comfort above and below decks. Her between decks are unusually high, light and airy, even for vessels of her tonnage, which is over 800 tons. Besides ample provisions for the passage out and back, and the four or six months she is to remain as the passengers’ home at San Francisco. She will be able to take about 400 tons freight, which is being rapidly contracted at easy rates. She is to be towed by a small steamer up the Sacramento near to the heart of the gold regions, and will be anchored there as a general depot for those who go out in her. Five physicians are enrolled among her passengers. As she sails in a few days, probably the first ship from this port, those who wish a chance in her will have to apply at once or miss the chance. The price of passage by her, out and back, with board, and all privileges for several months at California, is only 250 dollars.”

MURDERS ON BOARD THE SHIP AMELIA.—Last week the *Daily News* published a short account of a horrible catastrophe which took place in the midst of the Pacific Ocean, on board the *Amelia*, bound from California to China, with gold for the purchase of silks. Extracts from a private communication from Hanavoora Bay in Woahoo, one of the Sandwich Islands (on which stands the town of Honolulu), received *via* Mazatlan per the last West India Mail, by a mercantile house in Manchester, corroborate every main fact of the account already published, giving, however, fuller particulars, and the dates of the horrible tragedy:—“On the night of the 3rd October, in the middle watch, three of the crew, namely, Jose Cabrero, Jose Torres, and Andres Boldevio, mutinied, attacked the mate, and killed him. Captain Alva (a Spaniard), and Mr. Francis Cooke, passenger, hearing the noise, came on deck. Two of the ruffians attacked them, killed Mr. Cooke, and immediately threw him overboard, and badly wounded the captain, but who, nevertheless, succeeded in getting down into the cabin to arm himself, and came on deck again with a cutlass, but the murderers stabbed him in the neck with a knife, and he fell a corpse. Mrs. Cooke, her maid-servant,

Mary Hudson, and the flag-captain, M'Nally, (a native of Dublin), who were below when the murderous scene commenced, were confined to their state rooms; and the mutineers, who were all Peruvians, shaped their course for Peru. On the following morning Captain M'Nally offered, with the assistance of the carpenter, to leave the ill-fated ship, with the females, provided the mutineers would give him one of the boats and the necessary provisions. This they seemed to assent to, but on his going on deck he was seized, bound, and thrown overboard. They then threw the papers and documents also overboard, and getting out a large quantity of gold, divided it amongst the remainder of the crew, compelling each to take a part. On the night of the 5th, the murderers having drunk freely, two of them went to sleep, when the carpenter, in accordance with a plan arranged by some of the crew, killed them with his axe, while others attacked the third murderer, who resisted, but was likewise despatched by Smith, and the vessel brought to these islands (the Sandwich) by the apprentices, Thomas Gannon and Charles M'Donald. Smith, the carpenter, is a native of Rotterdam. Gannon and M'Donald are from London. The specie, about 300,000 dollars, has been secured by her Majesty's consul-general. Mrs. Cooke and servant are living on shore, and it is expected will return to the coast of Mexico, when an opportunity offers.

EXAMINATION OF MASTERS AND MATES.

A List of all Masters and Mates who have voluntarily passed an Examination, and obtained Certificates of Qualification for the Class against each assigned under the Regulations issued by the Board of Trade, to the 30th of November last.

MASTERS.

Nov. 1st.—W. M. Phillips, class 2nd, age 28, ship Henry, 310 tons, South Shields; J. Minikin, 2nd, 34, Farra, 279 t.; P. Deslandes, 3rd, 23, Royal Sovereign, 573 t. Portsmouth.—2nd.—F. A. Levin, 2nd, 23, Lady Amherst,* 446 t., No. of regitser ticket 30876, London; A. P. Honeyman, 3rd, 29, Osprey,* 768 t., 27.6627.—3rd, B. P. Everson, 2nd, 24, George the IV.,* 236 t. 424011, S., Shields; E. Crouch, 2nd, 24, Resource,* 219 t. 417283.—6th, W. Perry, 3rd, 21, City of Adelaide*, 327 t. 23209, London; J. Newlands, 1st, 46, St. Lawrence Liverpool; A. M'Pherson, 1st, 42, Flora M'Donald, 666 t.; F. Boyce, 1st, 35, Salacia, 353 t.—9th, R. Fawckner, 1st, 33, Science, 184 t. London; G. Gate, 2nd, 26, Rosalind, 305 t.; G. Long, 2nd, 23, Athenian*, 673 t. 195610; R. S. Norris, 2nd, 36, Vanguard, 257 t. 10019—10th C. J. Grimmer, 1st, 26, William and Henry,* 62 t. 306792, Yarmouth; J. Lunn, 3rd, 24, Useful,* 214 t. 92527, South Shields; J. Johnson, 3rd, 32, Thetis,* 160 t. 107665; A. Dingle, 2nd, 33, Pakenham,† 660 t. 189978, Liverpool.—13th, E. Le Lievre, 2nd, 31, London,* 554 t. 418742, London; G. W. Lowdy, 3rd, 47, Orestes,* 700 t. 400240; G. W. Pearson, 3rd, 43, Ranger, 162 t.—14th, J. W. Gordon, 1st extra, 34, Atalanta, 672 t. Glasgow.—15th, R. C. Wilson, 2nd, 44, Warrior. 205 t. London; J. Richards, 3rd, 28, Fair Arcadian,* 319 t. 34042; W. J. Dougal, 3rd, 34, Valleyfield, 343 t. 2597.—17th, W. Thompson, 3rd, 24, William and Sarah,* 226 t. 159509, S. Shields; W. B. Taber, 2nd, 42, Digby, 787 t, Liverpool.—20th, J. Gibson, 2nd, 36, Mid Lothian, 414 t. London; R. Marsh, 2nd, 37, Dadid Lyon, 476 t. 325608; E. J. Blake, 2nd, 33, Essex,* 329 t. 109453.—21st, W. Draper, 2nd, 45, Digby*, 787 t. 400637, Liverpool.—23d, W. Dalston, 2nd, 50, Navarino, 463 t. London; D. D. Willis, 2nd, 24, John Willis, 367 t. 8195; J. R. Myhill, 2nd, 38, Lady Amherst, 446 t. 328446; M. H. Chalk, 2nd, 34, Lady Howden, 319 t. 325318; E. A

Shepherd, 2nd, 38, Melway,* 1848 t. 2650075.—24th, W. Gardner, 3rd, 34, Astley, 221 t. S. Shields.—27th, J. Burt, 2nd, 26, Devonshire,* 337 t. 266479, A. Mustard, 3rd, 29, Coromandel,* 638 t. 329855.—29th, W. Hall, 2nd, 25, Urania, 279 t. S. Shields.—30th, J. Westray, 2nd, 37, Whitby,* 400 t. 24008, London, J. Lukey, 2nd, 38, Susannah, 514 t.; J. H. Palmer, 2nd, 25, John Line, 695 t. 328325; J. G. Cameron, 2nd, 30, Lavenside, 227 t.; J. Elmore, 3rd, 34, Apolline*, 452 t. 25138.

MATES.

Nov. 7th, R. Spence, 3rd, 24, Lee, 120 t. 326727, London—20th, H. Cory, 2nd, 21, Oriental Queen, 640 t. 272009; W. Livingston, 3rd, 27, Tory, 483 t. 28761.—27th, H. W. Stevens, 2nd, 23, Lady Sandys, 322 t. 244167.

KING DOBBS.—London: Darling, 126, Bishopsgate Street.

We little thought while we were expressing our opinion of the author of "Biscuits and Grog," as to his talent as a naval novelist, that he was really penetrating the above work in monthly numbers. We have given our readers a specimen of his work in a former page, where in "A Leaf from Life in Naples," and "A Ball at Malta," from his "Claret Cup," they will see the kind of production to which we alluded. His style is rich and racy, terse and vigorous; we have said he will not want readers, and we still think so.

THE SHIP.—By Mr. Steintz which we have already recommended to our readers. As regards the anchor, used or not by the Egyptians, Mr. Jal says, "that among all the Egyptian naval figures with which he is acquainted, he could not find one object resembling an anchor. Nevertheless, the galleys which navigated in the Red Sea, spreading terror among the Indians, must have been able to moor at a distance from the shore, for they could not always approach, because of the surf of the sea, or because rocks and bars defended the shore; also to protect themselves from the enemy, who, bordering the coast, might have fought immediately on their approach. They were then obliged to place themselves out of reach of their projectiles." Probably they used large stones, or masses of stones for the same object fulfilled, in latter times, by the single and double toothed anchor, which Mr. Jal believes from the following passage from Herodotus. (liv, 2, s 95): "They are thus guided, the boats of burthen in descending the Nile, have a hurdle of twisted cane and furze, and a perforated stone of about two talents weight, (about 1 cwt). The hurdle is bound with a rope in front of the ship, which is allowed to float on the course of the water; the stone is fastened behind with another rope; the hurdle, carried away by the rapid stream, pulls after it the baris, for thus this kind of ship is called; the stone behind drags the bottom of the water, and serves to guide its course."

This stone is not altogether an anchor, but gives it a somewhat considerable weight, and a rope of ample length, the baris, instead of going quite slowly down the Nile, will stop altogether in the middle of the stream.

The first who had the idea of throwing a stone to the bottom of a river as a moderator, and to direct and abate the course of an embarkation, was the real inventor of the anchor. Pausanius may honour Midas with the invention of this important nautical instrument: or, Pliny may attribute it to the Tyrrhenians, yet the stone was always the primitive anchor; and, if, at the time of Scos-tris, no other means of stopping the ships at sea, or on the Nile, were known, this surely must have been.

Arrian relates, that in a temple of a Goddess of Phasis, he was shown the anchor of the ship Argo; that it was of iron, and this circumstance, as well as the resemblance of this anchor with those of the contemporary Greeks of the second century A.U.C., led him to believe that it was posterior to the expedition

of the Argonauts; he adds, "that in the same temple there were very old fragments of a stone anchor, which was more likely to be the anchor of the ship Argo."

Ahenæus, speaking of the celebrated ship of Ptolemy Philopater, says, that "it had four wooden, and eight iron anchors." The latter probably had neither teeth nor flukes, and how can we suppose that the others possessed them? What resistance could these wooden anchors have afforded to hold against the wind a mass like that which we must imagine to ourselves from the fabulous description of Ahenæus? The iron anchors could have been but ingots of a considerable weight. As to the wooden anchors, they were great tubes filled with lead. We read, in fact, in the "Antiquities of Diodorus," that the Phœnicians, after having laden their vessels with silver in Sicily, extracted the lead from their anchors, and replaced it with silver.

When a mass of stone, or an ingot of iron was not employed, they used baskets filled with stones, or sacks full of sand or gravel. The historian of the expedition of Alexander, the same Arrian above-mentioned, says somewhere, that "Cratis had basket-work placed in front of his ships, filled with masses of rocks;" and, according to Polynæus, Iphricates substituted for these anchors sacks of sand attached to the cables of the ships, and let down into the sea; and that the emperor Leo, ordered (cap. xx of the Naumacha,) not to omit in those parts where sand was plentiful, and anchoring necessary, always to have ready to lower into the sea, instead of anchors, sacks full of sand or gravel.

These examples Mr. Jal purposely multiplies, to prove that the anchor was long a mass, acting merely from its weight; and that even the iron was bent to bite into the earth with a sharp tooth, and the Greeks could call it *ancura*, from the word *ancuro* (crooked) the primitive anchor was still employed.

BIRTHS, MARRIAGES, AND DEATHS.

BIRTHS.

Oct. 8th, at Simon's Town, the wife of G. Filmer, Esq., commanding H.M.S. *Dee*, of a son.

Jan. 8th, at Plymouth, the wife of Mr. McKee, R.N., of a daughter.

Jan. 27th, at Ramsgate, the wife of A. Robinson, Esq., R.N. of a son.

Jan. 27th, the wife of Lieut. T. W. Purver, R.N. of a daughter.

Jan. 30th, at Brixham, the wife of E. Hoblyn, Esq., R.N., of a daughter.

MARRIAGES.

Jan. 23rd, at Chadwell, Essex, H. Sewell, Esq., of Bloomsbury square, to Elizabeth, youngest daughter of the late Capt. Kittoe, R.N.

Feb. 13, at Birmingham, A. Skinner, Esq., Commander R.N., to Elizabeth Ellen, only daughter of the late B. Challinor, Esq., of Derby.

Feb. 6th, at Edinburgh, Lieut. C. O.

B. Hall, R.N. to Catharine Johnstone, youngest daughter of the late J. Nelson, Esq. Kingston, U. C.

DEATHS.

At Southsea, Feb. 10th, Retired-Commander Yule.

At Cambridge, Feb. 2nd, Lieut. W. J. Purchas.

Feb. 2nd, Lieut. P. R. Couch, eldest son of Capt. J. Couch.

At Ostend, Jan. 28th. Lieut. E. Tyn-dall.

Lately at Taunton, Lieut. W. Ham.

Jan. 15th, in Southsea, Mary Elizabeth, wife of C. K. Nutt, Esq., Surgeon of H.M.S. *Excellent*.

Jan. 17th, at Field-place, near Stroud G. E. Freeman, Assistant Surgeon R.N.

Jan. 21st, at Plymouth, T. M. Temple, master R.N.

Jan. 23, at Kelston Lodge, Jane, the wife of Capt. H. Need, R.N.

THE LATE MR. JOHN BISCOE, R.N.—Our readers who delight in deeds of charity, will find in our advertisement sheet, a tale of sad distress that will call forth all their commiseration. The case of the Widow and Four Children of the late Mr. Biscoe, Acting Master R.N., was happily discovered in time to prevent them from perishing by mere want of sustenance and common apparel.

So distressing a case among the widows of Naval Officers we have never before met with, and such a one is scarcely credible in this land! We trust some of the influential individuals whose names we see among the subscribers, will not stay their efforts in the good work thus commenced, until the objects expressed in the advertisement are achieved. And were those objects and the condition of Mrs. Biscoe and her children, made known to Her Majesty the Dowager Queen Adelaide, the real friend of the sailor's widow in distress, we are satisfied they would not be unheeded.

METEOROLOGICAL REGISTER.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory
From the 21st of January, to the 20th of February, 1849.

Month Day.	Week Day.	Barometer In Inches and Decimals.		Fahrenheit Thermometer In the Shade				Wind. Quarter. Strength.				Weather.	
		9 A.M.	3 P.M.	9AM	3PM.	Min	Max	A.M.	P.M.	A.M.	P.M.	A. M.	P. M.
21	Sn.	30.28	30.24	45	50	44	51	SW	SW	2	4	bc	o
22	M	30.02	30.14	44	45	43	46	W	W	5	4	qbcphr (2)	bc
23	Tu	30.36	30.40	45	49	49	50	NW	NW	4	4	bc	bc
24	W.	30.40	30.34	48	50	44	52	W	W	6	6	qo	qo
25	Th.	30.12	30.05	48	51	47	51	W	SW	6	6	qo	qo
26	F	29.84	29.87	46	46	45	47	W	W	4	3	bcp [2	b
27	S.	29.97	29.84	34	42	32	44	SW	S	2	5	bc	qor 4]
28	Su.	29.41	29.41	38	42	38	43	NW	NW	2	3	bcr [1]	bc
29	M.	29.58	29.87	35	38	34	40	N	N	6	6	qop 2]	qbc
30	Tu.	30.14	30.06	32	38	30	46	SE	S	1	3	o	oprs 3] 4]
31	W.	30.13	30.18	37	43	35	44	NW	NW	2	4	bcm	bcm
1	Th.	30.30	30.28	32	42	31	43	W	SW	1	1	bc	od [4]
2	F.	30.32	30.29	45	47	38	49	S	W	2	1	od [2]	od [3 4]
3	S.	30.41	30.43	46	48	43	49	SW	SW	1	1	om	o
4	Sa.	30.49	30.45	47	51	44	52	SW	SW	1	1	o	o
5	M.	30.49	30.47	46	48	45	49	W	W	1	2	o	o
6	Tu.	30.46	30.43	45	45	44	46	SW	SW	1	1	o	o
7	W.	30.51	30.39	42	43	42	44	SW	SW	1	1	o	o
8	Th.	30.20	30.12	40	50	38	51	SW	SW	3	4	bc	bcp 3]
9	F.	30.47	30.50	37	46	33	47	SW	W	2	3	bc	o
10	S.	30.38	30.42	47	51	43	52	SW	W	5	3	qo	o
11	Ju.	30.80	30.83	35	45	33	46	W	N	1	1	bm	bm
12	M.	30.79	30.65	27	39	26	41	SE	SE	1	1	bf	bf
13	Tu.	30.55	30.53	28	38	27	41	S	SW	1	2	bf	bc
14	W.	30.70	30.60	33	47	31	49	SW	SW	2	2	b	bc
15	Th.	30.53	30.52	44	52	41	53	NW	NW	1	1	bcm	bm
16	F.	30.52	30.50	39	42	36	44	NW	W	2	1	om	bcm
17	S.	30.55	30.58	32	47	30	48	W	SW	1	1	bm	bm
18	Su.	30.48	30.46	37	49	35	51	SW	SW	5	3	qb c	o
19	M.	30.22	30.06	43	51	42	52	W	SW	5	5	qo	qbc
20	Tu.	29.96	29.64	43	48	42	50	SW	S	2	2	o	or 3] [4

JANUARY 1849.—Mean height of Barometer=29.892 inches; Mean Temperature=40.2 degrees; depth of rain fallen 1.67= inches.

The "Master of the Bahamian" will find the island he describes in a corrected copy of the Admiralty chart.

We are obliged to "Lieut. Osborn" for his useful contribution.

We have been compelled to defer Notices of New Books for another number.

THE

NAUTICAL MAGAZINE

AND

Naval Chronicle.

That future pilgrims of the wave may be
Secure from doubt, from every danger free.

APRIL, 1849.

NOTES ON THE COAST OF VERAGUA AND GUATEMALA.— *By Capt. E. Barnett, R.N.*

HAVING rated our chronometers, we departed from Port Royal on the 17th of February, and early on the 19th had reached the vicinity of El Comboy; having on four previous occasions run down on its supposed parallel. We now traced a line in $15^{\circ} 40'$, between the meridians of $77^{\circ} 48'$ and $78^{\circ} 4'$. The day was beautifully clear, but nothing was seen.

On the 22nd we arrived at the Island of Escudo, but unfortunately the weather proved so unfavourable, that after waiting three days we were obliged to quit, contenting ourselves with A.M. and P.M. sights; which gave the longitude of the S.W. end $81^{\circ} 33' 45''$, an indifferent latitude, checked however by an excellent true bearing of the Valiente Peak, placing the same spot in $9^{\circ} 5' 37''$. Taking advantage of the clear intervals, the boats contrived with much labour, to trace out much of the island. It was evident, however, that we were in advance of the season, and it was thought better at once to get into the lagoon, where we should be more favourably situated to take advantage of the weather. Accordingly we left the island on the 24th, and by creeping along the main shore during the evening, were successful enough to reach an anchorage at the entrance on the following afternoon. We may safely place the Valiente Peak in $81^{\circ} 55' 11''$ W., and latitude $9^{\circ} 10' 27''$; and this position we considered most important.

NO. 4.—VOL. XVIII.

Z

Having secured the ship in the Blewfield Inlet, the boats were equipped, and having dispatched my zealous assistant to explore the Toboboo Bight, where I had understood there was good shelter for one or two small vessels, we commenced our scrutiny of the channels.

The weather still sadly retarded our progress. We had no wind, but incessant rain; in fact, from the period of our arrival until about the 10th of March, we were wet eighteen hours out of the twenty-four; however, from thence to the time of our quitting the lagoon in the early part of May, we seldom lost a day's work. The land breeze never failed to send off a shower night and morning, but the wind was so moderate that we never had occasion to hoist a boat in, to get a top-gallant yard down, or let go a bower anchor.

The little inlet in which we were secured forms a perfectly new feature in our present charts, and may by and by become one of some importance. Indeed, from the shelter it must have given to the guarda costas and smugglers, the resources it affords of wood, water, and excellent seining, and easy access, it is surprising that we do not see it even mentioned in any of the memoirs.

Taking advantage of its favourable position, and the many natural facilities it offers for the formation of a settlement, an American trader has established himself near the head of the cove, where he carries on a considerable barter with the Valiente Indians, who are scattered here and there all around the bold promontory which takes their name, and on the little eminences on the southern side of the inlet.

Having finished the examination of this romantic spot, and explored the Valiente channel, on the 7th of March, we advanced the ship into the Chiriqui lagoon, extending our work easterly along the northern shore.

The whole of the N.E. part of the lagoon is not navigable for vessels of any great draught of water, yet the small deep mangrove inlets which towards the eastern end penetrate nearly through the narrow isthmus, give secure hiding places to pirates and smugglers, and shelter to fishermen.

Although for the protection of our boats we managed to thread our way in the ship along the northern shore, we got so entangled at the east end that we had some difficulty in extricating ourselves; however, on the 15th, we had succeeded in reaching the entrance of the Chraco Mola river.

In exploring the south-eastern part of the shore two small rivulets were discovered, the Catabella (the most eastern,) and the Tory, (I give the Indian names). The former, probably, the Isabella of the old Spaniards, will admit a small canoe to a short distance only; and at the distance of an hour's pull from the entrance there appears to have been at one time a trading post and path to the Chraco Mola, which was reached in three hours. Both, however, are now abandoned. The latter, probably, the St. Diego, is a branch of the Chraco Mola, and will also admit a small canoe.

Finding that our station at this point lay very nearly on the meridian

of the Valiente peak, and that we had in view the greater number of our principal objects from one extremity of the lake to the other; it was evident that this spot was the most advantageous for establishing the base for the survey, and observations for latitude, and true bearing were made accordingly.

The river having been reported navigable to a considerable distance for large canoes, it was surveyed to the rapids, but all our endeavours to reach the trading post and Valiente settlement were ineffectual. The pilot who accompanied me declared he had never seen the river so low, but it was clearly evident to me that nothing but a small canoe could at any period be hauled over the narrow rapid falls. The river varies in width from one hundred feet to nearly as many fathoms, and during the floods is navigable for large boats to the landing-place at the commencement of the shallows; the banks become firm a short way from the entrance, and gradually increase in height to the above spot, where they are five feet above the level of the river, from thence they rise rapidly. We performed our voyage upwards in six hours, and by all accounts it would have taken us six more to have reached our destination in a canoe. Some idea may be formed of the difficulties to encounter in this latter part of the journey, when it is stated that in a distance of, certainly not more than a mile and a half, we had carried our boat up six rapids, which cost us two hours' severe labour to accomplish.

On the 20th we began to move westerly along the southern shore, and on the 23rd we had reached Frenchman's creek at the south-west corner of the lake. In this space we found several small creeks of inconsiderable magnitude; indeed, too narrow to receive any but a small canoe; and only visited by the natives for the purpose of fishing and hunting, or to obtain plantains and bananas, which grow in wild luxuriance on the banks. Two of them, the Warre-biarra (water-belly) and Chiriqui, have been deemed worthy of the title of river; but undeservedly. The former, however, although only from twenty to thirty feet wide, is deep, and navigable two days' journey. Two Indian families have settled on the banks, who collect sarsaparilla for the English trading post at Baboon Cay; and from thence there is a path to the Chrace Mola. The Chiriqui is so difficult of access as to be seldom visited.

The Roballo river is of the same character as the Warre-biarra, but more frequented on account of the abundance of sarsaparilla obtained from its banks. It is reported to receive several small tributaries by which canoes penetrate into the interior a considerable distance. During the heavy rains, however, they send into the main branch such an immense body of water as to render its ascent a work of great labour.

At Frenchman's creek, which is a mere rivulet, an English coloured family have lately formed a small establishment. The spot is most advantageously chosen, at the foot of the great mountain range, which here terminates at the shore, in the valleys of which they find a soil of the most fertile description; and in the season turtle congregate at this end of the lake in great numbers. If an attempt be made to effect a communication between the lake and the opposite side of the ridge, it will no doubt commence from this spot.

The rivulets which disembogue at the western side of the lagoon are not worthy of notice.

On turning easterly from the north-west corner we discovered two narrow deep cuts leading into the other lagoon, and although intricate, afford a ready means of escape or communication. Leaving them to be explored by my assistant, the survey was carried along the northern shore to the entrance, which we reached on the 28th.

On the 1st of April we had completed the examination of the channels, and moved outwards to the Sapotilla Cays. The only object of interest to be noticed on the northern shore of the lake is Popa Island; the southern side of which is clothed with a species of elm to which the name of Somewood has been given, and which proves to be exceedingly valuable ship timber; it resembles very much the Spanish elm of Jamaica. We attempted to trace the edge of the bank in the ship; but the current baffled all our efforts; indeed, very nearly swept us past the Cape. However, we were fortunate enough to gain the Valiente channel, and threading our way through the Crawl Cay passage, entered the other lagoon on the 6th of April, and on the following day reached the Boca del Toro.

Some few years back a few English emigrants, chiefly people of colour from the islands of Old Providence and St. Andrews, formed a settlement here, but seeing they could not compete with the traders whom they found in possession of the commerce carried on with the Indians, and that they had no means of redress for the many grievances they were exposed to, they made a formal demand to the New Grenadian Republic for protection; which, probably, having heard of the attempt which was about to be made to effect a communication with the Pacific from this lake, gladly seized the opportunity of planting their flag on this hitherto unknown and ungoverned shore. Accordingly, in a short time public officers took possession of the settlement, and issued a proclamation of laws for its government. These circumstances naturally enticed hither other adventurers, chiefly natives of the Republic, and the scattered colony may now probably amount to two or three hundred persons. It appears, however, that the authorities soon after their arrival, were alarmed by a threatened attack from the Mosquito king, who, in a formal message declared his right to the whole of this shore from Salt creek to the Island of Escudo de Veragua.

However, it is certain that during the fishing season the Mosquito men have not only found their way as far as Escudo, but taking advantage to land, have overpowered the native tribes on the shore, and by exacting tribute, become a terror, not only to the Indian, but European inhabitants. Before the evacuation of the small fort at Matina on the Salt creek, it is well known that the Spanish government paid an annual tribute to prevent their incursions; and the traders when forming their establishments are obliged to make extensive presents to prevent molestation. The Republican government looking on the Mosquito men as nothing more than a lawless tribe of marauders, have not condescended to reply to his majesty; but have taken the precaution to guard against an attack by reinforcing the little garrison they had established at the

east end of Columbus Island, and where they have also rudely planted a few small pieces of ordnance.

Having completed the examination of the channel, we commenced exploring the hidden mangrove creeks on the western side of Provision Island, and numerous excellent little harbours on the southern shore and around Coco Cay, and from thence the south-west part of the lagoon.

On the 22nd we reached Shepherd's harbour, and placing the ship within a cable's length of the Iguana creek, commenced watering, which with two canoes we accomplished in three days. During this time our boats were engaged in making a particular survey of this beautiful basin, under the direction of Mr. Mooney, mate, whose ability and indefatigable zeal demands from me the strongest expressions of recommendation; and I rest satisfied that the plan, and several drawings to which his name is attached, will convince you how valuable a *second* assistant I have; and how deserving of that encouragement the young surveying aspirant always so liberally receives from your hands.

The island which forms the northern boundary of this splendid harbour was named Guana Cay. I have, however, with the sanction of the commandant, ventured to call it Shepherd's Cay, from the circumstance of its being in the possession of a person of that name, who was the principal of the party that attempted to open a communication from hence to the town of David in the Pacific; but as this interesting question is so exciting a subject at the present moment, I am sure you will not begrudge me a few of your valuable moments, while I enter more fully into the attempt I have just alluded to.

It is well authenticated, that from some cause hitherto unexplained, probably from the deadly hatred of the natives, no settlement was ever permanently formed by the Spaniards between the river Belem or Conception in the province of Veragua, and Salt creek in Costa Rica. Its value, however, appears to have been known to the enterprising merchants of Jamaica at a very early period, and they have for a considerable time carried on a commerce with the natives, receiving in exchange for dry goods and hardware, tortoise-shell and sarsaparilla, the principal products. The trade was conducted principally by agents, during the last fifteen or twenty years; the most influential of these was Mr. P. Shepherd, who with one or two other respectable individuals, at the latter part of this period, had the whole trade in their hands, the Jamaica merchants becoming their creditors; and under grants from the Mosquito king, obtained by the means I have already alluded to, had formed trading posts at Toboboo bight, Blewfields Inlet, at the head of the Chraco Mola river, Baboon Bluff, Frenchman's creek, Bocas del Toro and Orago, Coita and Monkey points, and Salt creek.

Seeing the advantageous position of Guana Cay, (Shepherd's Cay,) Mr. S. Sepherd, a well known shipbuilder at Jamaica, (builder of H.M. schooner *Monkey*,) was induced by his brother, the trader, about nine years ago, to dispose of his business, and bringing with him twenty or thirty negroes, established himself on the island.

The valuable timber of the country soon became known to him, and

in a short time he had launched two or three small vessels, and also cultivated the banks of the rivulets immediately opposite; where may be seen every species of tropical vegetation in the greatest luxuriance; the soil being the most fertile that can well be imagined; requiring agricultural labour of a very light character.

Shortly after they had established themselves, the trading brother met with some inhabitants of the opposite ridge, who gave so glowing a description of the commercial prospects of that country, that the two Shepherds, and another person, immediately commenced the enterprising undertaking of cutting a road across. The accompanying correspondence will give you a full account of what followed, and may yet be accomplished. It is only to be regretted that these individuals failed, from the illiberality of the party on the other side, who urging on the work at the entire expense of the projectors, were found truckling with the government to obtain the whole tract of land.

It was shortly after this that the New Grenadians established themselves at Boca del Toro. I have already alluded to the circumstances which they allege led them here; but I have no doubt, hearing of the probable success of this bold undertaking was the principal reason. In fact, this may be gleaned from their proclamation, which of course put an end to any further exertions; and, indeed, from circumstances which occurred during my stay, in which I was obliged to interfere, they are evidently trying to drive the Shepherds from the settlement, with a view of seizing on a spot so exceedingly valuable. The whole account I have transmitted to the commander-in-chief, which he has forwarded to our minister at Bogota.

What a sad pity that we cannot see these magnificent harbours in the hands of an enlightened government. Only imagine the ignorance of a set of people, who will talk of a reward of the paltry amount of 10,000 fanagadas of land for the construction of a rail-road across a mountain ridge from 2 to 7,000 feet in height, where not the smallest plain is to be seen, and where every ravine during the height of the rains is scarcely passable.

Again, look at the limits of the province, designated in their proclamation, and it will be seen that the rivers there mentioned, cannot be found in any existing chart that I have met with, and I have some very good old MSS. The public authorities could never point out to me what they *supposed* to be the river Culebras, the most important, as the western limit of the Republic. In fact, I cannot, perhaps, give you a better idea of the liberality that may be expected from this pseudo-liberal government, than by telling you that, hearing a project was on foot to effect a communication with the Pacific through the River St. John and Lake of Nicaragua, they actually threatened war with Central America should it be attempted. Were these discouraging circumstances removed; the only obstacle to prevent this fertile country receiving the industrious energy of the European, is the constant rains which beset it. However, Mr. Shepherd has assured me, that, at his settlement he has never witnessed a day that he could not employ his people for some hours; and

that, in point of health a complaint is seldom heard. In the space of nine years he has only had two deaths from among his thirty companions. I may also state that during our sojourn on the coast, we had only two cases of fever, which terminated favourably.

I had some hesitation in naming this lagoon, some call it Admiralty bay, others Admiral Columbus' bay, and as the name of Columbus does not appear upon any chart of this shore, I think we cannot do better than perpetuate it here. The commandant at Boca del Toro calls the eastern part Admiralty bay.

Having found how useless it would be to attempt getting the ship along the north-west shore against the current, while finishing the remaining part of the lagoon and the Dragon channel, Mr. Lawrence was employed in examining that part of the coast, and was successful enough to carry the triangulation as far as Salt creek.

Our work in the lagoon being completed, we obtained equal altitudes at Lime point on the 10th, and on the following day took our departure from the coast. As I had surmised, before we had got thirty miles to the northward we were drifted up to Escuda : however we were fortunate enough to reach Corn island in four hours, and to obtain an excellent meridian altitude.

Having determined the rates of our watches, and from them deduced the difference of longitude, we found that our station at Lime point (supposing Corn island to be correctly posited) was one mile too far westward ; but when we come to take into consideration the small errors that may reasonably be supposed to exist in the measuring of the three meridian distances, that by which Captain Owen establishes Corn island, (I believe from Cape Gracias a Dios which would involve another,) ours from Port Royal to Cape Valiente, and the last : and again those that would under the most favourable circumstances creep into a triangulation twenty-nine miles in extent, in a direct line ; I certainly could not venture to alter our scale, at least until the measurements were repeated, which I hope to effect next year.

After refreshing our crew I gave a few days to adding soundings to Owen's sheet between Monkey point and St. John, yet unfinished, and on the 22nd we anchored at the latter place.

In a former letter I told you of my disappointment in not meeting here Mr. Bailey, however, we fortunately fell in with an American merchant intimately acquainted with him, and who was kind enough to give me the following account of his work.

Mr. Bailey having ascertained the possibility of constructing a railroad from the head of the Lake of Nicaragua across the Isthmus to the Pacific, the government voted him 2,000 dollars to undertake the examination of the River St. John, with a view to ascertain the practicability of constructing a canal which would avoid the rapids, to obtain the difference of level between the lake and the Atlantic; and how far the river could be made available to steam navigation. To assist him were appointed his son, a captain of engineers, and from twenty to thirty native pioneers. However, so arduous was the undertaking that it appears the

only object effected, was the survey of the river on an extensive scale; at the conclusion of which they were nearly all disabled by sickness, their funds expended, and consequently their expedition at an end. And from the wretched state of affairs I fear there is no prospect of his receiving any further encouragement from his Government.

With respect to the mode of navigating this river, Mr. Higgins the American traveller I have spoken of, and indeed several others who have frequently made the voyage of it, and the lake, say that nothing can be more correct than the description given by Roberts in *Constable's Miscellany*. As to the possibility of cutting a canal, although several report favourably, I think it is merely because they are interested in the success of such an undertaking: their opinions being given from what they have seen in passing to and fro as fast as the rapids would permit, and the impenetrable woods, which line the banks would allow them to see.

As to navigating it by steam vessels at the present moment it is out of the question.

From some cause or other the force of the stream appears to have taken the direction of the Colorados branch, where it sweeps every thing before it. The consequence is that the shallows are growing in the other, and so rapidly that the bongo (trading canoes) are now frequently left aground for several days; and it was, with some difficulty that we could find a passage over the bar for our yawl to water.

The damming up of the Colorados could no doubt be effected, although at a considerable cost and immense labour: yet it should be borne in mind that the country is subject to severe earthquakes. On the 22nd of May two shocks were felt at the village, the last of which so alarmed the inhabitants, that they were on the point of quitting their huts. We were at sea about thirty miles north of the harbour, and felt one of them distinctly.

From Mr. Higgins' account, Mr. Bailey has also examined a part of the southern shore of the lake between Granada and Nicaragua, and if he could be furnished with a small decked boat of light draught, he would still carry on the work; the rude bongo and canoe employed by the natives being perfectly unadapted for such a service. This could be easily sent to him in frame, or indeed already constructed, either by the river, or across the narrow isthmus which separates the part of St. John in the Gulf of Papagayo, from the town of Nicaragua, only a distance of fifteen miles on a cart road; so that it would appear access to the lake is more easily attainable from the Pacific than the Atlantic.

Mr. Higgins met Captain Belcher in Realejo in December last, who had succeeded in getting one of his boats as far as the east end of Lake Leon. I find also that a German savant ascended the St. John at the commencement of the season, with the intention of making a tour of the lakes, and passing through Costa Rica to return by way of Salt creek, where the packet of this month expects to pick him up.

I had understood that Mr. Bailey was employed by a company of American speculators. This, however, is not the fact, although I learn from Mr. Higgins that the merchants concerned in the South Sea fishery

are extremely anxious to effect a communication; but, that nothing will be undertaken by them unless they are convinced it can be accomplished by the way pointed out in Mr. Bailey's mission, which by affording the means of rapid transport of the cargoes and supplies would enable the whalers to remain entirely in the Pacific. Of course the spur which would be also given to the commerce of Central America, is not lost sight of, but the anarchy, confusion, and distrust which now so ruinously degrades this disrupted republic, throws the prospect of such desirable results to an immeasurable distance.

On the 28th of May we had finished watering, and on the day following sailed with the hopes of completing the remaining short space between Turtle Bogue hill and Point Blanco. However, I regret to say that, the rains which had now set in accompanied by heavy gusts of variable winds so baffled all our efforts to approach the shore, that although we fortunately succeeded in connecting the triangulation to Captain Owen's sheet, and determined the position of the rivers which disembogue in this space with other remarkable points in the interior, we were swept past Point Blanco without being able to obtain a single sounding. Indeed, at the very best time the difficulties attending the navigation of this bight are so great, that I expect we shall have to rest contented with very little more detail; not that there are any hidden dangers to guard against, on the contrary, the shore presents an unvaried feature of a steep, bold beach, skirted by impenetrable underwood, but from the current which inclines so frightfully towards it, and directly into the bight at Salt creek, and the north-east roll which has so frequently endangered our packet. With respect to the packet station at Salt creek, I think a single glance at our chart will show you how very much better it would be to change the landing-place to Lime bight, on the eastern side of the point; the only obstacle is the absence of a road across the promontory to communicate with the village at Salt creek. There is, however a foot path to the wells, which lie some short distance inland from the beaches, and if the two or three letters which are brought down monthly, are of so much importance, it would surely not require great persuasion to induce the settlers to complete their connection. The risk now run is really frightful; indeed, on one occasion had not our boat been on the spot, she had scarcely a hope of escape from shipwreck.

The rains were now coming so fast upon us that if we obtained two, or at most three days work in the week, we considered ourselves fortunate. However, we succeeded in tracing the bank to the eastern boundary of our work, but I now found that so much time was lost in endeavouring to combat against the weather now daily getting worse, that I thought it more prudent to quit this inhospitable shore, and employ the remaining portion of our time at the northern edge of the Mosquito bank; and on the 19th of June we took our departure from that neighbourhood.

I will now make a few more observations on this part of our work. Between the Turtle Boyne and Point Blanco, are four small streams—*First*, the Tortugas which is a mere outlet to the extensive swamp which

surrounds the Parasmina hills. *Second*, the Parasmina, navigable for small canoes, one day's journey, whose banks afford the fishermen a constant supply of plantains and bananas. *Third*, the Matina, which is of no magnitude, and seldom visited except for shelter. *Fourth*, Salt creek, which, although admitting only small canoes, is of some importance, as being the outlet of a trifling commerce, carried on with the towns of Cartago and St. Jose, which lie at the foot of the Cartago mountain; the former said to contain a population of 5,000; the latter 10,000. The creek is navigable to the little village of Matina, situated about fifteen miles from the entrance; from whence a rough mule road communicates with the above towns; the journey, however, is most laborious and during the rains scarcely to be effected. There is a small village at the mouth where are two resident American traders; and during the Turtle season may contain one or two hundred persons. The few exports are indigo, cocoa, hides, sarsaparilla, and turtle-shell; but of so small a quantity as to load only two small vessels annually. There is also occasionally a large shipment of specie to Jamaica by the English packet.

Between Point Blanco and the Boca del Drago there are many little streams and rivulets, some of which it is said penetrate to a considerable distance into the interior of the country, but none of which are navigable for any thing larger than small canoes; and even in them, owing to the falls and rapids the ascent is most laborious, indeed from the heavy surf which, in the finest season of the year incessantly roars on every part of these shores, to pass their bars is most frequently impossible. During the fine months, however, they are ascended by the traders, who carry on a trifling commerce with the natives, exchanging for sarsaparilla, a few cotton, and hardware goods. In the Home creek situated a short distance from Mr. Shepherd's trading post at Coita point, coals have been picked up of a superior quality, but not in sufficient quantity to become at present an article of export: on no part of this shore do we find (with the one exception) a settled habitation. The interior, however, has, by all accounts, a large population of wandering tribes, the most fierce and powerful of which are the Blancos, who possess the country immediately round the Blanco peak. The reason of their not settling themselves on the sea side is probably owing to the dread they all have of the Mosquito marauders, who in their fishing voyages prowl along the shore. The traders, however, taking them under their protection, have succeeded in enticing them into their employ on their trading voyages; and the few that we saw, appeared to be a quiet athletic race of people, and we hear are much attached to the English.

The Cartago mountain from its approximation to the lake, has received more particularly our attention, from the great probability of its being seen not only from thence but also from the Pacific. And as I am led to believe that St. Carlos lies more nearly on the same meridian, than present charts point out, I hope its true bearing, and difference of latitude, checked by its altitude will afford the means of establishing that point. With this view I shall send Mr. Bailey the position of Cartago by the first opportunity.

I have now again to resume my narrative. Having passed along the parallel of the rock said to exist between the "Serrana" and "Seranilla" without success, we hauled to the northward, and had the good fortune to hit on Arrowsmith's late discovery; which employed us for three weeks; and regret that our being driven off by the wind and current, obliges me to send it to you in an unfinished state. It was provoking; for three days more would have accomplished our task. But as I found we should have the greatest difficulty in regaining our position, if we succeeded at all; and our chronometers having now remained a long time without rating, and our provisions getting short; I thought it better to give up the attempt and proceed to the Grand Cayman, as being the nearest well determined point to which we could connect the bank.

Having effected this on our way to Cape Antonio, we gave a day to the Cayman ridge to the westward of the island; which closed our campaign.

In the examination of these banks we had ample opportunities of seeing the value of Ericson's lead. In our first experiments great discrepancies were observed; the machine differing as much as from 3 to 5 fathoms in a depth of 20, sometimes *plus*, sometimes *minus*. Whether it arose from any imperfection of construction in this particular instrument supplied to us I cannot say. However we soon found that by keeping the iron shutter which guards the tube, *open*, most correct results were obtained. This of course is too dangerous an experiment to practice, for if the lead was to fall on a rock with the open part downwards the tube would most probably be destroyed. I dare say, however, that this evil will be remedied by puncturing the shutter in every part to admit the water more freely. In trials at different rates of sailing, we find $4\frac{1}{2}$ knots is sufficiently fast to obtain a true register.

THE TRADE OF ARRACAN AND THE PORT OF AKYAB.

December 13th, 1848.

THE extensive shipments of rice which have been made from this province, during the last few years, to all parts of Europe, to America, China and the Straits, and the good quality adjudged to the grain, has given an importance to the port of Akyab which must render any information regarding its commerce both interesting and valuable to the mercantile community, and it is with a hope of thus benefiting the public, and averting the loss and inconvenience which parties have sustained from want of information, that an old resident has been induced to publish and circulate the following notes, collected from the most authentic sources.

The rice loading season commences after the breaking up of the rains, or south-west monsoon, *i.e.* in all November:—at this time, grain of the last year's crop can be procured, the natives being then able to unhusk

the paddy, and prepare it for shipment, a process which cannot be accomplished during the rains, as it is necessary first to dry it well in the sun. Clean rice is never kept ready, beyond what may be required for local consumption, as it does not keep well in the damp climate of Arracan.—Vessels have occasionally arrived before the above period, without having sent previous orders, and thereby incurred great loss and delay.

The harvest usually commences during the latter end of November, with the Laroong and Longphroo rice, which is nearly all cut and exported by the end of December, or early part of January; the Latooree next ripens; and the harvest terminates in February, with reaping the Nacreensee, which forms the most bulky part of the crop, and is partly held for exportation during and after the south-west monsoon, and before the next crop becomes available.

Ships coming for cargo rice of the season, should not arrive before the end of November, and for cleaned rice, not before the end of December or beginning of January, when the harvest having been partially made, labour can be employed in collecting, husking, and cleaning the grain for shipment.

Should it be an object to make two or more visits to the port during the season, especially for cleaned rice (a cargo, which requires time to prepare, and is not obtainable without previous orders,) funds should be deposited with an Agent to enable him to store, or bag it before the vessel's arrival, and by this means dispatch could be ensured in 8 or 10 days, whereas the usual number of laying days are from 25 to 30, and even 50 for vessels chartered in Europe. The mode of purchasing being upon advances, funds should, if possible, invariably accompany the order at least a month before the ship's arrival.

The best months for loading are February, March, and April.

The season terminates about the middle of May, after which *no large vessel* should remain in harbour, as the south-west monsoon then prevails strong, and they would be exposed to some risk and difficulty, in crossing the bar, where the average depth is $4\frac{1}{2}$ to 5 fathoms at high water, and at that period a heavy sea runs.

Vessels of from 3 to 400 tons can be loaded during the south-west monsoon, that is, between May and October, and proceed to Sea with perfect safety; but in such cases the cargo must be stored in Godowns before the rains set in.

Vessels of more than 500 tons, or drawing more water than specified below, should not be sent to this port.

Vessels of any draught under 21 feet, find no difficulty in sailing in and out during the north-east monsoon.

Akyab is the only port of grain export in Arracan: it has a fine harbour, with good and safe anchorage in $3\frac{1}{2}$ to $5\frac{1}{2}$ fathoms of water: the entrance to the harbour is rather intricate for strangers, but having once entered, a pilot is no longer required, all the dangers being above water, and there being plenty of room to keep clear of them.

The Akyab district is intersected with rivers, and salt water creeks, or natural canals, with water sufficient to admit a vessel of 3 to 400 tons,

proceeding 20 to 25 miles beyond Akyab to load, and in charter-parties of vessels for the Straits, which are loaded in bulk, it is usually stipulated that the vessel proceeds to any place within 25 miles from Akyab. It is customary for vessels of this draft and tonnage to go as near to the loading place as they can with safety.

Generally between 1 and 200 vessels are loading at the same time, but most of them are small craft from the Coromandel coast, where paddy is taken and cleaned, for the Mauritius and Bourbon markets.

The process of cleaning grain in Arracan is very imperfect and unsatisfactory, as it breaks and injures it without cleaning it thoroughly.

The quantity of grain exported during the last 11 years is estimated at nearly 62,000 tons annually, but of this 50,000 tons have been exported during the season it was reaped, and the remaining 12,000 tons early in the following season; this residue is available for shipment in November and December, with the provisions above as to orders and funds, but it is not recommended for the Europe market.

Three distinct kinds of rice are grown in Arracan—Nacrensee, a large, bold, barley grain, rather opaque: Laroong or Longphroo, similar to ditto, but smaller and a shade more transparent: Latooree, a long, thin, fine grain, more transparent than either of the above. On the whole they are larger, softer and more mucilaginous than those of Bengal, and consequently more subject to weevil, yet they are much better adapted for manufacturing purposes, and have been found to keep perfectly well during a voyage to Europe either in the partially cleaned, or, in the uncleaned or cargo state.

The supply of Nacrensee and Laroong is abundant, but that of Latooree is scanty; increased demand, however, is leading to its more extended cultivation, and it is expected that in the course of a few years the present large grain will give place to a finer and more saleable article.

The following quotations may be taken as the average of past seasons, there being the least possible difference between the prices of the three kinds of rice:—Cleaned Rice per 100 baskets 35 Co.'s rs.; cargo rice 25; and paddy 10.

Should the demand be great, these rates may fluctuate as high as 40 Co.'s rs. for cleaned, and 30 Co.'s rs. for uncleaned or cargo rice; but when it is moderate they sometimes fall much lower than the above quotations.

Cargoes must be engaged at the market price of the day upon which the agreement may be made, or order received; it being necessary on the part of the Agent to contract with the Brokers on the same terms.

Bags are procurable here only to a small extent, but no more than may be required for the cargo should be brought, as the demand is limited, and on one or two occasions they have been sold at a sacrifice.

The port charges are $2\frac{1}{2}$ annas per ton, and charges for agency 5 per cent. exclusive of packing and shipping charges, which are 1 anna per bag, and $\frac{1}{2}$ anna for Godown rent when the rice is packed on shore. A gratuity or fee is usually presented to the Port-master should his services be required to pilot the vessel to sea.

Ships in stone ballast are, upon application to the Authorities, sometimes discharged by them, if the stones are fit for public purposes:—but those in sand and mud, must be discharged subject to the orders of the Harbour-master; and, if landed, the boat hire is 20 rs. per 100 tons:—Coal ballast will fetch 8 to 10 rs. per ton for Government stores, according to demand.

Bamboos and mats for dunnage are cheap and abundant, and planks may generally be had for this purpose.

The only Exports, produce of the province besides grain, are, sandoway, tobacco, bees' wax, honey, raw cotton, hides, horns, goor, earth and wood oils, shark fins, fish maws, chillies, ginger, cows, bullocks, and ponies; some of these can be obtained in moderate quantities, but the supply of the rest is trifling, and is secured by the natives for coasting trade. The export next in importance to grain is salt.

N.B.—Fish, meat, bread, vegetables, and other ordinary articles of consumption are generally to be bought in the market, but every other description of store should be fully provided elsewhere, as they are not usually to be had here.

The following average grain export of the district of Akyab for the last 11 years shews the profitable nature of the trade.

Average number of vessels 525—Ditto of tonnage 62,125.

Average quantity of paddy, maunds 11,47,538—value of do Co.'s rs. 4,73,523

“ “ of rice “ “ 5,71,573—value of do “ 4,25,419

Total quantity of grain, maunds, 16,19,111 Total value of grain Co.'s rs. 898,942

The imports are unimportant, there being no market for any quantity of one article. A miscellaneous cargo of a small quantity of the under-mentioned goods would probably find ready sale. Piece goods, book muslins, jaconets; damask, plain, white and figured; long cloth, cotton velvet, ginghams, chintzes; woollens, coarse, red and blue; Turkey red twill, twist or yarn of various colours, coarse glass and crockery ware, brown sugar, sugar candy, sago, cheroots, cocoa-nut and mustard oil, ghee, soap, muskets, iron, nails, pit saws, umbrellas, beetle-nut, and Bengal rum.

N.B.—All printed piece goods should be of the brightest colours. This being a free port, all articles, excepting opium, which is a Government monopoly, are exempt from duty.

Monies.—The currency of Arracan is Company's rupees: sovereigns and bank of Bengal notes are not easily exchanged, nor are bills negotiable to any considerable amount: dollars can always be exchanged at 220 rs. per 100 dollars; and doubloons at 14 Co.'s rs. per tolah weight.

To convert dollars into rupees multiply by 11 and divide by 5.

N.B.—Specie is always required to be laid down for the purchase of cargoes, and the monthly steamer to and from Calcutta and Moulmein, and the regular trading schooners afford abundant opportunity for obtaining it from those places.

A basket of rice, Arracan weight, is 12 seers of 85 tolahs each, or lbs. 26·228; a basket of Paddy ditto, is about 9 seers: a tolah is equivalent in weight to a Company's rupee; 80 ditto ditto, to lbs. 2·057 or

nearly 1 seer ; 82½ lbs. or 40 seers to 1 maund ; 133½ lbs. to 1 picul ; 45 piculs to 1 coyan or 223½ baskets of rice, Penang weight ; 40 do. to 1 do. or 203½ do. do. Singapore weight ; 100 viss to 365 lbs. ; 1 do. to 3½ lbs. or 140 tolahs, or 100 tickals of 252 grains each.

27½ maunds or 85½ baskets of rice to 1 ton.

To convert tons into baskets multiply the former by 427 and divide by 5 :—or to convert baskets into tons multiply the former by 5 and divide by 427.

To convert tons into maunds multiply the former by 109 and divide by 4 :—and the reverse, as above, to convert maunds into tons.

To convert Indian weight into avoirdupois, multiply the weight in seers by 72, and divide by 35, and the result will be the weight in lbs. avoirdupois ; or multiply the weight in maunds by 36, and divide by 49, and the result will be the weight in cwt. avoirdupois.

(Signed) W. F. NUTHALL, *Lieutenant,*
2nd in Command Arracan Battalion.

[The sailing directions for this port will be found in our last year's volume (p. 247), but we learn from the notice accompanying the foregoing, that the lighthouse on Faqueer's Point has been completed, and that Charts of the Coast of Arracan may be obtained on application at the Court House at Akyab at 3 rs. each.—ED.]

VISIT OF H.M.S. SAMARANG TO BORNEO, *in search of the crew of the Premier,—extract of a letter from Capt. Sir E. Belcher, R.N.*

(Concluded from page 131.)

THE more I see of these interesting people throughout Borneo, the more I agree with Brooke,—that, they require but gentle treatment and encouragement from without, to become our most useful commercial allies. Here they would turn the Bugis Malayus out when they please, but the people of Bulungan are not a warlike nation, their town is not stockaded, nor have they anything resembling a battery; their guns, which in these countries are merely reckoned as plate with us, may be brought out on occasions of rejoicing, or perhaps, as in our case, for defence, but otherwise they are hidden in their houses. Their external commerce is so trifling that they are frequently distressed for rice. I found it particularly dear, and only to be purchased from the Bugis traders, trading here from the Coti River and Celebes. I observed that they pronounce Coti as in English Kotai. All the available lands are in cultivation, but the surrounding Sagais probably consume the greater part of the rice produced, either above or below the town. I put the question to my Sagai friend, "How would you have acted had we opened fire?" he replied, "Then, I would have resisted you, now I know you and your power, I perceive it would have been foolish; and now, I know what the English are, none of my people will ever fight against them;" hooking my forefinger firmly in his at the same time, and holding it up to shew the league of friendship. You are not to suppose this passed with a ferocious-looking heavy-built

savage; the reverse, a light but strongly built and beautifully formed man, about 5ft. 7in. rather silent, but with a mild speaking eye; and attaching himself to you more by his quiet modest demeanour and grasp of the hand, than by any words which escaped him. Indeed, we could only converse with him through a Malay, and then again through our own interpreter, yet you could detect his eye following every word and gesture, and even when it came to English, holding his hand up at times to intimate that was not his meaning. His intelligence in explaining with great rapidity by means of bits of grass, the route by which my letter would reach Borneo Proper, up river, over mountains, &c., was highly amusing and enabled me to follow him with my pencil.

On the evening of the second day ten Lascars were sent in, several ill and very weak. It is almost needless to say that they were delighted at the unhoped for release. It grieved me much to learn that they were all in the town and neighbourhood at the time of our arrival, however, I firmly believe, that the sultan was much pleased when he had it in his power to release them. Some difficulties were started about further delay for the remaining two, but on my deciding that "come they must," and that if they detained me, I should demand their fat bullocks and fowls for my men, as well as rice for the Lascars and the people of the prahu, who began to get discontented, they evidently began to be more anxious for my departure. That this was another attempt of the chiefs to detain them I have not the slightest doubt. On the fourth day they were sent in, having been near enough in the first instance to have been delivered over with the others. The old sultan now became very anxious for our departure. I offered him tea, sugar, and other articles from the ship, if he would send one of his people down, but his anxiety that "I should carry off the Lascars, lest, as he said, any of them should escape," (or be stolen perhaps,) overpowered every other feeling.

I took my departure about 3h. P.M. on the 10th of January, and about 11 on the following morning reached the mouth of the Sabanoon, where I remained a few hours to obtain the position, rest the crews, and take in a cargo of oysters, which we found disposed in entire banks placed vertically, the hinge being downward. About 8h. P.M. we reached the *Samarang*.

On the 11th of January we wayed and ran down to the reef near the wreck of the *Premier*. Had she passed a quarter of a mile more northerly she would have fallen into a complete harbour, formed by the coral belt, and would have been safe, even had she grounded. Within these reefs and near to the wreck, I anchored the *Samarang*, and re-victualled our boats for our return to Gunung Taboor, instead of running the ship so far to leeward, and in a less convenient anchorage. We quitted on the morning of the 13th of January by the channel between the reefs, and anchored near the ship's upper anchorage in the Pantai about 10h. P.M., reaching Gunung Taboor the following afternoon. The chart designates the river and outer bay as "Curan". The Curan branch is an inland stream, and does not directly connect with the sea. The main river is the Pantai, about half way up, the Curan flows into it. Near Gunung

Taboor the stream assumes the name of Brraou, (as Brow, one syllable,) and the people are designated as a special race, Orang Brraou, (or Brow people). The sultan is, Si Atap, or Maharajah Dinda. The Rajah Muda (or sultan, who now designates himself thus,) was under this sultan of Gunung Taboor, but having quarrelled about the Europeans, he has been closely shut up in Sambiliong, and probably will be destroyed. I endeavoured to effect a reconciliation, but the sultan of Gunung Taboor would not hear of it. He asserts that the Rajah Muda enticed them over to him under false promises of aiding their escape, that he wrote at the same time to Coti, asking his father what the sultan of Coti wished done with them, and that the arrival of the Dutch vessel, only, saved their lives, that at the first moment after their return from the wreck he offered to send them to Sooloo, but they would not go there, that they treated him very ill, and that, after having presented him with a desk, and other articles, they demanded back everything before the departure of the Dutch vessel; finally, that he has not in any way been recompensed for their subsistence, nor did he ask it. I have his whole statement in Malay, which charges the master with little short of piracy, by denying all knowledge of the Lascars, and desiring him to sell them! of drunkenness, falsehood, and gross language between him and his crew. Much variation and leeway, as may be allowed for Malay versus English &c. I am sorry to say, that on examination of the six Lascars at Manila this leaked out, and both they, and those we have rescued declare that the captain ran away with the boats during the night, leaving them to famish on an uninhabited island. Four unfortunate Lascars trusted their lives on a raft, and were never after heard of: with the rapid tides which set to the south-east they cannot have reached any land, and if they did, they would fall into the hands of the Illanoons, or actual pirates of the coast, which are planted on the sea coast between Coti and the whole range northerly, and westerly up to Tampassook (near Borneo Proper).

The act of the master in setting fire to his vessel is inexcusable. Had he not done this, I might have demanded all the property saved. The sultan tells me that by his treaty with the Dutch he engages to assist all Europeans, that he would willingly have rendered him every assistance, and was still ready to deliver up any article of property which might be in his town; that he placed himself entirely in my hands, that my wishes should be law, and that if I would instruct him how to act in future he would most religiously adhere to it.

In proof of his anxiety to befriend the British, he offers to give them a separate place to live in, to protect them, to give them a preference in trade, and to shew his sincerity has given me a special list of goods which his country affords, and which he can insure as cargo in May next, with a special note under his hand for the completion of his promise. He offers any of the external islands for a settlement, but none are fit for such a purpose, indeed, the coast should not be approached but under the directions which I will send you with our hasty survey. It is, however, sufficiently accurate for the purposes of safe navigation. I have also given his chief captain, who is anxious "to become a great navigator,"

a letter to forward his interests at Singapore, whither he proposed to proceed the next season, and endeavour to induce the Malays of that place to open a direct trade with Gunung Taboor, or Tauna Besar, as they sometimes term it. Our friend Tuan Hadji appears to have a great knowledge of the geography of this part of Borneo. He informs me that immediately behind the Bulungan range there is a lake which connects with the sea by many different rivers; this probably feeds the Sabanoon and Bulungan, which are found fresh nearly at their embouchures. He has furnished me with a brain sketch of all the islands, points, rivers, &c., between the Point Kanivongan of the charts and Bulungan. I send you a copy of it by which you will perceive how little we know of the regions. The Point Kanoongan is Tanjong Manaaliak, Kanivongan Besar (great), and Kichi (little), are islands.

Having obtained a document to the sultan of Sooloo denying in toto having directly or indirectly sold the Lascars, but asserting that he sent them free to Sooloo, to find their way home, we prepared to take our leave of the sultan. Another case offered. A native of Manila had been captured by the Balligninis, sold at Sooloo and escaped hither, he was anxious to return to his friends. The sultan had no objection provided he left something to support his wife and child. The Spaniard offered to transmit ninety dollars so soon as he could earn it. The sultan was satisfied provided I would only tell the governor "that I had heard him promise." This little act, this confidence in what he thought honour would compel the governor to do, made a stronger impression on my mind than could otherwise have been conveyed, of the proper feeling which actuates this young sultan. I think him quite equal to our favourite Buddur-uddeen at Sarawak (now Borneo)

The prime minister is also a very superior man. He does not chew betel; he preserves his teeth a pure white, and his last expressions to me were "I wish to be an Englishman."—"When you come here again bring me English clothes and I will be dressed as one." His son is a very superior young man about 20, very sedate, very stately, at the same time goodnatured, and the handsomest Malay I have seen. All the chiefs of Gunung Taboor eclipse those of Bulungan; indeed I know not of a single friendship formed at the latter place excepting with the sultan. About noon on the 15th we took our departure, some of our party having had tolerable amusement with snipe shooting.

On the 19th we regained the ship, and on the following morning beat out of our "Reefnook". Owing to the description of the island of Maratua by Tuan Hadji, I determined on making an examination of it before quitting the coast, and therefore steered for it. The strong southerly currents pressed us so fast to leeward that we could not weather, and during the whole succeeding day could not hold our own. On the 22nd we succeeded in weathering and ran down its eastern side, but no opening in the reef warranted pushing the ship in, although I knew that there was sufficient water within. Illness had also deprived me of power to stand further fatigue. I therefore retired to my cot directing the boats to be hoisted in, and a course shaped to sea.

It was not till the 26th that we got to windward of the island of Maratua, and we succeeded in getting out of this dangerous current, which held us embayed with reefs under our lee as far as could be seen to the eastward from our masthead. This it was which induced me to caution approaching the Pantai by the outside passage. The safest course is on the west sides of Maratua and Kakaban, and rounding Sangalaki on the east or west, haul up west until the mouth of the Pantai bears W.N.W., when you may steer directly for it *on that course*. The *Samarang* draws 16 feet, and nothing brought her up on that line, going in or coming out. The bottom is oozy (creamy mud). No vessel should attempt to enter the shallows until daylight, and if caught to the southward of Sangalaki or Samasama after sunset should drop the keedge the moment she gets soundings (of 20 fathoms) until daylight, as there are reefs lying off the southern edges of all the islands, which a morning sun would clearly shew.

Our water having run short reduced us to two quarts, and rendered it imperative that we should seek it on the coast. Maratua and Derawan had been pointed out as islands on which it could be procured, but the currents, calms, and dangers rendered this hazardous. I therefore pushed in for the coast to the southward of Si Ameel, and very fortunately found myself on the morning of the 29th January embayed by northern reefs. I say fortunately, because, although the ship touched and sailed quietly over them, it eventually induced me to stand deeper in, and succeed in my object. About 8h. A.M., we again found ourselves in 10 fathoms, clear bottom, and drifting into less water, the wind having entirely failed. I anchored and despatched two boats towards the shore for information from a prahu noticed at anchor, as well as to search for water on the coast. About noon the first cutter under Lieut. Robertson, came up with the prahu, and asked him to send a person to show where fresh water could be procured as well as to pilot the ship in. Thinking our boat too weak to resent insult they pointed their brass gun, put themselves on the offensive, and whirling the lighted match over the touch-hole, were calling out "Do not fear them, Fire." The Malay interpreter who was with Lieut. Robertson told them "they were friends just come from Bulungan, and not to be afraid, that he would not harm them, and all he asked for was information." With Malays, passive measures in these cases are interpreted as weakness, and the brass gun having been shifted over to bear on the cutter, and the match near the touch-hole, Lieut. Robertson desired his men to lay in their oars and fire their muskets. The brass gun the Malays fired thrice without effect, but the musketry of our boats taught them their weakness. They fled to the reef and hid themselves in the jungle. Lieut. Robertson being unable to bring her out, burned her. From her equipment, she was evidently an Illanoon, and from information from later sources we learned that she must have belonged to the pirates' den at Tooncoo, about thirty miles to the northward. One very peculiar feature, which those who know the equipment of these vessels enquired after was, "Had they two pronged grains like those used for fish, but with greater spread?" "Yes."

“Then they are Illanoons, and those pronged weapons are for *fishing men*.” It appears they throw them with almost unerring aim, taking their victim by the neck, jerking it short back hook him with the barbs. On the return of our boats learning that water could be had although in very small quantity, and that the least water over the bar was $3\frac{1}{2}$ fathoms I decided on taking the ship in, and before sunset we were secured in a very spacious anchorage having a clear mud and sand bottom for a very considerable distance, with even soundings varying from 10 to 12 fathoms, and with our customary good fortune found close to our anchorage a fair spring of water which enabled us to complete in forty-eight hours. During our stay the boats were employed seeking for a fair channel to the northward as well as completing a partial survey of our anchorage. Unfortunately I thought myself sufficiently recovered to take part, was poisoned by some oysters which I ate, and again reduced to a very low ebb in my cot.

On the 2nd of February I made another rash attempt to secure the observations, succeeded, and put to sea; our reef-locked position compelling us to run nearly ten miles to the southward to clear one of the islands. Just before quitting, our Sooloo prahu rejoined, the crew much worn down, and rejoiced at recovering us. I immediately hoisted her up astern, and got her people on board. They were of much use to us by aiding us in the pilotage, but I had now become too weak and nervous to keep the deck, and therefore resolved to try the offing for stronger winds to enable me to reach Sooloo.

On the 5th of February, we had only succeeded in getting two miles to the northward of our land position of the 2nd; but as we made easting we found the strong southerly currents decrease, and eventually turn favorable, enabling us to reach Li-misa on the eastern side of Sooloo on the morning of the 8th. Hitherto we had experienced strong northerly currents between the islands, attended with over-falls. On the night of the 8th we were forced by equally strong southerly currents on the shores of Li-misa, and compelled to anchor in 10 fathoms, current three knots, even in this inshore position. Near midnight we wayed to prevent the opposite tide from forcing us on a spit projecting south-west, and succeeded in getting over to the Sooloo shore.

At dawn on the 9th we found the northerly current assist us again, and on passing Bee-tee-nan (Bi-ti-nan), although we were going $8\frac{1}{2}$, it entirely destroyed our steerage, wetting the master on the bowsprit end. Immediately after rounding the island it became instantly smooth, and we shaped our course for Sooloo, and although the wind gradually died away, succeeded in reaching our anchorage by three o'clock. On the 28th we succeeded in reaching Mindanao, and with light airs beat up its western side.

On the 8th we stood off towards the Cagayanes, and as no satisfactory account exists in Horsburgh I determined on sacrificing six hours to afford surer sailing directions than are to be found in that work. The tracing of the day's work I send you; by it we discover three islands not placed on the charts, and visible at the northern extremity of the group;

there are probably many others to the southward. Shoal water appeared to extend five and six miles westerly, encircling the two new islets, but I have strong grounds for suspecting that a deep water channel from the westward, would admit *Samarang* into the very picturesque sound formed by the two greater islands. There is also anchorage on the eastern side, but very close to the rocks, the bottom fine sand, with occasional rocks. The Spaniards have a fort on the greater island on its Eastern Bay, as well as a pretty large village. I had not time to visit it, but some of the authorities deputed to make enquiries about us, assured me that everything I asked for (vegetables, stock, &c.) could be procured at the Pueblo, and from the general tenor of the enquiries, I suspect that whalers occasionally obtain refreshments there. The bays or creeks in the interior of the Sound are very picturesque, very retired, and at their mouths have not less than $3\frac{1}{2}$ to 4 fathoms. The houses viewed from the boat were not neat nor cleanly in appearance, but the race which communicated with us (Bisayans) were a clean-limbed light coloured and vigorous people, very respectful, and inheriting a great deal of the *old* Spanish courtesy; taught it possibly, perforce, by their spiritual instructor. From my brief survey I should advise vessels not to near these islands on the west closer than six miles. On the east, they may approach the coast or fort within one mile; the reef-line by day always affording sufficient warning. The eastern island appears to be very narrow, and does not contain much surface for agricultural purposes. The rocks which prevail to a very unpleasant degree, are water-worn, coralline, very sonorous, and presenting infinite sharp points, (similar to Bermuda coast line,) which defy the naked foot; still they have formed many snug little gardens in the cleared village, where the cocoa-nut and plantains appeared to thrive. The greater island which is elevated about 60 or 80 feet above the sea, exhibits greater spaces of cleared land, the vegetation apparently luxuriant. A reef extends northerly, in patches, about thirty miles. My observing position is in lat. $9^{\circ} 35' 30''$ N. long. $121^{\circ} 15' 55''$ E., variation $8^{\circ} 44' 28''$ E.

Vide Horsburgh 573. How did he ascertain the depth *within* at six leagues distance? The interior soundings are from 15 to 4 at the coast line.

I had intended working along the "Antique coast," as it is termed, (or western side of Panay,) and passing to the eastward of Semirara and Mindoro, take that course for Manila, but the breeze leading me off shore I determined running for the Camden shoal, and fixing it before reaching in for Panay. Our reckoning shewed the three islets, Maralison, Balbatan, and Napula, to be much more easterly than placed in the chart, and on sighting Quiniluban I observed that the second island in sight (S.W. when Quiniluban bore W.b.S.) was not on the Admiralty chart; but having a private set of Spanish charts I notice they are nearer the truth on them, although I doubt all. So much for want of provisions, and want of a tender. Being tied to time I could not rectify any of these errors, as the breeze becoming favorable compelled me to make the most of it, calms having already sadly retarded us. Before eight

the *Samarang* was shortening her distance at the rate of ten knots, and before midnight was well up with the Apo shoals, having given up my easterly course round Mindoro.

On the 9th we passed the Apo shoals, off which we buried one of our lads, who died suddenly from worms, only three days on the list. On the night of the 10th we lost a jib-boom, and in twelve hours after a second, almost without warning, and the same evening reached Manila.

THE ROYAL AND MERCANTILE NAVIES.

“Now sit we close about this taper here,
And call in question our necessities.”

OUR recollections of the stirring scenes and events of the last war, are not the less vivid from the intervention of thirty-four years of peace: the impression made upon the mind was too deeply imprinted to be erased even by the softening effect of a long period of repose. These events were progressive,—‘grew with our growth, and strengthened with our strength’,—as it were, blending their influences with our very nature.

That being admitted, would the old officers of the royal navy, and those of the mercantile marine, who still survive,—would they wish in the event of a war, to see the same routine of violence on the one part and endeavours at evasion, on the other, which made the merchant navy at the commencement of the last, an indispensable appendage to the royal navy, enacted over again? “we opine not.”

But, it may be said that that is raising an argument from the abstract point of a supply of seamen to the royal navy through the merchant service, upon the presumption that things will fall back into their old course when another war comes, whilst circumstances are materially changed.

Unless we establish a project to obviate it, must it not be so? Is there one formed?

A scheme for manning the navy constitutionally, appeared in the *Nautical Magazine**. What opinion the authorities may have formed of it, I do not know; but to my knowledge it has been highly commended by an experienced and clever naval officer of forty years’ actual service in both the royal and mercantile navy, and whose opinion is, therefore, valuable.

Unless therefore, some efficient plan, of the same tendency as the one,

* Volume for the eventful year of 1848.

alluded to, and which shall admit a reciprocal exchange of servitude without violence, be adopted, the same delays, as were formerly experienced, in manning our ships of war, must of necessity occur again, and as great an evil as could afflict any class of men, must come with those delays :—impressment with all its unconstitutional harshness.

Have we forgotten its working and its effects ? So terrible a necessity should have appeared only in the feudal ages. But, if our legislators, or rather statesmen of old

“ Bequeathed it, as a rich legacy,
Unto their issue.”

with a doubtful title of their right to do so—calling it, in lieu of more definite terms, a “ *consuetudo regni*”, are we,—their posterity, to perpetuate it who cherish justice, and are so nice about the “liberty of the subject”?

If something like reproach rests upon the memory of the responsible men of the gone-by day for their supine preference of a barbarous custom, to a better and more constitutional mode of manning the fleet, may we not be sure that, from the spirit of the present times, the evil will be remedied ? Let us not be ‘to dumb forgetfulness a prey’. To resolve and to act from impulse at a moment’s warning is surely not wise : it is thought, *deep and mature thought* that public men* stand most in need of. The experience of the past, like a step-mother, may prove a good guide in the present. Hence our reflection should embrace the retrospective as well as the prospective.

What were the effects of impressment ? Thousands of our best seamen deserted,—country, friends, parents, wives, and children ! For, so appalling was the exercising of that power over the free, and otherwise fearless heart of the seaman, that, all those endearing ties were sacrificed to escape from its presence.

The numbers remaining were insufficient to meet the increasing and incessant demands of the fleet: they were unequal to fully man the ships, and very partially those belonging to the merchants ; there was scarcely a vessel that was not short-handed ; and in addition to that necessity which, from a want of forethought, or from indifference, had become absolute, another with even less of common justice in it, arose :—that of seizing natives of other countries, even those of the South Sea Islands, and compelling them to serve, very many of them, nearly the whole of the war.

But the thousands thus obtained were not taken alone from British merchantmen or from the British shore.

Was not the royal navy the ægis, the shield in the war, to its appendage ? True. But a wilful State necessity imposed a most onerous duty upon it, and forced it to prove itself a very harsh guardian indeed during its whole continuance. The merchant ship was navigated by a motley crew, among which were foreigners of all shades—the captain, mate,

* They being, of course, competent in other respects.

and apprentices being alone protected; very few English seamen, during the heat of the war, were to be found on board, and what few were shipped, were old men, or deserters from the men-of-war. As an appendage, its grand resource failed, so that, in truth, after a while, it was so but negatively; for unless it could have supplied the pressing want of the royal navy continuously, it was not so practically. The cotter having a cow which became barren, and ceased to give milk, though intrinsically valuable, it could scarcely be called an appendage to his dairy; at all events not a profitable one. However, I am not objecting to the use of the term; for it is perfectly correct (though perhaps, it should be taken in a qualified sense) whilst we have no established scheme for manning the navy except by the system of impressment.

The usefulness of the mercantile marine, after the first portion of a war has passed, in the supply of seamen is scarcely appreciable, depending chiefly on the discharge of apprentices from the obligation which bound them by indenture, and which during their probationary servitude was their protection. The object of this paper, is however, to show that, unless a plan for the interchange of servitude from one navy to the other be adopted, all the "horrors" of compulsory or forced labour on the "free-born" British subject must recur again;—and that is, indisputably, so monstrous an evil that, I am sure an excuse (if one be needed) will be readily granted me for writing so fully on the subject.

It appears even in peace that, the navy receives no more than about one-third of its seamen from the merchant service, whilst, be it remembered, it is now bringing up its own seamen systematically, in great numbers: two streams, from different sources, will augment the supply of water! but the increase of seamen will not be the only advantage gained by this wise measure. It will have the important effect of *attaching* the men to the royal service as a preference: it will give a better educated, a better trained class to the one, and probably to the other navy; and, if they increase, that is, if the plan be continued, their presence among those who have not had the same advantages may be expected to have a moral effect on the conduct of the latter.

How far "Free-trade", if established, would affect both services, I pretend not to offer an opinion. The problem, it appears to me, must be decided, *pro* or *con*, by figures; the demonstration can alone be made plain through calculation;—the chain of argument from facts serves only as collateral evidence. Hypothetically, if by it, our merchants augment their traffic,—the revenue increases as a consequence, it cannot injure the royal navy, because the interests of seamen would be advanced. On the other hand: should the merchants be unable to compete successfully with foreigners, the marine would probably decline, and if to any amount, that would be detrimental to the royal navy. From what I can learn there is a growing dislike among lads to be bound as apprentice to the merchant; they prefer being free to change masters; but, should the clause be abrogated, the owners of ships should be compelled by law to employ the same number of boys, as at present, without indenture.

It would appear a remarkable fact, did we not know that any thing

which is not very clearly understood often creates opposite opinions, and according to the force of prejudice or bias, rises up strong oppositionists as well as strenuous advocates—that, after *centuries of practical results*, politicians differ on the subject of “protection.”

I may now close, by adding, that whether restrictive duties shall be retained, or free-trade established, a scheme for a general routine of servitude is a *desideratum*,—for indeed, if we do not feel careless of getting into a dilemma at the opening of a new war, no time should be lost, whilst peace remains, to perfect one that shall ensure voluntary servitude in all parts of the world to the royal navy.

A SEAMAN.

ODD FISH.

[The fact of an “Odd Fish” (perhaps our old friend the Sea Serpent) having been reported within this last month, by Commander Nolloth, to have been seen by him off the Coast of Portugal, has induced us to present the following to our readers.—ED. *N.M.*]

“Who first taught the waters to imitate the creatures on land, so that the sea is the stable of horse-fishes, the stall of kine-fishes, the sty of hog-fishes, the kennel of dog-fishes, and in all things the sea the ape of the land.”

The Good Sea Captain.—Fuller's Holy State.

MR. EDITOR.—Since public curiosity has again been awakened on the subject of the Sea Serpent, it may interest many of your readers to peruse the following papers, printed in the *Journal of the Asiatic Society of Bengal* for 1835, being a scientific journal to which very few have access in England. I add to them also one or two notices from Kotzebue's “Voyage of the *Rurick*,” bearing on this curious question of the existence of great, and as yet unknown fish, in the hope that some of our brother sailors, including in this term the doctors and marine officers, if you please, as not less zealous, I am sure, where questions of Natural History and from them the history of our planet are to be elucidated, may by having their attention directed to the subject, be enabled to procure some relics of some of these monsters for our Museum, or even harpoon a living one.

[From the *Journal of the Asiatic Society of Bengal*, Vol. IV.]

An unusual Sea Monster in the Bay of Bengal, No. I.

[Extract of a letter from Lieut. W. Foley, B.N.I., Nov. 25th, 1834.]

On my voyage to Madras (in May last,) I saw a most extraordinary fish, and which had never before been seen by any seaman on board, although some of the officers and crew had been employed in the whale fishery. It was of the size of a whale, but differing from that animal

in shape, spotted like a leopard, in a very beautiful manner : it came close under the stern of the ship, during a calm, and we had a magnificent opportunity for viewing it. It had a very large dorsal fin which it moved about with great rapidity, when made angry, in consequence of the large stones that we threw down upon it rashly ; for it possessed sufficient strength to have broken the rudder and stove in the stern of the ship. Several large fish (seemingly dog-fish,) about a cubit in length and upwards, were gambolling about the monster, entering its mouth at pleasure and returning to the water again. The following will give you some idea of its shape. The mouth very large, dorsal fin black or dark brown, tail also ; body covered with brown spots like a leopard, head lizard-shaped. May it not be the Plesiosaurus, or a species of that fish known to have existed formerly in the waters of the ocean ? Having given you this statement, it is proper that I should give you the names of those who were also eye-witnesses of the existence of this extraordinary animal. They are as follows :—1. Captain Tingate, at that time commanding the ship *Cashmere*, merchant, now commanding the *Competitor*. 2. Mr Smellie, Mr. Pike, and Mr. Landers, officers of the vessel.

The above gentlemen will corroborate my statement : Capt. Tingate and Mr. Smellie were old sailors, and had never before seen the fish, or one resembling it. There were also several European seamen on board, not one of whom had ever seen it before.

[All we can venture to say on this authentic account is, that the monster described is not a Plesiosaurus as Lieut. Foley suggests, as that reptile has no "dorsal fin." What it may be, we must leave others more competent to decide ; but the unusual nature of the notice should by no means prevent the insertion of a description supported by such unequivocal evidence.—*Ed. Jour. Asiat. Soc.*]

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Notice of an extraordinary fish: by H. Piddington, Esq., No. II.

Mr. Editor.—The following notices of a new and monstrous fish may probably be worth recording in the journal. They do not altogether agree with those of the fish described in your January number by Lieut. Foley, but there may be more than one species of these monsters.

In December 1816 I commanded a small Spanish brig, and was lying at anchor in the bay of Mariveles, at the entrance of the bay of Manila. One day, about noon, hearing a confusion upon deck, I ran up, and looking over the side, thought from what I saw, that the vessel had parted, and was drifting over a bank of white sand or coral with large black spots. I called out to let go another anchor ! but my people, Manila men, all said, " No, sir ! its only the chacon !" and upon running up the rigging, I saw indeed that I had mistaken the motion of the spotted back of an enormous fish passing under the vessel, for the vessel itself driving over a bank ! My boatswain (*contra-maestre*), a Cadiz man, with great foolhardiness jumped into the boat with four men, and actually succeeded in harpooning the fish ! with the common dolphin harpoon ;

or grains as they are usually called, to which he had made fast the deep-sea-line, but they were towed at such a fearful rate out to sea, that they were glad to cut from it immediately.

From the view I had of the fish, and the time it took to pass slowly under the vessel, I should not suppose it less than 70 or 80 feet in length. Its breadth was very great in proportion : perhaps not less than 30 feet. The back so spotted, that, had it been at rest, it must have been taken for a coral shoal, the appearance of which is familiar to seamen. I did not distinguish the head or fins well, from being rather short sighted, and there being some confusion on board.

As my people seemed to look upon the "the chacon", as they called it, almost in the light of an old acquaintance, which indeed it was to many of them who had served in the Spanish gun-boat service, I made many enquiries of them, of which the following is the result.

1. That there were formerly two of these monsters, and that they lived (*tenian su casa*) in a cluster of rocks, called Los Puercos, at the south-west entrance of the bay of Mariveles ; but that about ten or fifteen years before this time, or say in 1800, one was driven on shore, and died close to the village in the bay ; the inhabitants of which were compelled by the stench to abandon their houses for a time.

2. That the remaining one frequented the bay of Mariveles and that of Manila, and it was supposed, that it often attacked and destroyed small fishing boats, which never appeared after going out to fish, though no bad weather had occurred. This last account I afterwards found singularly corroborated.

3. That it was considered as dangerous by the Spanish gun-boats, that they always when there kept a swivel loaded, the report of which they said, drove it away. My principal informant was a man employed as a pilot for the ports in the Phillippine Islands, whither I was bound, who had passed his whole life in the gun-boats. He said that one instance of its voracity occurred when he was present. A man, who was pushed overboard in the hurry to look at the monster, being instantly swallowed by it.

4. The native fishermen of the bay of Manila quite corroborate this account, and speak of the monster with great terror.

About 1820 or 1821, an American ship's boat, with an officer and few men, was proceeding from Manila to Cavite ; but, meeting with a severe squall and thick weather, they were driven nearly into the middle of the bay. They were pulling in what they thought the best direction, when on a sudden the sailors all dropped their oars ! The mate, who was steering, looking astern of the boat, saw the open jaws of a huge fish almost over him ! Having nothing at hand he threw the boat's tiller into the mouth of the fish ; shouting as loud as possible, when, the jaws closing with a tremendous crash, the whole fish, which they described to be more like a spotted whale than anything else, dived beneath the boat, and was seen no more. I do not now recollect the names of the ship, or of the captain, but I thought the circumstance of the *spotted* appearance a remarkable proof that the story was not an in-

vention. "We do not like to tell it," said the American captain, "for fear of being laughed at; but, my officer is quite trust-worthy, and we have learnt from the fishermen too, that there is some strange species of large fish highly dangerous to their boats."

Like the American officer, I fear almost being laughed at, were it not that, could we collect more facts relative to these strange monsters, they might perhaps at least explain some of the "coral spots," so often mentioned in our charts*, independent of its being a matter of great interest to the naturalist. I therefore add here a vague notice of monstrous spotted fish, which are known in the Moluccas.

These are called by the fishermen of Ternate, Celebes, &c., a "Ikan-bintang", (or Star-fish,) from the bright light which they occasion, and by which they are recognised at great depths at night, in calm weather. The Malay fishermen describe them too as spotted, as large as a whale, and highly destructive of their nets; which they instantly take up when they see the fish, if they can get time to do so; for it is known to destroy boats, and whole lines of nets and fishing stakes, if it once becomes entangled amongst them, to the ruin of the poor fishermen. I had the same account corroborated at the Sooloo Islands, both by Malay, and by Chinese fishermen; as also at Zebu, in the Phillipine Islands.

At Sooloo I was shewn large quantities of the skin of a spotted fish, cut into pieces and dried, for sale to the Chinese junks, which my people said was the skins of young chacons; "*Pero no son estos como nuestro chacon de allâ, señor.*" "But these are not like our chacon yonder, sir," was always added. This skin I should have called that of a spotted shark†; the tubercles were excessively coarse and rough.

It seems thus certain, that some immense spotted fish, of highly destructive propensities, resembling in this respect the gigantic shark of the West Indies, (which is often known to attack and devour the negroes in their canoes, and recently even a man and boat in Boston bay‡,) exists in the seas of the Eastern Archipelago. It is difficult to say, whether the one seen by Lieut. Foley was an individual of the same species or not. As already stated, I was unable to see mine with sufficient distinctness, to ascertain anything beyond its enormous size, great breadth, and spotted appearance. I add such conjectures as my limited knowledge and confined means of reference have enabled me to collect: I offer them only as conjectures.

We look naturally, from the voracious habits of these monsters, amongst the rays or sharks, (*squalus* and *raja*.) for something to throw light upon what they may be, and it appears that, though these two genera have been classed by Broussornet, Bloch, and Lacepede, there is

* Horsburgh alludes to shoals of Devil-fish (*Lophius*) being perhaps mistaken for shoals.

† The tiger shark seems to be rather a striped than a spotted shark.

‡ That some of them are sufficiently formidable, we have lately had evidence. In Boston bay, a man was recently attacked in his boat, and devoured by one of these animals.—*Ency. Americana*, Art. Shark, 1832.

still much uncertainty existing as to some of the known species of which, may be placed indifferently in either genus, for the distinctive characters, of the rays are derived from the flatness of their bodies, and those which are least flattened; and the squalæ, which are so in some degree, approach much to each other.”—Bosc (in *Nouveau Dict. Hist. Nat.* art. Squalæ.) As to their size, the largest individual which has been subjected to trustworthy measurement, seems to be that mentioned by Lacepede; a *squalus maximus*, driven on shore near St. Malo, which was 32 feet long, and 24 feet in circumference; but this is far surpassed by the size of those of which, in Europe at least, only the fossil remains are found. Bosc, speaking of the Squalé Roussette, *Squalus catulus et canicula*—Linn., says of the fossil teeth, “There is in the Museum of Natural History at Paris, a tooth, an inch and ten lines long, and two inches nine lines broad; which according to a very moderate calculation (by Lacepede, must have belonged to an individual 50 feet in length! Art. Squalé,) and in another place he says (Art. Reguin):—

“The length of the front teeth of a shark 33 feet long is about two inches, and their breadth at the base two inches and a half; but there is shown at the Museum of Natural History at Paris, a petrified shark’s tooth, found at Dax, near the Pyrenees, which is, also, exclusive of the root, nearly four inches long. The animal to which it belonged must then have been more than 60 feet in length! (Lacepede from an unquestionable calculation, estimates it at 71 feet; and that, the jaws were nine feet in diameter!)”

The authority of Lacepede is so high, that we may fairly conjecture the question of size to be so far set at rest, that Lieut. Foley and myself will be acquitted of any exaggeration; and the fact of their swallowing boat and fishermen too, is farther confirmed by Bloch (a good authority,) who says, speaking of the preference given by the sharks to putrid flesh, that “the Greenlanders, who frequent a sea abounding in sharks, in little canoes made of the skin of this fish, are careful to make as little noise as possible, to avoid the chance of being swallowed together with their boat by these monsters.” Its colour is the next remarkable circumstance, and it is worth noticing, that in this all parties agree. The dorsal fin mentioned by Lieut. Foley and the lizard-like head I am unable to speak to. It is quite possible, however, that there may be a genus of these monsters which have the head far less flattened than in general. *Raja rhinobatus*, which seems to connect the two genera has the snout lengthened.

I suspect the name *chacón* to be a West Indian (Carib or African,) one for a shark. I do not find it in any Spanish Dictionary, and I am not aware that it is derived from any of the dialects of the Phillipine Islands. We may hope that ere long some of our whalers may meet with one of these monsters, and thus enable naturalists to form some judgment of what they are. It would be a highly interesting circumstance could we procure some of the teeth, and these should be found to correspond with those at Paris. Perhaps, some of your Singapore

readers may be enabled to furnish us with more information from the Malay fishermen, if the *Ikan-bintang* is known in those seas.

I had just finished this paper, when I received from my friend, Dr. Harlan, of Philadelphia, the first number of the *Transactions of the Geological Society of Pennsylvania*, in which is a most interesting "Critical notice of various organic remains discovered in North America, by Dr. Harlan"; at p. 89, is the following:—

"The bones of one species of shark, upwards of 40 feet in length, allied to the *Carcharias*, have occasionally been found in several localities. In Cuvier's 'Theory of the Earth,' by S. L. Mitchell, p. 400, it is stated, 'The skeleton of a huge animal was found on the bank of the Meherria river, near Murfreesborough, N.E. It was dug out of a hill distant sixty miles from the ocean. Captain Neville and Dr. Fowler, who visited the spot, gathered the scattered vertebræ, and laid them in a row 36 feet in length. If to this the head and tail be added, the animal must have been 50 feet or more in length, and we have recognised them as the remains of a gigantic species of shark.'

He refers to other specimens, indicating sharks of 40 feet or more in length; but this will, I doubt not, be sufficient to shew that it is quite probable the fish seen by Lieut. Foley, and the *chacon* of the bay of Manila may be individuals of the same family as those only known to us as yet by their fossil remains.

In Kotzebue's Voyage, Vol. II. p. 183, is the following passage describing a Whale (!) with enormous rows of teeth.—No. II.

The Aleutians count seven species of whales, of which the most are probably unknown in Natural History. One of these species is a rapacious animal, which is well known not to be the case with other whales, as they have no teeth, and only live on small fishes. This animal of the size of the largest whale, is furnished with dreadful jaws, full of large teeth. It devours everything it can catch, and often pursues the Aleutians, whose little baydares, if it is able to overtake them, it upsets with one blow of its tail. It is said that a baydare, with twenty-four oars, and thirty men, was lately destroyed by the blow of such a monster near Oonalashka.

The Russians and Aleutians relate that, if a piece of the blubber of this animal is swallowed, it has the property of immediately passing through the body undigested.

M. Krinkof's description of a sea-animal which pursued him at Beerings Island, where he had gone for the purpose of hunting, is very remarkable. Several Aleutians affirm they have often seen this animal. It is of the shape of the sea-serpent, and is immensely long; the head resembles that of a sea-lion, and two disproportionately large eyes give it a frightful appearance. "It was very fortunate for us," said Krinkof, "that we were so near land, or else the monster would have swallowed us. It stretched out its head far above the water, looked about for prey, and

vanished. The head soon appeared again, and that considerably nearer; we rowed with all our might, and were very happy to have reached the shore before the serpent. The sea-lions were so terrified at the sight, that some rushed into the water, and others hid themselves on the shore." The sea often throws up pieces of flesh, which according to their opinion is that of the serpent, which no animal, not even the raven will touch. Some Aleutians, who had once tasted some of it suddenly died. If a sea serpent really has been seen on the coast of North America, it may have been one of this frightful species.

The Aleutians also tell stories of a gigantic polypus. It has happened that a polypus has thrown its long arms, which are twice as thick as a strong man's arm, round the baydare of an Aleutian, and would have carried it into the abyss if the Aleutian had not had the presence of mind to cut through with his knife the fleshy arm of the polypus, which was furnished with large suckers. The polypus remains with the body fast at the bottom of the sea, and generally chooses a place from which it can reach the surface with its arms. The last accident happened in the passage which is formed by the southern point of the island of Oomnack, and the little island lying near it. No ship can venture in on account of the shoal.

In a subsequent part of the work, p. 207, when in sight of Oldia, one of the Radack islands, he says :

"While our situation was the most dangerous, a whale sported round our ship, which seemed to wait for our near destruction with impatience. It was one of those rapacious animals with their enormous jaws and teeth, which the Aleutians call *Planen*. How this fish, which is generally found in the North had come so near the equator, I cannot conceive."

Kotzebue's mention of the monster cuttle-fish, will of course, remind your readers of the plate from Deny's de Montfort in the volume of the Naturalist's library on Marine Amphibia, said to be a copy from a votive picture in a church in some port on the coast of France, representing a Chinese junk with a European crew said to have been attacked by one on the coast of *Angola!*

We have thus good evidence to show that there certainly exist huge fish belonging to three separate families of that division of the animal kingdom. The sea serpent, which we may, perhaps, set down as a great conger eel, if not a true snake, the Indian and Aleutian whale-like monsters, which may be sharks, or rays, or devil-fish, if these last are predatory; and a cuttle-fish large enough to attack a small vessel or boat. As it is not altogether improbable that some of their skeletons might be met with on remote and desert islands, or on reefs, sandy beaches, &c., where many seamen have seen those of whales, large turtle, &c. It may be as well to mention here, that they should always, unless *perfectly* well assured to what fish such remains really belong, endeavour to bring off as many of the vertebræ, jaw, and palate bones, teeth, ribs, fins, or paddles, or horny beaks, &c., as possible, and to measure as nearly as they can (with an oar or boat-hook, if there is no line at hand,) the

length and breadth of the skeleton as it lies on the beach*; and they should by no means be too confident in their own knowledge of the kind of skeleton which they may find, since for instance the vertebræ of some families closely resembles those of other tribes, and thus by any but good anatomists may be mistaken one for the other. If there is time and room on board, a few bones may easily be brought home for examination, and if the skeleton be a rare one some of H.M. ships can call at the spot to bring away the whole. If bound to India the Museum of the Asiatic Society of Bengal will also afford every information and assistance.

H. P.

Calcutta, January 1st, 1849.

PACKET PORTS,—*Boulogne and Calais.*

POSTAL communication is one of those important features in civilized communities, that has long been the object of the government in this country to accelerate by every available means. We all know how essentially the establishment of railways has done this. Mails are delivered twice a day where they were previously known but once, and have reached places in which they were unknown before. Previous to the establishment of railways it might have been doubted whether the carriage by land or by water was most rapid under circumstances favourable to the latter, and unfavourable to the former; but of the certainty of the former, and the uncertainty of the latter there never was any doubt; and the great superiority of railway carriage over that by water no one in his senses for a moment thinks of doubting.

Calais and Boulogne have long been rival ports for the mail communication with this country, and the latter has enjoyed a preference over the former, as the packet port, to which, however it might have been entitled in former years, it can no longer have any pretensions. The great improvements which have been made in Calais harbour of late years, besides other advantages of situation that it always had with respect to its sheltered roadstead, and its shorter distance from Dover, are so considerable, in comparison with the disadvantages which must ever attend Boulogne from the exposed nature of its position, that to allow the latter to remain as a packet port would be quite unaccountable.

The coast of France about Boulogne is exposed to the whole force of the Atlantic sea, and with strong westerly winds the port is inaccessible even at tide time. At low water in bad weather the communication by boats even by daylight is difficult, and often impossible, while at the same time vessels cannot anchor off the coast, and it is very dangerous to lay off and on. It is very well known that the westerly winds prevail fully nine months in the year, and the Atlantic swell may be said to roll in for ten months from the same quarter.

* Or even if imbedded in the cliffs or sandstone or coral rock of the shore or reef.

The singularly unfortunate position of Boulogne renders the difficulties incidental to all artificial harbours with a narrow entrance, still greater there, for the tide rushes past the entrance at right angles to it, while an eddy in the opposite direction equally as strong is felt immediately within the pier, so that skill becomes necessary to point a vessel for the entrance, even in moderate weather; and in strong westerly winds it is a service of great risk and danger, as the slightest delay in the ship answering her helm must inevitably cause her wreck. This, indeed, is a casualty not improbable, as the sea may, and often does, lift the rudder out of the water at the instant that the eddy tide catches the bow, and broaches the packet to the west pier,—an instance of this occurred recently to the *Vivid*. Her extraordinary escape from her perilous position was perfectly miraculous.

The direction of the prevailing winds renders the passage to Boulogne mostly head to wind, and, therefore, a severe trial in the rough winter gales.

The danger of collision by meeting homeward-bound vessels in the dark is obvious, and in such cases escape would be almost impossible, as the packets even against a strong wind go ten and twelve knots, and a heavy merchant ship scudding at the rate of eight knots,—no look-out can be surety against accidents by collision.

The return passage from Boulogne is not so objectionable as the outer, but it has no advantage over that from Calais.

The coast of Calais is sheltered from those very prevailing winds which render that of Boulogne so dangerous; the harbour is very much better, accessible nearly at all times of tide, and when not so the communication by boat is comparatively easy, the roadstead being as good as the Downs, on those occasions of westerly winds when it is impossible to anchor off Boulogne; or lay off and on the port. During N.E. winds when Calais becomes exposed, the intercourse is by no means so difficult, as at Boulogne during the prevailing westerly gales.

The route to Calais with westerly winds is made with a fair wind, and with far less danger of encountering running ships, and presents greater facilities for avoiding them, when they occur.

The average passage from Dover to Boulogne is about two hours and a quarter, that to Calais about one hour and forty minutes: the time for landing the mail, &c. may be considered twenty-five minutes in favor of Calais; therefore, we may allow one hour less for the transit of the mail from the post-office at Dover to that of Calais, than that from Dover to Boulogne.

We will place here in comparative position the pretensions of these two places as Packet ports.

Boulogne.

1. The prevailing S.W. winds (nine months of the year,) make the coast of Boulogne a lee shore, and throw a heavy dangerous sea on it.

NO. 4.—VOL. XVIII.

Calais.

1. Calais is sheltered from the prevailing S.W. winds.

2. Calais is easier to enter at any time than Boulogne.

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2. It is dangerous to approach in fog on account of outlying reefs with deep water close to them, so that a vessel cannot feel her way to the coast with the lead; and at low water the danger is greater.

3. The port of Boulogne is dry at low water spring tides.

4. The entrance of the port is narrow, and more difficult to take than Calais, from that cause, and the direction of the piers with respect to that of the tide.

5. Boat intercourse is more difficult at Boulogne than at Calais, gales interrupting it for several days at Boulogne, and occasioning accidents and loss of life.

6. The distance from Dover to Boulogne is six miles more than to Calais.

7. The risk of running foul of passing ships is greater than in the route to Calais, and also of accident from passing through French fishing craft on the Varne and Ridge.

8. The difference of time in making a passage to Boulogne or Calais, in fine weather, is half an hour earlier to Calais than Boulogne.

9. It is more difficult to reach Boulogne against a strong S.W. wind and a spring flood, than to reach Calais against a strong E. wind and spring ebb.

10. Boulogne is adapted for fine weather only, and unfit as a station to be gained in all weathers, as a packet port must be.

11. The passage to Boulogne occupies 2h. 20m. at least; oftener more: that to Calais 1h. 35m.

3. In Calais a vessel can always lie afloat.

4. Calais has a good roadstead well sheltered in prevailing winds.

5. Calais coast may be approached in safety in any weather by the lead.

6. A vessel using her lead cannot miss the piers of Calais even in a fog.

7. A vessel may run into Calais by the lights in the darkest night.

8. The port of Calais enables a vessel to lie afloat at lowest spring tides, and with the first of the flood she may always start.

9. The width of the piers apart enables a vessel to recover a yaw from the run of the sea, and regain her proper course when entering or leaving.

10. The intercourse by boats at low water is always safe at Calais, which it is not at Boulogne.

11. At low water a sailing boat can always get out of Calais, which she cannot do at Boulogne.

12. Before Calais was improved the port was used as a packet station; in which time no accident ever occurred with the packets, and the utmost regularity was preserved. The present improved state of the port will render that more certain.

13. The distance from Dover to Calais is not only six miles less than that to Boulogne, but the passage is much safer, being more out of the track of shipping, and fishing vessels.

14. While there is a heavy sea between Cape Grinez and Boulogne, with prevailing winds, between it and Cape Grinez there is smooth water.

15. Calais is more favourably situated than Boulogne for preserving regularity in packet returns, so essential to a packet station.

16. The certainty of landing at all times is ensured at Calais; but is always uncertain at Boulogne.

A Calais paper speaking of the improved state of that harbour says:— It is a month to-day since the English packets carrying the mails between France and England, have made use of the port of Calais, and not the slightest accident or irregularity has occurred in consequence. The experience gained has fully justified all that we have said of the facility which our port affords for the arrival and departure of the steam packets.

From the 1st of February the mail has been landed only once from the roads, and even that would not have been necessary if the English Captain had known the depth of water in the channel, and that at low water from the entrance of the port up to the quay. It is true the mail has been embarked six times in the roads, but this arises evidently from the difficulties yet experienced by the packets in entering the port as far as the quay, while the tide is ebbing. The unfinished state of the quay at present does not allow of a vessel being stationed there, and frequently the tide obliges them to go there three or four hours before the arrival of the dispatches from Paris, the consequence of which is at present the necessity of anchoring in the roads. This inconvenience, however, must soon disappear; the construction of the quay is proceeding with the greatest activity, and it is now unquestionably proved that it will be unnecessary for the packets to remain in the roads of Calais. It is in fact quite certain that from the moment the packets can enter the port at all times, they may also leave it.

Last Sunday the Indian mail, and the English mail for France and Belgium were landed at Calais.

This circumstance induces us to believe in the realization of an idea we have for some time entertained, and which consists in centralizing in our port the whole packet service from England, destined for France or Belgium, of which a part now goes by the ports of Dover and Ostend. This measure will not only be profitable to the English post-office in point of economy, but will be of immense advantage in the transmission of the mails, which will be carried with all the dispatch, regularity, and safety that can be desired.

The improvements made in the port of Calais, and its happy situation completely justify the preference which it appears is about to be bestowed on it.—*Journal de Calais, March 1st, 1849.*

Calais continues to be the adopted port, much to the satisfaction of all who have to cross the Strait of Dover: indeed for the packets again to return to a port to encounter all their former dangers, is impossible, where it is necessary to land the passengers and mails by *means of a life boat from the offing*, while another affords not only shelter outside so that an ordinary boat might be used, were even that necessary; but for which there is no occasion as the packet may run into the harbour: the former of these is Boulogne and the latter is Calais.

UNITED STATES COAST SURVEY.

This report exhibits the progress of the survey of the coast of the United States during the past year, together with a summary of the operations of the four preceding years. From it we learn that during the past year the work has been carried into every State, with one exception, on the Atlantic and Gulf of Mexico; and parties are on the way, and under orders, for the Pacific coast. A base line has been measured on Bodie's Island, North Carolina, and two preliminary measurements of others have been made: one

on Edisto Island, South Carolina, and the other on Galveston Island, in Texas. Six sheet charts have been published during the year, and ten others are in the hands of the engravers. The entire number of coast survey maps already published is twenty-one; besides these, three sheets are engraved and nearly ready for publishing.

Six new shoals have been discovered within the season, off Nantucket, and one in the Chesapeake Bay. The discovery of these shoals is of the highest importance to our commerce—those near the island of Nantucket, lying in the track of vessels trading to Europe from New York, and coastwise between New York and New England. A large area, extending more than twenty miles south and east of Nantucket, is thickly beset with dangers. The old South Shoal, lying about fourteen miles south-east of Nantucket, has long been known to navigators; but in 1846 a new South Shoal was discovered by Lieut. Davis, situated about eight miles south of the former. Two of the shoals discovered the past season have only eight feet water upon them in places; a third has only ten feet; the fourth has thirteen feet; and the fifth has sixteen feet of water. These all lie north of the old South Shoal. It is surprising that vessels bound to Europe do not strive to keep further from the neighbourhood of these dangerous shoals. It will be remembered that the packet ship *Louis Philip*, in December, 1847, struck upon shoal after shoal within a few miles of Nantucket, in imminent danger of being lost.

Great pains have been taken to determine with the utmost precision the longitude of some one point in the United States to which the position of all others might be referred. For this purpose the superintendent has availed himself of the opportunity afforded by the line of Cunard steamers between Liverpool and Boston. On the arrival of a steamer at Boston the chronometers are taken to the Cambridge Observatory for comparison; and again on the arrival at Liverpool they are taken to the observatory at that place. Each of these comparisons affords a determination of the longitude of Cambridge from Liverpool. One hundred and sixteen chronometers, in thirty-four voyages, have in this manner been compared. These comparisons will be continued until the greatest accuracy which can be expected from this method has been attained. Other methods by moon culminations and occultations of stars are also regularly employed.

The difference of longitude between Cambridge Observatory and the principal places of the United States is to be determined by means of the magnetic telegraph. The longitude of New York and Philadelphia, from Washington, was determined during the summer of 1847; and during the last summer the longitude of New York from Cambridge was determined by the same method. A small observatory was erected in the upper part of this city, in the garden of Mr. Rutherford, where an astronomical clock was set up, and a transit instrument for the determination of time. This observatory was connected by a wire with the telegraph line to Boston, and Cambridge observatory was in like manner connected with the same line. These two stations, thus put in telegraphic communication, were each furnished with a local battery and register, and thus became complete telegraph offices. The object now was, by the transmission of signals, to determine the difference of time between the two places. For this purpose the observer at Cambridge might strike the key of his register at any instant indicated by his clock, when the observer at New York would hear a click of his magnet, and the instant of its occurrence might be noted upon his own clock. These observations being subsequently compared would give the difference of time of the two places, which is found to be nearly twelve minutes. In this way

the difference of longitude might be determined within half a second, and perhaps somewhat nearer. But this degree of precision, does not satisfy the claims of science. We wish to determine the difference of longitude with the utmost possible precision, and this cannot be effected by the preceding method, where the fraction of a second is required to be estimated by the ear. To remedy this inconvenience, recourse was had to the comparison of solar and sidereal time. The solar day is about four minutes longer than the sidereal, and therefore a sidereal clock gains upon a solar clock one second in about six minutes.

The following mode of comparison was accordingly adopted :—

The observer at Cambridge, having a solar chronometer before him, strikes the key of his telegraph register in coincidence with the beats of his chronometer. The observer at New York hears the click of his magnet, and compares the sound with the beat of his own clock, which indicates sidereal time. The two sounds probably do not exactly coincide; but the Cambridge observer continuing to strike his key at intervals of a second, according to his chronometer, the clicks of the magnet heard at New York grow later and later as compared with the clock, until the two sounds occur sensibly at the same instant. This time is recorded as being the instant when the Cambridge chronometer and the New York clock differ by a certain number of whole seconds, without any fraction. This process of beating seconds at Cambridge is continued for fifteen minutes, during which time two coincidences, and perhaps three, will be recorded upon the New York clock. The observer at New York now commences beating seconds by striking upon the key of his register coincidentally with the beats of his own clock. The Cambridge observer compares the clicks of his magnet with those of his chronometer, and in fifteen minutes obtains four, and perhaps five, coincidences, since his chronometer beats half-seconds. The comparison of Cambridge and New York time, obtained in this way, is probably correct, within one or two hundredths of a second.

A similar comparison is made by telegraphing transits of stars. A list of stars having previously been selected for this purpose, the Cambridge astronomer points his transit instrument upon one which is passing the meridian, and strikes the key of his register at the instant the star is seen to pass each wire of his telescope. The times are noted by the observers at Cambridge, and at New York, each upon his own clock. In about twelve minutes the same star passes the meridian of New York, when the New York observer points his transit instrument upon it, and strikes the key of his register at the same instant the star passes each wire of his telescope. The times are noted both at Cambridge and New York. The difference between the times of transit of the same star over the two meridians gives the difference of longitude of the two places. This method was repeated by a large number of stars upon several different nights. The combination of these two methods will probably give the longitude of New York from Cambridge more accurately than that of any European observatory has been determined. Still more recently, the magnetic clock invented by Dr. Locke, of Cincinnati, has been employed, and the telegraph thus affords the means of determining differences of longitude with almost mathematical precision. It is intended as fast as practicable, to apply this method to the determination of the longitude of every important place along the entire coast of the United States.

Among the operations of the coast survey bearing more immediately upon the commerce of New York, must be mentioned the survey of Hell-gate : 4,000 soundings have been made during the past seasons, and 614 angles

taken with the sextant to establish hydrographic points. Tidal observations at every half-hour of the day and night have been made in connexion with the soundings. When these surveys have been completed, it is proposed to undertake such improvements as shall lessen, if not altogether remove, the hazard attending the ordinary navigation of Hell-gate.

The exploration of the Gulf Stream, which was commenced several years ago, was continued during the past season, and the temperature carefully observed at various depths. A new base line has been measured on the coast of North Carolina, in connexion with the survey of Albe-marle Sound.

In conclusion, we find in this report evidence of activity throughout the entire line of coast of the United States, and we trust the survey will be prosecuted with undiminished zeal, so that the present generation may reap its advantages. This survey will furnish us with an accurate chart of every harbour and bay of the United States; and the additional security thus afforded to our commerce will repay, many-fold, the expense of the survey.—*New York Paper.*

NAUTICAL NOTICES.

CAPE AGULHAS LIGHT.

Colonial Office, Cape of Good Hope, 15th Dec., 1848.

A lighthouse having been erected at Cape Agulhas, near the southernmost point of the Continent of Africa, the following Sailing Instructions for vessels approaching that point, which have been drawn up by T. Maclear, Esq., F.R.S., Her Majesty's Astronomer Royal at the Cape of Good Hope, and which include a description of the land and shore about Agulhas,—instructions for anchoring in Struys Bay,—and a description of the construction of the Light Apparatus, are by the direction of His Excellency the Governor published for general information.

His Excellency has further desired it to be notified that, the works being now completed, the lantern will be lighted on the 1st of March next; and will, thereafter, continue to be lighted every evening at sunset.

By His Excellency's Command,
(Signed) JOHN MONTAGU,

Secretary to Government.

It has been thought advisable to reverse the logical order of the matter connected with the establishment of this light, so that what is more wanted should appear first, and further information be had by reference to the particular heads.

The adopted arrangement is as follows:—

1. General Sailing Instructions for passing Agulhas.
2. Description of the Land and Shore about Agulhas.
3. Instructions for anchoring in Struys Bay, Currents, Tides, &c.
4. Description of the construction of the Light Apparatus.

1.—*General Sailing Instructions for passing Agulhas:—*

Latitude of the Light,	34 49 45·7	h. m. s.
Longitude, East of Greenwich,	20 0 40	= 1 20 2·67
Longitude, East of the Cape Observatory,	1 31 55	= 0 6 7·67

Height of the Light above the mean level of the Sea, 131 English feet.
Magnetic Variation $29^{\circ} 20'$ W.

The Light can be seen in clear weather in any direction seaward, between East and N.W.b.W., at the distance of six leagues from a deck 15 feet high.
It is a steady White Light.

All the bearings mentioned are Magnetic, and all the distances expressed in miles are Geographical, unless the contrary is stated.

If a vessel from the *eastward* passes Struys Point at the distance of 5 miles from the shore, and steers a W.b.S. course exactly, she will pass the most southerly projection of the Northumberland point reef at the distance of $4\frac{1}{2}$ miles, and the Light at the distance of $5\frac{1}{2}$ miles, and clear Gunner's Quoin. This is the limit *northward* within which no sailing vessel should be found. It secures every advantage that could possibly be obtained by a closer course, and at that distance the Light will be brilliant.

Precautions:—In clear weather, the Light may be seen, when 5 or 6 miles eastward of Struys Point, from a look-out at the height of 35 feet; and if the vessel then should chance to be close in shore, by steering the above course, she might touch the shoal off Struys Point. To guard against this, when the light is first seen, it should be brought immediately to bear W.b. N.; and keeping this bearing of the light, the vessel will pass 2 miles to the southward of any danger respecting Struys' Point.

Care should be taken when approaching the land before the light is discovered, for in hazy weather, or from spray in a fresh breeze, combined with the distance of Struys Point (about 15 miles), the light may be faint or altogether obscured, and the vessel may get within the line of danger. Under these circumstances, the lead should not be neglected, and the depth should not be less than 20 fathoms, without putting about immediately to the south.

The like precautions are required in the day time, particularly in foggy weather; for the high land of Agulhas may be invisible, while the sand hills of Struys Bay and the breakers off Northumberland Point are distinctly seen. On these occasions it is difficult to determine whether the vessel is to the eastward or westward of Struys Point; because the shore features of the Bay eastward of that Point, are similar to those of Struys Bay, although the extent is less.

Sailing vessels in particular should adhere to the rules, for if it should fall calm, the heavy swell which constantly rolls towards the shore would carry them with it, and the only resource, that of anchoring, would probably be of no avail from the rocky nature of the bottom, combined with the swell. The *St Mungo* is said to have been *wrecked in this way*.

Coming from the westward, the light will be seen first on a S, $57^{\circ} 15'$ E. bearing. The extreme end of the low ground called Gunner's Quoin Point bears N. $52^{\circ} 30'$ W. from the lighthouse, distant $19\frac{1}{2}$ miles, but is not visible from it. The sea was remarked breaking a long way off the Point,—it will, therefore, be necessary to keep off until the light becomes visible.

With the precautions here given, there will be as little danger in rounding Agulhas as in rounding the Cape of Good Hope, or indeed any other headland.

2.—Description of the Land and Shore about Agulhas.

Cape Agulhas is defined to be the rocky projection from the S.E. corner of the Agulhas Promontory, the centre of which promontory is about three-

fourths of a mile westward of the projection, and about 200 yards more southerly, being the most southern part of Africa.

Description of the Land.—The features of the land about Agullas distinguish it from the neighbouring head lands. A ridge shaped undulating clump rising from the flat ground, is separated into four ridge-shaped hills, by irregular ravines running nearly true E. and W. The middle ridges enter wedge-like, at the east end, and are lost towards the centre, where the ravine widens to a mile in breadth. The middle ridges are the lowest, the northern and southern are nearly of equal height.

Viewed at a distance from the seaward, easterly or westerly, the north and south elevations being seen nearly end on, resemble two oblong hummocks; but the former extending more easterly appears the highest as seen from the eastward.

Viewed at a distance from the southward, the south ridge masks the others, save at their east end; but the ravines being hid, the whole appear to be united, (only the south and middle ridges are noticed on the chart. They are all given on Col. Michell's plan.)

The highest part of the south ridge is 455 feet above the level of the sea, and its true meridional distance from the shore is almost exactly one mile. From this point the descent eastward is rather gradual. Westward the descent is at first steep, then slightly undulates. Southward it is steep, then undulates to within 300 yards of the shore, where the ground becomes flat.

On the first undulation from the shore, which is about 55 feet above the level of the sea, nearly true south of the highest point before mentioned, and N. 30° W., 520 yards from Cape Agullas, the lighthouse is built.

This spot was selected by the masters of H.M.S. *President*, *Brilliant*, and *Rosamond*, (Messrs. Rees, Russell, and Ashton), under the command of Capt. Foote, R.N., in conjunction with Lieut.-Col. Michell.

The light commands to seaward between E. and N.W.b.W., or more correctly, E. to N. 57° 15' W.

Description of the Shore.—West of the Agullas Promontory the shore bends north-westerly, then round to the headland called Gunner's Quoin, forming an irregular shallow incurvation of about 19 miles in breadth. Immediately to the E.N.E. of the promontory are two deep indentations. The first called St. Mungo's Inlet. The next is deeper and wider, and the projection which separates them is called St. Mungo's Point. From the last inlet the shore runs jagged to the dangerous projection called Northumberland Point, the site of the wreck of the ship *Duke of Northumberland*, which point forms the west horn of Struys Bay.

The whole of the beach, from the west of the Agullas Promontory to Northumberland Point, consists of rugged sand stone and quartz rocks, or rocky reef, perfectly impracticable even for a boat. At the promontory groups of rock prevail; at the cape, rocks and rocky reef, extending out a third of a mile. At the inlets, flat rocky reef exposed at low water for a third of a mile; thence rocky to Northumberland Point, where it is sand and reef.

Exposed to the uninterrupted oscillations of the Southern Ocean, the sea breaks heavily on this iron bound shore, particularly during southern winds. A vessel touching upon it, has not the slightest chance of escaping destruction.

The coast between Northumberland Point and Struys Point, viz., of Struys Bay, is low and sandy, but a short distance from the beach there is a line of sand hills varying from 50 to 150 feet in height, some of them covered with dark coloured bush, a feature that distinguishes the coast from Struys

Point to the next point eastward of it. There is no high land sufficiently near to interfere with the distinguishing character of the hills northward of Agulhas, as viewed from the seaward.

Northumberland Point bears east from the light $3\frac{1}{2}$ miles. It is low and sandy immediately on the beach, but a very dangerous ledge of rocks extends S. $37^{\circ} 30' E.$, 1 mile from the point, and a detached rock was fixed by intersection while breaking, which places it S. $58^{\circ} 30' E.$, $1\frac{1}{2}$ mile from this point; and S. $81^{\circ} 40' E.$, $4\frac{1}{2}$ miles from the light. The extreme of Northumberland Point reef bears S. $77^{\circ} 30' E.$, $3\frac{3}{10}$ mile nearly from the light. Westward from the Point the reefs extend about one-third of a mile, and break heavily when the wind is from the S.E. In one or two places it breaks further out, but in no place exceeds half a mile.

Struys Point is the outer extreme of a number of sand hills, and as before stated, forms the eastern horn of Struys Bay. It bears from Northumberland Point, which is the western horn, N. $79^{\circ} 30' E.$ 11 miles (estimated), and N. $82^{\circ} 20' E.$, 15 miles from the lighthouse. This point is more dangerous than Northumberland Point, inasmuch as the reefs lie much further off the shore, and there is no high land to enable the mariner to determine his position. Circumstances did not allow of this point being included in the Agulhas survey; but during a strong south-easter it was remarked from the summit of the sand hills near the point, that the reef extended seaward about three miles, and was then breaking with fury.

Like Northumberland Point, the color of the water off this point changes to seaward from brown to light, then dark green, from which it may be inferred, together with the known shallowness of the water off Northumberland Point, that the lead, as well as the colour of the water, will always warn a ship of the approach of danger.

Struys Bay is formed by Struys Point to the east, and Northumberland Point to the west. The landing place is in a small bay or cove to the N.W. of Northumberland Point, sheltered by a projecting shelf of shingle from each extremity of the cove. The jetty, constructed from pieces of wreck, renders the landing easy: but at the outer horns of the shingle there is only water sufficient for a boat at quarter flood in fine weather. Three or four huts at the head of the jetty, point out its position from the bay. Immediately in the neighbourhood, on higher ground, is a stone dwelling-house, with a signal staff a few yards behind it, termed the Telegraph Staff on the chart.

3.—Instructions for anchoring in Struys Bay, Currents, Tides, &c.

The marks for anchoring are the large stone house near the beach, W. $\frac{1}{2}$ S., and the sandy extreme of Northumberland Point S.W.b.S., in 5 fathoms sand. Here the bottom is clear, while to the westward and nearer to the reef where the water is smoother the bottom is foul,—rocks interspersed with patches of sand. The latter is unsafe, the cable is liable to snap from fouling the rocks, an accident that befel H.M.St. vessel *Dee*, while lying there in a light S.W. wind, accompanied by the usual swell.

Directions for Anchoring.—Vessels from the westward intending to anchor in this bay, should not bring the lighthouse to bear more westerly than W.b.N. $\frac{1}{2}$ N., until Northumberland Point bears N.W. $\frac{1}{2}$ N. Then steer N.N.E. or N.E.b.N. until the stone house before mentioned bears W.N.W. This will lead clear of the outer detached reefs off Northumberland Point. Proceed then to N.W., and bring the anchorage marks on.

The light will not be visible from this anchoring ground, owing to the swell of the intervening land.

Precautions respecting Struys Bay.—Shelter may be obtained in this bay
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during westerly and north-westerly winds only. None is afforded with the wind between S.W. round to the southward and east. With any of the latter winds it is unsafe, if not impossible to ride in this bay, for the sea rises to such an extent as to break in 7 or 8 fathoms, a circumstance that was remarked on two occasions while H.M. steamer *Dee* was standing off waiting for the weather to moderate to enable her to anchor. At the time of anchoring, although the wind had subsided for several hours, the water nearly broke in 7 fathoms, where the anchor was let go; and at the place from whence she had put to sea three days before in 4½ fathoms, the sea was breaking heavily. As a general rule, vessels seeking shelter in this bay in a N.W. gale, should put to sea immediately after it subsides, for the wind frequently changes in a few hours from a strong N.W. to a S.E. or S. point, in which case it is very difficult to work out in consequence of the heavy sea that rises with these winds.

Currents.—During the examination of the coast (Sept. 1848) no current was observed in Struys Bay, nor about the coast 2½ miles from the shore, as far to the westward of Agulhas as the letter E. on the chart; but it was confidently asserted by fishermen, and the residents at Struys Bay, that a very strong current frequently sets to the westward round Northumberland Point.

Tides.—Circumstances did not allow of the tides being observed with due accuracy. Two copper plugs were let into rocks S.W. of the lighthouse, to mark the high and low water points nearly at spring tides. The comparisons with these plugs on October 15, 16, 18, 19, 28, 29, (1848), and an observation at the jetty in Struys Bay, on October 23, give the establishment, and rise and fall, nearly similar to what prevails in Table Bay and Simons Bay.

Magnetic Variation.—This was determined by means of two magnets, on the flat ground between the lighthouse and beach. The result ($29^{\circ} 20' W.$) has been employed for the compass bearings, given in these instructions.

4.—Description of the Light Apparatus.

This light is of the first or most brilliant class, and is the work of Mr. Henry le Paute. It is constructed upon what is technically called the Dioptric principle.

A hollow cylinder, with a paraboloid top of about 19 feet in circumference, and 10 feet in height, is composed, omitting a doorway, of 28 horizontal tiers of glass and reflectors, firmly fixed in a metallic frame work of six compartments, so that each tier is divided into six circular segments.

The centre tier is a large hoop-shaped plano convex lens, 11 inches in depth. Next, 8 tiers of circular prisms above and 8 below the centre lens. Then 7 tiers of reflectors above and 4 tiers below. Three-fourths of the circumference, of the cylinder is formed by this combination. The remaining quadrant which is towards the land, and its centre due N., serves for the doorway into the cylinder, but the door is lined with two large concave metallic reflectors, each two feet in breadth and three feet in height.

The burner consisting of four concentric Argand wicks, 4 inches in diameter, is placed in the centre of the cylinder in the focus of the large lens. It is supplied with oil by a force pump driven by clock-work; and there is a simple contrivance which gives notice by the ringing of a bell when the reservoir requires to be replenished.

The frame work of the lenticular, (the name given to the whole combination) is firmly attached to a cast iron circular floor, supported by a stem of cast iron, the lower end of which is let into a block of granite resting upon the crown of the supporting dome, where it (the stone) is surrounded by masonry.

The theory of the lenticular may be understood as follows :—The burner being in the focus of the plano-convex lens, the rays of light that impinge upon the inner plane surface emerge outside horizontal.

The bases of the prisms are perpendicular inside ; their upper planes are horizontal, and their hypotenusal planes outside slant downwards and inwards. The depth of each base successively diminishes from 3 inches to $1\frac{1}{2}$ inch in depth, in the order from the centre lens, upwards and downwards, which is the order of the increasing inclination of the impinging rays from the burner. The effect of the prismatic form is to turn the rays, and to send them out horizontal, upon the same principal by which objects in a horizontal direction in front of a Camera Lucida are seen by looking *down* into it.

The tiers of reflectors commence at the height and depression where the still greater inclination of the impinging rays from the burner would cause a prism to decompose them in the horizontal direction into the prismatic or rainbow colours. The reflectors are concave towards the lens, their curvatures increasing as they recede from the centre lens. They reflect the rays that fall upon them to the prisms, whence they are sent out horizontal.

The two large reflectors behind on the inside of the door return the rays from their direction to the large lens, through which they escape horizontal.

Thus all the light from the burner, save the small quantity that escapes up the chimney glass, is bent into one brilliant horizontal sheet to overspread the horizon.

This splendid specimen of skill is protected by a lantern $10\frac{1}{2}$ feet in diameter, or 33 feet in circumference, glazed with thick plate glass, and surmounted by a copper dome, from which a lightning conductor of wire rope descends to the ground.

The lighthouse was planned by Lieut. Col. Michell, the late talented surveyor-general at the Cape, who made a journey to Paris for the express purpose of selecting the lenticular apparatus.

It may be proper to mention that the tower of the lighthouse is to be painted, and will show alternate horizontal bands of white and red, two of each.

Messrs. Rees, Carr, and Skead, of H.M.S. *President*, *Nimrod*, and *Dee*, respectively, particularly Mr. Skead, provided a large portion of the sailing instructions. These, with the remainder by myself, I have arranged and compared carefully with the chart recently constructed from measurement and rigorous trigonometric calculation. The other matter is by myself, and I hold myself responsible for the accuracy of the whole.

I may add, that one of the trigonometric stations in the measurement of the arc of the meridian is on the highest point of the hill above the lighthouse ; by means of which, the latitude and longitude of the lighthouse are derived from the position of the observatory. Thus the light is in an exact geographical point.

THOMAS MACLEAR,
H.M. Astronomer,—Cape of Good Hope.

[We preserve the following correspondence which we find in that valuable journal the *Shipping Gazette*. It relates to the supposed rock between Terceira, and St. Michael, a notice of which from the Hydrographic Office appeared in our last number, page 157.—Ed.]

Admiralty, Feb. 3rd. 1849.

SIR.—I am commanded by my Lords Commissioners of the Admiralty to

send you herewith, for the information of the committee for managing the affairs of Lloyd's copies of a letter from the Under Secretary for Foreign Affairs, dated the 26th ult., and of its enclosures, relative to a shoal which has been discovered near St. Michael's; and I am to acquaint you that my Lords have ordered H.M. sloop *Racer* to proceed at once to St. Michael's, and to survey the spot in question.

To Capt. G. A. Halsted, R.N.,
Secretary, *Lloyds*.

H. G. WARD.

Foreign Office, Jan. 16th, 1849.

SIR.—I am directed by the Secretary of State for Foreign Affairs to transmit to you the copy of a despatch from H.M. consul at St. Michael's, relative to a shoal which has been discovered near that place.

To H. G. Ward, Esq., &c.

EDDISBURY.

St. Michael's, Jan. 4th, 1849.

MY LORD.—I have the honour to transmit to your Lordship the enclosed declarations of three shipmasters, making it probable that a new under-water shoal has appeared between this island and Terceira, about thirty-five miles N.W. of the N.W. point of St. Michael's, on which the sea breaks in bad weather. As it is unlikely that I shall be able to induce the master of any vessel now here to proceed to examine this shoal, I take the liberty to inquire if you would think it expedient to move the Admiralty to order an outward-bound ship-of-war, a steamer if possible, to call here for the purpose of ascertaining its existence, place, and nature. Islets have been formerly thrown up near the same spot, which being formerly of arenaceous constituents, were soon washed away, and the present shoal, if it exist, may disappear in the same manner. But the statements of the third of the enclosed declarations render it probable that it may be of a rocky nature, like the neighbouring "Formigas," and require to be laid down as a permanent danger. I am informed that H.M. ships and packets, as well as merchant vessels, not unfrequently pass between St. Michael's and Terceira, after calling at Fayal, on their passage home.

To Viscount Palmerston.

T. C. HUNT

Declaration of Benjamin Pratt, master of the ship *William*, of Bangor (U.S.); Victorino Falcao, master of the ship *Tres Amigos*, of St. George's, in Portugal; and George Perkins, master of the ship *Plymouth* (U.S.)—relative to a new shoal observed by them between St. Michael's and Terceira, in the Azores:—

[No. 1.]—Declaration of the master of the *William*.—On the 31st December, 1848, at 9h. 30m. A.M., bound from Terceira for St. Michael's, I saw breakers, mast high, some distance ahead, evidently caused by a shoal, and not a floating mass, went about and took sights, then half a mile north of them. Sights taken at Terceira the 29th of December:—

Time by Chron.	10h. 34m. 28s.	Altitude	13° 15'
"	" 10 35 39	"	13 23
"	" 10 36 31	"	13 30

Sights taken half a mile north of the breakers on the 31st of December, at 9h. 30m. A.M.:—

Time by Chron.	11h. 20m. 15s.	Altitude	19° 36'
"	" 11 21 15	"	19 40
"	" 11 22 24	"	19 50

Course from hence S.S.W.—Good four miles per hour.—Latitude by observation at noon 38° 07'; chronometer being 3, 5-10 per day.

These observations being worked out gave the longitude 26° 41' 0" W. of Greenwich, and lat. 38° 16' N.

[No. 2.]—Translation.—Declaration of the master of the *Tres Amigos*.—On the 31st of December, at about 10 A.M., having been blown out from St. Michael's, reaching to the southward I saw a shoal, where the sea broke the height of a ship, at intervals of about ten minutes. Near us, reaching the same way, was an American brig, which, if it had been night, would have been wrecked on the shoal, but when they saw it they went about in the greatest haste. By my calculation the shoal is in lat. $38^{\circ} 18' N.$, and $26^{\circ} 50'$ West of Greenwich.

[No. 3.]—Declaration of the master of the *Plymouth*.—At 9h. 30m. A.M., 25th of December, I saw the sea breaking heavily at the distance of two and a half to three miles N.N.W., of my ship. A heavy sea was running, the wind having moderated at N.W., from a S.W., gale the night before. The water broke 60 feet high in different places, at intervals of about ten minutes, as if on an extended shoal having several heads. It was certainly not a floating obstruction; I consider it a narrow reef, about a mile in length, running from N.N.E., to S.S.W., about 40 miles W.N.W. $\frac{1}{2}$ W., by compass* from the N.W., point of St. Michael's.

THOMAS CAREW HUNT.

British Consulate, St. Michael's, Jan. 4th, 1849.

* This is probably true.

THE COURIER ROCK—MATANILLA REEF.—Jan. 22d, 1849, the brig *Courier*, of Greenock, from Matanzas, bound to Greenock, laden with molasses, drawing 14 feet 10 inches, in leaving the Straits of Florida, rounded the N.W. end of the Maternillo Reef, at 2 P.M., bearing S.E.b.E. four miles, wind N.W.b.W., steered N.E.b.E., thirteen miles, and E.b.N. $\frac{1}{2}$ N., twenty-four miles, wind N. $\frac{1}{2}$ E., vessel going 9 knots per hour; at 6h. 40m. P.M. struck on an unknown coral reef, passed over, tacked ship, and stood off N.W.b.W. $\frac{1}{2}$ W.; sounded in stays $3\frac{1}{2}$ fathoms, to 4, 5, $5\frac{1}{2}$, 7, and 10 fathoms, and no bottom at 16 fathoms; latitude at noon by a good meridian altitude $27^{\circ} 34' N.$, longitude brought forward from 9 A.M. by a good chronometer, proved to be correct yesterday, off Cape Florida, $79^{\circ} 19' W.$, at noon, and the breakers of the N.W. end of the Maternillo Reef at 2 P.M., and the courses steered corrected for half a point of easterly variation, gives the position of the reef $27^{\circ} 51' N.$, $78^{\circ} 31' W.$ Last voyage I had a chart of the Bahama Banks and Channels of 1847, but in running down the Old Bahama Channel I found it so decidedly wrong, that I condemned it, and made one for myself, to complete my passage to Matanzas. With this voyage I have another chart of 1847, of the windward passages and Bahama Islands, and I find that several of the well known points are wrong, particularly the N.W. end of the Maternillo Reef, which is laid down ten miles south of the true position: this I ascertained before leaving Matanzas, therefore I marked down the true position of the reef in $27^{\circ} 34' N.$, and sailed round it in lat. $27^{\circ} 38' N.$; saw the breakers on the end of the reef quite distinctly from the deck four miles off, when, according to the chart they should have been fourteen miles off.

WILLIAM THOMPSON, *Master of the brig Courier.*

JAMES BROWN, *Chief Mate.*

[With the view of increasing the publicity desired by the master of the *Courier*, we have reprinted his letter to the *Shipping Gazette* of the 27th of February last; and the extraordinary position in which he has considered the rock on which he struck, some thirty miles N. of the Matanilla reef, appearing somewhat remarkable, we have taken the trouble to lay down the track of the *Courier* from the time she rounded the N.W. end of the Matanilla reef at 2 P.M. bearing S.E.b.E. 4 miles. There is plenty of range in deter-

mining the exact spot to be considered the "N.W. end" of the reef, but we take a shoal place of 2 fathoms on Capt. Barnett's chart, as being most likely to show itself, by breaking and starting the *Courier* from her position, with that bearing S.E.b.E. 4 miles, we have laid down her courses and distances to the time she struck, and without any allowance whatever, they place her in lat. $27^{\circ} 34'$ and long. $78^{\circ} 28'$, and not in the position given by Mr. Thompson. But does this gentlemen really imagine he could even be in that position? He might have *steered* N.E.b.E. with the wind at N.W.b.W., but how long did he do so? for the wind heads him to N. $\frac{1}{2}$ E., and he is obliged to keep his wind to make his E.b.N. $\frac{1}{2}$ N. course after going 13 miles. Even this would be rather unfavourable to a deep merchant brig laden with molasses, and drawing 14 feet water, when the subject of leeway is considered, for the wind appears to have been dead on the reef. But there is something worse than this, for it is well known that there is a counter current on the edge of the gulf stream setting to the S.E. and southward, and we can come to no other conclusion than that the *Courier* had as much as she could do to keep off the reef, and that she was really set to the southward by this eddy current, and struck on the known coral reef on the northern edge of the bank, from which she fortunately was enabled to lie off again on the starboard tack. We therefore do not consider there is any danger in the lat. $27^{\circ} 51'$ N., long. $78^{\circ} 31'$ W., as reported by the master, and defy him to get bottom near it on his next voyage. Moreover, how he manages to get there with his four and a half hours run from the time of his departure is beyond us to account for; besides other statements made in the foregoing about charts, with which he seems to have been singularly unfortunate; not knowing, probably, that Capt. Barnett's survey was published by the Admiralty in April, last year.—Ed.]

[Since the foregoing was concluded we have seen Capt. Barnett's letter to the Editor of the *Shipping Gazette*, who does not seem to be aware of this officer's survey having been published.—Ed.]

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Fort William, Marine Superintendent's Office, 23rd, Nov. 1848.

BLACK PAGODA.—Notice is hereby given, that a portion of the Black Pagoda, which is a landmark for mariners coming up the Bay of Bengal in the south-west monsoon, has been lately blown down, so that its appearance is materially altered, and it may not be seen at the distance at which it was previously visible.

By Order, JAS. SUTHERLAND, *Secretary.*

NEW SHOAL IN THE GULF OF MEXICO.—The *New Orleans Bulletin* has received the following from the master of the ship *Lady Falkland*, from Bristol.—The location of this shoal is only about 100 miles to the eastward and 180 miles to the southward of the Balize. The position is a very dangerous one for vessels bound into the Mississippi. The ship *Lady Falkland* from Bristol, England, for New Orleans, on the 7th January, 1849, saw the appearance of breakers on a shallow reef, extending from north to south about a quarter of a mile, lat. $25^{\circ} 52'$ N., long. $88^{\circ} 10'$ W.—W. SMITH, master of the ship *Lady Falkland*.—*Shipping Gazette.*

[An almost impossible place for a shoal. We have no doubt the master of the *Lady Falkland* has been deceived by one of those numerous obstacles to navigation which pass for shoals.—Ed.]

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Hydrographic Office, 22nd March, 1849.

REVOLVING LIGHT ON CAPE OTWAY.—Notice has been received, that a Revolving Light was established on Cape Otway, on the 29th August

last. Its revolutions are performed in about one minute, for a few seconds of which only, the light is visible; the intervals of darkness last fifty seconds.

The lighthouse stands in latitude $38^{\circ} 51'$ south, and longitude $143^{\circ} 34'$ east of Greenwich. The light is 303 feet above the level of the sea at high water, and it may be seen at the distance of 8 leagues in clear weather.

Hydrographic Office, 22nd, March, 1849.

FIXED LIGHT ON CAPE AGULHAS.—Notice has been received from the Cape of Good Hope stating that the light in the new tower erected on Cape Agulhas would be shewn from the first of the present month.

The lighthouse stands on an elevation of 52 feet above high water, and bears N. 30° W. (magnetic,) distant 520 yards from the extreme point of Cape Agulhas.

The Tower is about 70 feet high, and the light being 128 feet above high water mark, may be seen from the deck of a vessel, in clear weather, at the distance of 6 leagues, between the bearings, by compass of S.E.b.E. and West. Its latitude is $34^{\circ} 49' 46''$ S, and longitude $20^{\circ} 0' 40''$ east of Greenwich. The magnetic variation is $29^{\circ} 20'$ W.

In approaching Cape Agulhas from the westward, the light should not be brought to the southward of S.E.b.E. $\frac{1}{2}$ E. in order to be sure of giving a sufficient berth to the scattered rocks off the Quoin; and when coming from the eastward, it should not be allowed to come to the westward of W.N.W. $\frac{1}{2}$ W., in order to avoid the dangerous reefs which project from Struys and Northumberland Points. If the weather be hazy no vessel should come into less water than 20 fathoms.

THE PORT OF AKYAB.—A Flag-Staff having been erected on Fakeer or Mosque Point in lat. $20^{\circ} 7'$ N., long. $92^{\circ} 56'$ E., it is recommended for vessels making the port in the day to steer until they get the Table Land of the Bolongo bearing East, and the Great Savage Lighthouse N.b.E., when they will be about one mile from the South end of the bar in $6\frac{1}{2}$ fathoms. From this position the Flag-Staff will be distinctly seen, bearing N. $\frac{1}{4}$ E., steer directly for it, crossing the bar in $3\frac{1}{2}$ to 4 fathoms, till the light on the Savage bears S.E.b.S. $\frac{1}{2}$ S., which will put them inside the passage rock, bearing from the Savage Lighthouse N.W. $\frac{1}{2}$ N., about $\frac{1}{4}$ of a mile. Then steer N.E., or more Easterly, according to the state of the tide, to enable them to clear a Red Buoy, which is placed in 10 fathoms at the South end of the Fakeer's reef. After clearing it they can haul up for the inner Flag Staff, and anchor abreast of it in 3 to $3\frac{1}{2}$ fathoms at low water, inside of a Black Buoy, which is on the South end of an extensive flat projecting from Flat Island in $2\frac{1}{2}$ fathoms low water spring tides. The above mentioned Flag Staff is visible from the deck of a vessel about 12 miles.

(Signed)

W. T. LLEWELYN, *Harbour Master.*

Akyab, 20th, Nov. 1848.

Published by order of the Superintendent of Marine,

JAS. SUTHERLAND, *Secretary*

Fort William, 14th Dec. 1848.

cs. crew saved.—d. drowned.

Vessels' Names.	Belong to.	Masters.	From.	To.	Wrecked.	When.
Ann	Liverpool	Paley	Lisbon	Liverpool	Carne P. W.	Dec 11, 7d
Bittern		Kelly	Tobago	St. Thomas	Off Saba	Nov. 19, cs
Bonito		Cole	Shields	Maldon	Off Spurn	Jan. 16, cs
Brighton	on shore be	hind N, Pi	er, had bro	ken up	Sunderland	Dec. 26, cs
Columbine	145	Gales	Stockton	London	Maplin sand	Dec. 23, cs
Comet		Allen	Ramsgate	St. Michael	run down	Jan. cs
Effort					Peterhead	Jan. 10, cd
Elizabeth & Jane		Hall	Sunderland	London	Maplin	Dec. 2, cs
Emily	London	Hindson	Newcastle	Messina	48° N. 7° W.	Dec. 25, cs
Enterprize	150	Rodgers	sprung leak	and sunk off	Arklow	Dec. 22, cs
Forest Monarch		Richardson	St. John NB	Glasgow	Ireland W.C	Nov. 21, cs
Ganges			in contact	with Carlot	Loop Head	Dec. 24, 1d
Grace Darling		Doran	New York	Newry	Grn Castl. R	Dec. 15, cs
Heads of Oak		Allison	Newcastle	Poole	Newcomb	Dec. 25, cs
Hero	155	Fraserburg			Peterhead	Jan. 10, 2d
Hope			Liverpool	Bristol	run foul of	Dec. 21, cs
Hope					B. of Islands	May 30
Imogene		Watson				Dec.
Isabella		Yocale	Riga		Aberdeen	Jan. 10, cs
James	160	Noble	Middlebro'	Boston	Scarboro'	Dec. 2, cs
J. Alexander		Lister	Newcastle	Folkstone	Off Cromer	Dec. 29, cs
James Reid		Goodall		Montrose	57° N.	Dec. 17, cs
James Wearne		Mathews	Constant'npl	Limerick	off Penzance	Dec. 14, cs
Jane and Mary		Lister	Pillau	Amsterdam	unheard of	Sept. 1
Jessie	165	Guernsey	Malaga	Cronstadt	Ogland	Nov. 3, cs
Jos. and Elizabeth		Selby	Blyth	London	Gunfleet	Dec. 20, cs
Juliet		Belfast			North Sea	Dec. 17, cs
Kitty		Warren		Plymouth	Cornwall C.	Dec. 25, os
Lady of the Isles		Trannack	Liverpool	Terceira	run foul of	Dec. 21, cs
Liberty	170	Harrington	Limerick	Glasgow	Laglan B.	Dec. 14, cs
Mansfield		Aberdeen	Leslie	Hartlepool	Johnson	Jan. 8, cs
Mantara		Ardrossan	Liddle	Leith	Malta	C. Strangfrd
Marine Plant		Wick	Newcastle	Galway	Rennure P.	Feb. 28, cs
Messenger		Sunderland	Livingston	London	Gunfleet	Jan. 2, cs
Milton	175		Palermo	Liverpool	Oystcrhaven	Dec. 15
Nonparell		Cork	Newport	Liverpool	Irish channl	Dec. 19, cs
Ocean		S. Shields	Shields	London	Kentish K.	
Oliver		St. Johns	Oliver	Wilmot	Boston	Nantasket
Palinurus			Allen	Demerara	London	Scilly
Peace	180	Scarboro'	Richards	Rostock	Hoy Sound	Dec. 23, 1d
Pictou		N. Shields	Clark	Boston	Galleyhead	Dec. 18, cs
Prince Charles			Honduras	Liverpool	St. Marys	Dec.
Prince of Wales		Sunderland	Watkin	Hamburg	London	Gunfleet
Pursuit		Yarmouth	Darnell	Newcastle	Yarmouth	North Sea
Rosanna	185	Dundee	Murray	Liverpool	Newcastle	up near
Royal George		Milford	her whole	stern picked		
Ruby		Arbroath	Clark	Ipswich	Wargo	Oct. 26, cs
Sarah		Pictou	Chisholm	Pictou	Glasgow	Indique, CB
Scotchman			Greig	Sheerness	Wargo	Oct. 25, cd
Sea Witch	190		Freeman	S. Leone	London	Guernsey
Shannon			Foote	Sunderland	Portsmouth	Foundered
Skylark			Devey	Hamburgh	London	Gunfleet
Susan			Morgan	Galatz		Hare I. Ireld
Swallow			Lovell	Petersburg	Liverpool	Nov. 15, cs
Teesdale	195	Stockton	Storey	London	Stockton	Hasboro'
Teniah					Liverpool	
Tigress		Linton	Ceylon	London	Off Dover	
Tigress		Guthrie	Leith	Adela de	G St. Vincnt	Sept. 26, cs
Trader		passed ab	andoned off	Bell Rock		Dec. 17, cs
Union Grove	200	Dundee	Hendry	Hull		Oct. 25, cs
Unicorn, steamer				Hull	Antwerp	Foundered
William		London		Shields		Jan. 22, cs
Williams		Donaghadee	McKie		off Stranraer	Jan. 10, od
Wanderer	204		Croston	Launceston	Mld. Head	July 9, cs

ATLANTIC :—REPORTED BANK.

Liverpool, March 17th, 1849.

SIR.—I beg to inform you that on my passage from New Orleans, to Liverpool 19th ult., the temperature of the water at 8 A.M. was 66°, at 10 A.M. 63°, and noon down to 60°; at 1 P.M. 61°, at 2 P.M. 63°, and at 4 P.M. 66° Latitude observation 40° 05'; Longitude observation 53° 45'; noon squally weather with a very heavy sea running, could not see more than 4 or 5 miles from the ship; no danger in sight; still I think there is a bank, or rock, not far from my situation at noon, may it not be Watsons Rock which is treated as doubtful.

I am, &c.,

JAMES AKETT,
Commander of the Ship "Corsair."

To the Editor N.M.

[Besides Watsons Rock alluded to, in 1841, *Nautical Magazine*, p. 780, a shoal was reported by the *Anna* in nearly the same position. These appearances are much in favour of there being something there. But the lead would soon have decided it had it been used, in addition to the above very judicious observations of the Master of the *Corsair*.—Ed.]

BATAVIA.—Dec. 28th: The Ocean Queen, Sutherland, of Aberdeen, from Singapore for London, struck on a coral reef, 9th inst., and sunk, crew and passengers saved. The following details have been furnished by Mr Sutherland:—At about 2 A.M. on the 9th inst. while steering S.E. $\frac{3}{4}$ S., with a strong breeze from the N.N.E., and a good deal of sea on, the ship running 9 $\frac{1}{2}$ to 10 knots an hour, struck on a coral reef eight or nine miles off the Great Domino, on the southern coast of Lingin. At the first or second stroke part of the false keel, or the main keel, or the bilge planks were broken off, and came up alongside. At 2h. 30m. the ship drove over this reef and got into six or seven fathoms water. The anchor was let go, but before sufficient chain could be run out the ship struck very heavily on a second reef. The force of this blow was so great as to drive the rudder up some five or six feet, and to split the main deck in two. The ship, which hitherto had made no water, was now filling rapidly. At about 6 A.M., she had sunk so much that the water was flush with the main deck. At 7 A.M., seeing there was no hope of saving the vessel, the passengers and crew left in the boats, taking with them only a small portion of their clothing, a bag of biscuits and a little water. They landed on the island of Great Domino, where they found neither food nor water; and fearing the piratical propensities of the inhabitants, they again got into the boats and steered for Minto, where they arrived early on the morning of the 11th inst. A small Dutch vessel has been sent from Minto to see if anything can be recovered from the wreck.

[Mr. Sutherland would be doing a service to his brother seamen by giving further information by which the above reef might be laid down.—Ed.]

EXAMINATION OF MASTERS AND MATES.

A List of all Masters and Mates who have voluntarily passed an Examination and obtained Certificates of Qualification for the Class against each assigned under the Regulations issued by the Board of Trade, to the 18th of December, last.

MASTERS.

Nov. 10th.—G. Barnes, class 1st, age 29, ship North Briton, 257 tons. Newcastle.—27th.—Hew Burn, 3rd, 36, Julindur, 530 t. London.—Dec. 1st.—R. Lonsdale, 2nd, 27, Dorothy,* 331 t. 179977, South Shields; W. Pollard, 2nd, 31, Perseverance,* 177 t. 52356; J. Cook, 2nd, 29, Fanny, 129 t. 45384, Newcastle; E. Smith, 2nd, 33, Othello,* 386 t. 258117; J. Taylor, 3rd, 33, 94846.—4th.—M. K. Johnson, 1st, 32, Tay,* 550 t. 306777, London; J. Sargent, 2nd, 35, Henrietta, 364 t. 30427; W. Thoms, 2nd, 41, Triad, 310 t.; J. Blyth, 3rd, 46, Rover, 405 t.; T. J. Thomas, 3rd, 33, Julindur,* 530 t. 13654.—5th.—G. W. Jackson, 1st, 36, Achilles* 1000 t. 410863, Plymouth; T. Carlyle, 1st, 27, Harvest Home, 458 t. 213443, Liverpool; S. Kelly, 1st, 38, Earl of 388 t. 392663; R. Jackson, 2nd, 26, Edwin, 220 t. Hull.—6th.—W. Weatherhead, 3rd, 33, Raby Castle,* 228 t. 11216, South Shields; J. Work, 2nd, 26, Sunbeam,* 225 t. 163575.—7th.—P. C. R. Gill, 2nd, 29, Stromboli,* London; J. B. Ronnie, 2nd, 33, John Mitchell,* 400 t. 29400, J. W. Miller, 2nd, 37, Samuel Enderby, 422 t. 327677; C. Young, 2nd, 39, Symmetry, 293 t.; W. Crickmay, 3rd, 65, Heroine, 307 t.; J. Mackellar, 3rd, 27, Conquering Hero,* 312 t. 89918; J. Douglas, 1st, 27, John Mitchell, 400 t. Glasgow.—8th.—P. Scott, 3rd, 33, Eaglet, 141 t. 55813, Newcastle.—11th.—W. Lister, 2nd, 35, Heroine, 375 t. London, J. W. Smith, 2nd, 33, David Malcolm, 538 t.; J. Bogle, 2nd, 31, 612 t. 28626; A. Anderson, 2nd, 39, Tory,* 485 t. 324987; C. H. Fretwell, 2nd, 41, La Bonne, Merc. 296 t.; D. Smith, 1st, 32, Dubrook, 600 t. 15482, Dundee.—13th.—R. Gordon, 3rd, 26, Robert and Isabella, 264 t. South Shields.—14th.—T. Knox, 2nd, 23, Thetis,* 184 t. 163529, Newcastle.—16th.—G. Simson, 1st, 21, Majestic,* 564 t. 272812, Leith.—18th.—R. Winter, 2nd, 50, Brunette, 263, t. London.

WRECK OF THE FORTH.—Of the various wrecks that have taken place lately, few have occasioned more surprise than the loss of the Forth on the Alacranes; an unfortunate danger for the West Indian Steam Company, this being the second loss sustained by them on the same shoal. Having read the commander's account of this wreck in the papers of the day, from mere curiosity we have laid down her track from the same document. A more effectual one to ensure the loss of the vessel could scarcely have been chosen than that of the Forth. Considering the position of the vessel at noon on the day before, running as she was nearly before a "*fresh gale*" from E.S.E., when a northerly current might be expected, as well as a drift of a mile an hour with the sea, she seems to have made good the very course and distance that might have been expected, and was brought up by the Alacranes!

The statement which we have used says, that soundings were tried for with "21 or 32 fathoms", at 8h. 50m. p.m.; one account says "21" and another "27 to 32." The vessel by the chart was then in about 29 fathoms. Again about midnight no bottom was got with "31" fathoms, when she must have been in about the same depth. But in trying for soundings were the engines eased, or was the vessel still at her full speed? If so, no wonder soundings were not gained. But the very fact of not getting soundings should have cautioned the Forth to stop her speed, and insist on having them, as she must have known that she was on the Campeche Bank, on which she might *feel* her way anywhere. We do not make these remarks from any unbecoming motive towards her commander; but it is time that the West India Company stopped such proceedings, and insisted on a proper use of the lead in their vessels. Such headlong running to destruction will not raise the character of their commanders as good navigators or seamen, for to this want of attention to the drift of the vessel before the gale, and the neglect of the lead, may be certainly attributed the loss of the Forth: her chronometer had nothing to do with it.

* As Mate.

TABLE LXXIV.

For reducing Killometres to English miles, and English miles to Killometres.

1 French kilometre = 0·6213824 Statute Mile.

1 English statute mile = 1·6093149 Killometre.

Killometres or Eng. miles	English miles, and Dec. parts	Killome- tres, and Dec. parts	Killometres or Eng. miles	English miles, and Dec. parts	Killome- tres, and Dec. parts	Killometres or Eng. miles	English miles, and Dec. parts	Killome- tres, and Dec. parts
1	0·621	1·609	40	24·855	64·373	79	49·089	127·136
2	1·243	3·219	41	25·477	65·982	80	49·711	128·745
3	1·864	4·828	42	26·098	67·591	81	50·332	130·355
4	2·486	6·437	43	26·719	69·201	82	50·953	131·964
5	3·107	8·047	44	27·341	70·810	83	51·575	133·573
6	3·728	9·656	45	27·962	72·419	84	52·196	135·182
7	4·350	11·265	46	28·584	74·028	85	52·818	136·792
8	4·971	12·875	47	29·205	75·638	86	53·439	138·401
9	5·592	14·484	48	29·826	77·247	87	54·060	140·010
10	6·214	16·093	49	30·448	78·856	88	54·682	141·620
11	6·835	17·702	50	31·069	80·466	89	55·303	143·229
12	7·457	19·312	51	31·690	82·075	90	55·924	144·838
13	8·078	20·921	52	32·312	83·684	91	56·546	146·448
14	8·699	22·530	53	32·933	85·294	92	57·167	148·057
15	9·321	24·140	54	33·555	86·903	93	57·789	149·666
16	9·942	25·749	55	34·176	88·512	94	58·410	151·276
17	10·563	27·358	56	34·797	90·122	95	59·031	152·885
18	11·185	28·968	57	35·419	91·731	96	59·653	154·494
19	11·706	30·577	58	36·040	93·340	97	60·274	156·104
20	12·228	32·186	59	36·662	94·950	98	60·895	157·713
21	13·049	33·796	60	37·283	96·559	99	61·517	159·322
22	13·670	35·405	61	37·904	98·168	100	62·138	160·931
23	14·292	37·014	62	38·526	99·778	150	93·207	241·397
24	14·913	38·624	63	39·147	101·387	200	124·276	321·863
25	15·535	40·233	64	39·768	102·996	250	155·346	402·329
26	16·156	41·842	65	40·390	104·605	300	186·415	482·794
27	16·777	43·451	66	41·011	106·215	350	217·484	563·260
28	17·399	45·061	67	41·633	107·824	400	248·553	643·726
29	18·020	46·670	68	42·254	109·433	450	279·622	724·192
30	18·641	48·279	69	42·875	111·043	500	310·691	804·657
31	19·263	49·889	70	43·497	112·652	550	341·760	885·123
32	19·884	51·498	71	44·118	114·261	600	372·829	965·589
33	20·506	53·107	72	44·740	115·871	650	403·899	1046·055
34	21·127	54·717	73	45·361	117·480	700	434·968	1126·520
35	21·758	56·326	74	45·982	119·089	750	466·037	1206·986
36	22·379	57·935	75	46·604	120·699	800	497·106	1287·452
37	22·991	59·545	76	47·225	122·308	850	528·175	1367·917
38	23·613	61·154	77	47·846	123·917	900	559·244	1448·383
39	24·234	62·763	78	48·468	125·527	1000	621·382	1609·315

The distances on French railways are given in killometres.

No. 4. Abstract of the passage made by H.M. steam ship *Terrible*, from Tetuan to Malta in 1846.

Date.	Distance		By the land	By obser- vation.	No. of days and hrs. steam.	Average. Speed per hour.	Rev. pr m.	Sail set.	Course.	Wind. Direction.	Strength.	State of the sea.	No. in use	Step of cam.	Boilers.		Pressure—steam	Mean. ft. in.	Draught.		Immersion of Paddle wheels.	Quantity.	Coal Expended.		Expended.						
	Knts.	b. m.													No.	ft. in.			ft. in.	Hourly.			Daily.	Oil.	Tallow.						
Sept. 25... 227	21 58	10:24	11	sqr sails for 12 hr.	E.b.S.	N.W.	5	s	2	5th	63	18	1 17/6	5	42	9	14	3	23	41	19	5	86	7	5	50	
25... 26 235	23 38	9:94	10½	none	E.	E.b.S.	4	little	2	5 & 6	6½	17	10 21/6	2	44	18	1	19	44	18	5	31	7	5	50		
26... 27 243	23 40	10:26	11	none	E.b.S.	E.	2	hd s	2	do	63	17	8 22/6	0	48	9	2	0	1	14	48	9	5	08	7	5	50
27... 28 256	23 40	10:81	11½	Fre & aft for 12 hr.	S.E.b.E.	N.	3	s	2	do	61	17	5 24/5	9	52	9	2	3	2	23	52	9	4	95	7	5	50
28 ... 16	1 25	11:30	11½	none	S.S.E.	S.E.	3	s	2	do	61	17	5 24/5	9	5	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals 977	d. h. 3 22½	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Average	10:33	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

½ hd. s. head sea—s. smooth—Coal used:—Indifferent and Bad.

DANISH BLOCKADE.

Foreign Office, March 23.

It is hereby notified that Viscount Palmerston, Her Majesty's Principal Secretary of State for Foreign Affairs, has received a despatch from Her Majesty's Minister at Copenhagen, stating that he had received from the Danish Minister a notice that all the ports of Holstein and Schleswig, with the exception of Als and Ærøe, will be blockaded on and after the 27th of the present month. The notice is as follows:—

“The Minister of the Navy hereby makes known that all harbours and ports in the Duchies of Schleswig and Holstein will, from the 27th of this month, be blockaded, excepting, of course, the islands of Als and Ærøe, and such other places as are actually under the Royal Government.

“The blockade will be raised for every place returning under the lawful Government; and special notice will be given whenever such places are excepted from the blockade.

The Ministry of the Navy at Copenhagen, the 7th of March, 1849.

ZAHRTMANN.

THE ARCTIC EXPEDITION.

Three or four bags of Private Letters, communications to Sir James Ross, have been sent out by all the Whale Ships, and a box with Ten Cylinders, hermetically sealed, has been sent to each of seven ships with Dispatches to be buried in different parts of the coast on the west side of Baffins Bay. Such spots being selected as are named by Sir James Ross as those at which the *Investigator* will leave notice of her proceedings in running out of Lancaster Sound to endeavour to communicate with the Whale Ships.

The following paper has been laid before the House of Commons:—

Admiralty, March 23, 1849.

“The Lords Commissioners of the Admiralty are under the necessity of laying a supplementary estimate for the relief of the Arctic Expeditions under Sir John Franklin and Sir James Ross, upon the table of the House.

“Their Lordships having been apprised by the last letters received from Sir James Ross that it was his intention to direct the *Investigator* to land all the supplies that she could spare at Whaler Point, and to proceed to England, if no tidings of the expedition under Sir J. Franklin were received by the whale ships now about to sail, leaving the *Enterprise* to prosecute the search alone, have consulted the highest naval authorities as to the probable consequences of this step.

“They find it to be the unanimous opinion of those most conversant with the Polar Seas, that such a separation of the ships under Sir James Ross would be most perilous to the ship remaining in the ice, and would probably neutralise the entire object of the expedition, if Sir John Franklin's party were to be discovered at the time when the *Enterprise* had nearly exhausted her own stores. They have, therefore, determined upon sending out a fresh supply of provisions for both ships by the *North Star*, which is now fitting for this purpose at Sheerness, with orders to proceed across Baffins Bay, and as much farther as practicable in the direction of Lancaster Sound and Barrow Straits, looking out for the *Investigator* or her boats.

“In the event of the *Investigator* not being fallen in with, the commander of the *North Star* will be directed to land the supplies at such points on the south side of Lancaster Sound, or other places indicated by Sir James Ross,

as may be accessible to the *North Star*, in sufficient time to secure his return across Baffins Bay before the winter sets in.

"The expense of fitting the *North Star* for the ice will be £6,086, and the wages of the crew, stores, and provisions on board £6,602, making £12,688, in all, which constitute the supplementary estimate now submitted to the House. But, in addition to this, Her Majesty's Government has determined to offer a reward of £20,000, to be given to such private ship, or distributed amongst such private ships, of any country, as may, in the judgment of the Board of Admiralty, have rendered efficient assistance to Sir John Franklin, his ships, or their crews, and may have contributed directly to extricate them from the ice.

"H. G. WARD."

NEW CHARTS.

A List of published and corrected Charts from the Hydrographic Office, Admiralty, in March, 1849.

PORT PUEBLO NUEVO, (<i>Central America</i>), <i>Capt. Sir E. Belcher, C.B., R.N.</i> , 1849		
		price 1s. 6d.
BODEGA BAY, (<i>California</i>),	<i>Ditto</i>	price 1s. 6d.
PORT ST. QUENTIN, <i>Ditto</i>	<i>Ditto</i>	price 1s. 6d.
ST. LUCAS <i>Ditto</i>	<i>Ditto</i>	price 1s. 6d.
VANCOUVER ISLAND AND GULF OF GEORGIA, <i>Capt. Vancouver and Kellet, R.N.</i> , 1792 and 1847, price 1s. 6d.		
NOOTKA SOUND, with plan of Friendly Cove, <i>Capt. Sir E. Belcher, C.B., R.N.</i> , 1839, price 1s. 6d.		
CAPE BLACKWOOD TO CAPE POSSESSION, (<i>New Guinea Island, south side Torres Strait</i>), <i>Lieut. Yule, R.N.</i> , 1846, price 1s. 6d.		
PORT JACKSON, (<i>Aust. aliu.</i>), <i>Capt. O. Stanley, R.N.</i> , corrected to 1848, price 1s. 6d.		
CANALE DELL' ARSA, (<i>Adriatic</i>) <i>Mr. Roberts, Master R.N.</i> , 1848, price 1s.		
WATERLOO BAT, (<i>South Africa</i>), <i>Lieut. Forsyth, R.N.</i> , 1845, price 6d.		

COALS FROM FORMOSA.—A cargo of coals consisting of 80 tons was last week imported into Hongkong in a Chinchew junk from Formosa. On trial we are informed by a competent judge they have maintained the high character formerly given of them, and the whole have been disposed of at 7½ dollars per ton. We are informed the shipper declares this price is not sufficient to remunerate him, but as this complaint is frequently made without much cause, and all we have previously learnt about trouble and expense (when the *Vixen* visited Formosa it was believed a large supply of coals could be procured there at 2 dollars per ton,) required to obtain them in Formosa lead so directly to a contrary conclusion, we think it probable a further supply may be confidently looked for. On the other hand the expected increase of steam navigation, will always secure a steady demand here, so that we hope at no distant time to see this valuable mineral form an important article of exchange in our dealings with the Chinese.—*Hong Kong Register*.

PETTIGREW'S LIFE OF NELSON.—We are scarcely allowed room by the pressure of other matter for the following elegant lines on Lady Hamilton, from the pen of Dr. Beattie, which we promised in our last number.

"And here is one—a nameless grave;—the grass
Waves rank and dismal o'er its crumbling mass,
Of mortal elements,—the wintry sedge
Weeps drooping o'er the ramparts' watery edge;—
The rustling reed—the darkly rippling wave—
Announce the tenant of the lonely grave!

“Crushed in a pauper's shell, the earth scarce heaves
 Above that trodden breast ! the turf scarce leaves
 One lingering token that the stranger found,
 ‘Ashes for hope’ in that unhallowed ground ;
 And ‘dust for mourning ;’ levelled with the soil
 The wasting worm hath revelled in its spoil—
 The spoil of beauty ! This the poor remains
 Of one who, living, could command the strains
 Of flattery's harp and pen ! whose incense flung
 From venal breath upon her altar, hung
 A halo ; while in loveliness supreme,
 She moved in brightness, like the embodied dream
 Of some apt minstrel's warm imaginings,
 The more than form and face of earthly things.
 Ah, when hath heart so warm, have hopes so fair
 Been crushed amid the darknes of despair ?
 With broken heart, and head in sorrow bound,
 Hers was the midnight bier the borrow'd shroud !

“Few bend them at thy bier, unhappy one ;
 All know thy shame, thy mental sufferings none ;
 All know thy frailties, what thou wast and art !
 But thine were faults of circumstance—not heart !
 Thy soul was formed to bless, and to be blest
 With that immortal boon—a guiltless breast,
 And be what others seem,—had bounteous heaven
 Less beauty lent, or stronger virtue given !
 The frugal matron of some lowlier hearth
 Thou hadst not known the splendid woes of earth !
 Dispensing happiness and happy—there
 Thou hadst not known the curse of being fair !
 But like yon lonely vesper star, thy light—
 Thy love—had been as pure as it was bright !

“I've met thy pictured bust in many lands ;
 I've seen the stranger pause, with lifted hands,
 In deep, mute admiration, while his eye
 Dwelt sparkling on thy peerless symmetry !
 I've seen the poet—painter—sculptor's gaze
 Speak, with rapt glance, their eloquence of praise ;
 I've seen thee, as a gem in royal halls,
 Stoop like presiding angel from the walls,
 And only less than worshipp'd ! Yet tis come
 To this ! when all but slander's voice is dumb !
 And they who gazed upon thy living face,
 Can hardly find thy mortal resting place.”

BIRTHS, MARRIAGES, AND DEATHS.

BIRTHS.

- Feb. 25, at Escot Cottage, the lady of Lieut. F. A. Smith, R.N., of a son.
 Mar. 4, at Wyndham Place, the lady of H. S. Dyer, Esq., R.N. of a daughter.
 Mar. 9, at Bath, the lady of Captain Adams, of a son.
 Mar. 14, at Swanage, the lady of Capt. Pilkington, of a son.
 Mar. 14, at Portsea, the lady of M. T. Wright, Esq., R.N., of a daughter.
 Mar. 14, at New Cross, the lady of A. J. S. Eames, Esq., Secretary of the Royal Naval School, of a son, still born.
 Mar. 14, at Cranborne, Dorset, the lady of Capt. Curry, of a son.
 Mar. 19, at Sheerness, the lady of Mr. J. Belam, Master of H.M.S. Ocean, of a daughter.

MARRIAGES.

DEATHS.

Mar. 6, at Carrigline, A. Nepean, Esq., R.M., to Elizabeth Jane, daughter of N Seymour, Esq., Cove.

Feb. 23, at Gibraltar, Duncan Augustus, son of Rear-Admiral D. Campbell.

Mar. 10, at Stonehouse, Walter H. Molesworth, Esq., to Frances Mary, daughter of Capt. Twysden, R.N.

Mar. 14, at Guildford, Mary, widow of the late J. Andrews, Esq., Inspecting Commander.

METEOROLOGICAL REGISTER.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory from the 21st of February, to the 20th of March, 1849.

Month	Day.	Barometer						Wind.				Weather.		
		In Inches and Decimals.		In the Shade				Quarter.		Strength.		A. M.	P. M.	
		9 A.M.	3 P. M.	9A	3P.	Min	Max	A.M.	P.M.	A.M.	P.M.			
		In Dec	In Dec											
21	W.	30.01	29.99	38	46	35	47	W	W	3	2	bc	or [4	
22	Th.	29.80	29.81	51	53	43	55	NW	W	4	5	bc	qbcp [3	
23	F.	30.00	30.00	39	47	36	50	W	SW	3	3	bm	bc	
24	S.	29.67	29.67	45	42	38	46	SW	N	3	3	or [2]	or [3 4]	
25	Su.	29.52	29.50	41	45	37	47	SW	SW	2	2	or [1]	bcphr [3 4]	
26	M.	29.45	29.71	40	42	37	43	N	NE	5	4	qor [1] [2	bc	
27	Tu.	30.04	30.06	32	44	28	46	NE	SE	2	3	bc	bc	
28	W.	29.65	29.38	43	46	38	47	SW	SW	5	7	qor [1] 2]	qors [3] [4	
1	Th.	29.43	29.38	37	43	32	44	NW	NW	6	6	qbc	qbc	
2	F.	30.14	30.20	42	50	39	51	SW	W	3	4	bc	bc	
3	S.	30.39	30.42	43	51	39	52	SW	SW	2	1	o	o	
4	Su.	30.50	30.50	47	55	44	56	SW	SW	2	2	bc	b	
5	M.	30.48	30.55	45	53	39	54	SW	SW	1	1	o	o	
6	Tu.	30.66	30.54	41	52	35	43	W	W	1	1	b	bc	
7	W.	30.06	29.93	47	52	42	54	W	W	5	5	qbc	qor [4]	
8	Th.	29.85	29.80	42	44	40	46	W	NW	1	5	bc	qbcphr [4]	
9	F.	29.94	29.92	32	38	27	39	NW	NW	5	4	qbm	bcps [4	
10	S.	30.30	30.40	35	40	31	41	N	N	5	3	qbc	bc	
11	Su.	30.48	30.40	35	42	31	43	W	W	1	4	o	o	
12	M.	30.16	30.15	49	53	38	54	NW	NW	3	4	o	o	
13	Tu.	30.07	30.17	50	51	45	54	NW	N	4	4	bc	og	
14	W.	30.32	30.30	41	47	40	48	W	W	1	2	ogm	bcm	
15	Th.	30.35	30.32	48	52	46	53	NW	NW	2	2	og	o	
16	F.	30.33	30.32	48	52	47	53	NW	NW	1	2	ogm	o	
17	S.	30.34	30.31	43	54	37	55	S	NW	1	1	b	bm	
18	Su.	30.20	30.14	40	47	36	48	SW	SW	1	1	o	bcm	
19	M.	30.06	30.03	41	49	39	41	SE	SE	2	2	of'	bc	
20	Tu.	30.15	30.21	42	48	36	49	E	NE	2	2	o	bc	

FEBRUARY 1849.—Mean height of Barometer=30.171 inches; Mean Temperature=42.3 degrees; depth of rain fallen=2.46 inches.

TO CORRESPONDENTS.

The great mass of our *Hydrographical information* has compelled us to defer for our next number several important notices.

The letter of ALIQUI, and that from the ROYAL ADELAIDE, will appear in our next.

DR. HUMBLE's letter received. The subject does not claim for it immediate attention.

We are requested by Mrs. BISCOE to express her grateful acknowledgements for the attention which her case has met with, and is still receiving from the readers of the *Nautical*.

Hunt, Printer, St. Alban's Place, Edgware Road.

THE
NAUTICAL MAGAZINE

AND

Naval Chronicle.

MAY, 1849.

CALIFORNIA AND PANAMA.

“ Jump away, Jonathan,
Jig along, Jemima,
California's made of gold;
We'll get as rich as Lima.

“ Come, lads, leave your dads;
Search for gold so brisk, oh!
Cut stick, right slick; and
Sail for San Francisco.”—*Yankee Melody.*

So runs the popular note of invitation; and thousands continue to obey its impulse. It is with deep regret that we see how widely the infatuation for Californian gold-hunting is spreading itself on our side of the Atlantic. Let the supplies of gold dust prove as ample as the boldest speculator has yet hoped for, the lot of all *honest* emigrants to California during the period of the first scramble is sure to be deplorable, and when the first scramble is over, and the United States Government has taken measures to secure the management of its new treasures, it will be as useless for adventurers to go there in the hopes of picking up and appropriating the gold, as it would for them to go to the mines of Cornwall in the hopes of picking up and appropriating the tin.

The American papers have mentioned one fact connected with the rush to California, which speaks volumes as to the ruffianly character of thousands of the new colonizers of the Golden-land, and of the utter insecurity for person and property that at present prevails there. The circumstance we mean, is the significant announcement that at the places where the adventurers collect before they start for California, “revolving pistols have risen in price cent. per cent.”

My adventures in California among the "diggings" have not been attended with "hair-breadth escapes," but have enabled me to collect some little history of the extraordinary discoveries there, which have spread a hunting mania after gold in this quarter of the globe, greater than ever there was after foxes at home. A complete history of the discovery is given in the following from *The Californian*.

In the beginning of the month of February last year, Messrs. Marshall and Bennett were engaged with a party in erecting a saw mill for Capt. J. A. Sutter, on the American Fork of the Sacramento River, about forty miles above its mouth. In excavating the tail race, they removed the rock during the day, and let the water in at night, in order to wash out the loose dirt and sand. On the morning of the 10th, after shutting off the water, Mr. Marshall discovered the first gold, lying upon decomposed granite in the bottom of the race. It would seem that but little doubt was entertained of its being the real *Simon Pure*, for operations immediately ceased on the mill, and all hands commenced searching for gold. It was soon found that gold abounded along the American Fork for a distance of thirty miles.

For a time the discoverers were the only ones aware of the fact, but the news finally spread through the settlements. But little credit, however, was gained by the report, though occasionally a solitary "gold hunter" might be seen, stealing down to a launch with a pick and shovel, more than half ashamed of his credulity. Some time during the month of May, a number of credible persons arrived in town from the scene of operations, bringing specimens of the ore, and stating that those engaged in collecting the precious metal were making from 3 to 10 dollars per day. Then commenced the grand rush! The inhabitants throughout the territory were in commotion. Large companies of men, women and children could be seen on every road leading to the mines, their wagons loaded with tools for digging, provisions, &c. Launch after launch left the wharves of our city, crowded with passengers and freight for the Sacramento. Mechanical operations of every kind ceased, whole streets, that were but a short week before alive with a busy population, were entirely deserted, and the place wore the appearance of a city that had been suddenly visited by a devastating plague. To cap the climax, newspapers were obliged to stop printing for want of readers.

Meantime our mercantile friends were doing an unwonted stroke of business. Every arrival from the mining district brought more or less gold dust, the major part of which immediately passed into the hands of the merchants for goods, &c. Immense quantities of merchandise were conveyed to the mines, until it became a matter of astonishment where so much could be disposed of. During the first eight weeks of the "golden times," the receipts at this place in gold dust amounted to 250,000 dollars. For the eight weeks ending at this date, they were 600,000 dollars. The number of persons now engaged in gold hunting will probably exceed 6,000, including Indians; and one ounce per day is the lowest average we can put for each person, while many collect their hundreds of dollars for a number of days in succession, and instances

have been known where one individual has collected from 1500 to 1800 dollars of pure gold in a day. Explorations have been progressing, and it is now fully ascertained that gold exists on both sides of the Sierra Nevada, from lat. 41° N. to as far S. as the head waters of San Joaquin river, a distance of 400 miles in length, and 100 miles in breadth. Farther than this has not been explored, but from the nature of the country beyond the sources of the San Joaquin, we doubt not gold will also be found there in equal abundance. The gold region already known is, however, sufficiently extensive to give profitable employment to 100,000 persons for generations to come. The ore is in a virgin state, disseminated in small doses, and is found in three distinct deposits—sand and gravel beds, on decomposed granite; and intermixed with a kind of slate.

For a long time subsequent to the discovery of the mines, the only implements used in washing the gold were large tin pans, or Indian baskets. Latterly, machines were used, at first a rough log hollowed out (in some instances) by burning, and scraping with a butcher's knife; afterwards more finished ones made their appearance built of red wood boards in the shape of an ordinary trough, "about ten feet long and two feet wide at the top, with a riddle or sieve at one end to catch the large gravel, and three or four small bars across the bottom, but half an inch high to keep the gold from going out with the dirt and water at the lower end. This machine is set upon rockers, which gives a half rotary motion to the water and dirt inside." Four men are requisite to work one of these machines properly.

Within the past month many sick persons from the mines have arrived at this place, and scarcely a launch comes down the Sacramento without more or less sick persons on board, while some die on the river. The very natural inferences drawn from this by those who have never been at the mines is, that they lie in a sickly section of country, and those at work there are in daily expectation of being taken sick. In our opinion however, nothing can be farther from the truth. As far as our experience goes, it is on the larger rivers only where disease prevails, and in passing up or down them the person not in perfect health is almost invariably the one to become sick. We have observed but few, very few cases of sickness in the immediate neighbourhood of the mines, but such as we believe would have occurred under similar circumstances in any other climate. Let the miner pass the Sacramento safely, and we would almost insure any person's doing so that was perfectly regular and temperate in all his habits. Let him not when he arrives at the mines, work as though he was privileged to operate for a limited time only, but *poco a poco*, resting at proper intervals; let him abstain from the free use of intoxicating drinks, living upon wholesome food, avoiding for instance half-baked hot bread; let him sleep under the shelter of a tent, with warm bed clothing, and if, after following our advice in all these particulars, the gold hunter becomes sick, why, we do not know any thing about the matter.

The Editor's remarks are very good, but mark the sequel:—

Mr. Consul Forbes gives the following account of the proceedings on the Sacramento:—

Up to the date of the 8th August, various reports reached Monterey, and this place, that a definite treaty of peace had been celebrated between the United States and Mexico; but no official notice of such treaty was received by the United States authorities in California until that date, when Colonel Mason, the United States Military governor of this province, published a manifesto notifying the inhabitants thereof, that a treaty of peace was celebrated between those two powers on the 30th of May. Herewith I send you a copy of that manifesto, contained in a newspaper published here, and another of this day's date, containing the President of the United States message to the Senate, announcing the ratification of that treaty.

The account of the discovery and extent of the gold washings as described in the last mentioned newspaper, is correct. My official report thereof to her Majesty's consul at Tepic stated that the daily produce of those washings was from 20 to 25,000 dollars per day. My authority is Colonel Mason, the governor of California, who visited a part of the district in which the gold is found and made strict enquiry in relation to the extent of country upon which it had been discovered. This gentleman assured me, that the daily produce of gold, was not less than 30,000 dollars; since that period, the gold has been found in abundance over a great extent of country.

The effects of the discovery of gold in such abundance, has been an immediate stagnation of every mechanical and agricultural pursuit. There has been a constant rush of individuals of all classes, to the Auriferous harvest; every vessel that has entered this harbour since the middle of May, has lost a part or the whole of her crew by desertion; and those which have left the port, have had the greatest difficulty in obtaining seamen, at from 50 to 100 dollars per month.

The volunteer troops of the United States in California, have deserted in great numbers. The officers in command have not been able to prevent this desertion, far less to retake the deserters of their corps; and the shipping, nineteen sail of which lie here at the present moment are without the means of moving.

On the 7th of August all the remaining volunteers were disbanded, leaving the country with one company of dragoons.

According to the established custom in Mexican provinces, gold washings are free for all and every person who chooses to work; and upon this principle, the inhabitants of California have entered upon the land containing the gold.

Every man works armed with rifle or pistols: and such is their numerical strength, and utter disregard of law, that it is impossible for the authorities to do anything towards acquiring the exclusive dominions of the land, or of preventing desertions, either from vessels or from any military force that might be placed in the country for the preservation of order.

Up to the present time no measures have been taken by the authori-

ties in California either for the imposition of any tax upon the product of the gold washings, or for assuming the immediate and exclusive dominions of those washings.

The vast extent of country upon which the gold is found, would require a very large force to prevent private individuals from extracting the gold.

The gold is found in small particles in the bed of the rivers ; and generally large upon the hills, and in the crevices of the strata. It is not at all rare to find pieces of from one to three ounces, troy weight, and many pieces have been found of much greater weight. The quality of the gold is good ; being 23½ carats fine by assay made at the quick-silver mines.

The gold diggers generally work in small companies of six or eight. They have a tent, provisions, cattle, and horses. Each takes his turn in cooking and keeping camp. Four or five are engaged in getting out gold, and one or two in what they call prospecting—that is, hunting for some richer veins or deposit. They are a merry set of fellows, full of excitement and fun. They undergo great fatigue and make sport of their hardships. They throw an air of levity about the acquisition of gold, which makes a burlesque of the anxious faces you sometimes meet on 'Change.

They lose their earnings at the gaming-table with as little concern as you would an old garment with a new one to take its place. There is more where that came from, is their expression, and the next day they prove it true. The whole economy is changed. The ditcher, hand-hopper, and butt-hender are the most independent men in the community—each has his bag of gold and can fill it ten times as fast as his wants can empty it.

I doubt if there will be, by the time this reaches you, fifty soldiers at all our military posts in California. They will be in the mines; and if you send the few that remain to bring them back, they will themselves go a digging for gold.

Nor does the navy fare a whit better. Let a man-of-war anchor in our harbour to-morrow, and in three weeks she would hardly have men enough to get her to sea. Seamen who have been on the station five years, and who have four or five hundred dollars due to them, forfeit the whole and escape to the mines. The only way a merchant vessel gets to sea is to give the men a strong interest in the voyage. There is no discipline, except what they choose to establish among themselves; each for the time is cock of the walk.

PROCLAMATION.—To the People of Upper California.

San Francisco, September 2nd, 1848.

The undersigned has the pleasure to announce the ratification of a Treaty of Peace and friendship between the United States of America and the Mexican Republic, by which Upper California is ceded to the United States.

The boundary separating this country from Lower California, consists of a straight line drawn from the middle of the Rio Gila, where it unites with the

Colorado, to a point on the coast of the Pacific Ocean, distant one marine league due south of the southernmost point of the port of San Diego.

By the conditions of this Treaty those residing within the limits of the territory thus ceded, who may wish to become citizens of the United States, are absolved from all further allegiance to the Mexican Republic, and will, at the proper time (to be judged of by the Congress of the United States) be incorporated into the Union, and admitted to the enjoyment of all the rights and privileges granted by the constitution to American citizens. Those who wish to retain the character of Mexicans will be at liberty to do so, and also to retain their property in this territory, or to dispose of it, and remove the proceeds thereof wherever they please. But they must make their election within one year from the 30th of May last; and those who remain after the expiration of that year, without declaring their intention to retain such character, will be considered to have elected to become citizens of the United States. In the mean time they will be protected in the pre-enjoyment of their liberty and property, and secured in the free exercise of their religion. They however are reminded that, as war no longer exists, and as Upper California now belongs to the United States, they owe a strict obedience to the American Authorities; and any attempt on their part to disturb the peace and tranquillity of the country, will subject them to the severest penalties.

The undersigned has received instructions from Washington to take proper measures for the permanent occupation of the newly acquired territory. The Congress of the United States (to whom this power alone belongs) will soon, confer upon the people of this country, the constitutional rights of citizens of the United States, and no doubt in a few short months we shall have a regular organized territorial government; indeed there is every reason to believe that Congress has already passed the act; and that a civil government is now on its way to this country, to replace that which has been organized under the rights of Conquest. Such territorial government will establish all local laws and regulations, which, within the scope of its legitimate powers, it may deem necessary for the public welfare. In the mean time, the present civil officers of the country will continue in the exercise of their functions as heretofore, and when vacancies exist or may occur, they will be filled up with regular elections held by the people of the several towns and districts, due notice of such elections being previously given. The existing laws of the country will necessarily continue in force till others are made to supply their place.

From this new order of things there will result to California a new destiny; instead of revolutions and insurrections, there will be internal tranquillity. Instead of a fickle and vacillating policy there will be a firm and stable government, administering justice with impartiality; and punishing crime with the strong arm of power. The arts and sciences will flourish; and the labours of the agriculturists, guided by the lamp of learning, will stimulate the earth to the most bountiful production. Commerce freed from the absurd restrictions formerly imposed, will be greatly extended; the choked up channels of trade will be opened, and the poisoned fountains of domestic faction for ever dried up.

Americans and Californians will now be one and the same people, subject to the same laws, and enjoying the same rights and privileges. They should therefore become a band of brothers emulating each other in their exertion to develop the wealth and resources, and to secure the peace, happiness, and permanent prosperity of their common country.

Done at Monterey, California, this seventh day of August, 1848.

(Signed)

R. B. MASON,

Col. 1st Dragoons and Governor of California.

Every thing said of the mineral wealth of the country is fully confirmed, but the dark side of the picture that loomed up heavily in the distance, begins to assume a painful form and colour. Murder and robbery on shore, mutiny and piracy at sea, have become fearfully prevalent. The American commodore, under date 22nd Dec. says:—

Incredible quantities of gold are yet daily collected; and scarcely a week elapses without some new discovery of the precious metal more startling than any previous one. It is said that a small party of five or six persons, a few days past, struck upon a pocket, as they term certain deposits, from which, in two days, they obtained 30,000 dollars of pure gold.

The worst forebodings of evil consequent upon the want of certain and energetic administration of justice in this territory are almost daily realized. Within the last three weeks we have certain accounts of fifteen murders. In one instance an entire household of ten persons, a respectable ranchero, his wife, two children, and six servants. The man; whose name was Reed; had been very successful in the diggings during the summer, and had returned to his home near Santa Barbara, with a large amount of gold. His house was surprised by an armed party, and the whole family, as above stated, were barbarously murdered, and the house rifled of its golden treasure. The perpetrators of this horrid deed are still at large. Of the other five cases four are highway robberies, committed on persons returning with gold from the mines. In a word, I may say with truth, that both persons and property are insecure in Upper California at this time.

Commodore Jones, in his responsible and difficult position is doing his best to preserve order, and to establish a maritime police in the Pacific. He says:—

The mutinies, attended with murder, to which I alluded in my letter No. 43, have been fully confirmed; and, not without good reason, have caused much uneasiness to shippers of gold from this coast.

To guard each and every vessel sailing hence with large sums in gold dust would require every ship of the navy. The best I can do is to keep vessels of this squadron at sea as much as possible, plying between the ports most frequented by our mercantile marine.

The commodore has instructed his captains to board every vessel of which they may have the least suspicion, and to verify the state of affairs on board with that declared in the ship's papers. The mercantile and commercial community owe him thanks for this prompt measure, which he instructs his officers to execute with all due forbearance and delicacy. It may, nevertheless, give rise to some grumblings about the violation of flags, and the rights of nations.

Capt. Folsom says:—The gold mines continue to be as rich as before, although the rainy season has caused many to suspend their work. There can be no doubt that at least 4,000,000 dollars of gold, at 16 dollars per ounce troy, have been taken from the mines. The most accurate estimates I am able to make show that 1,500,000 have been sent from the country, and 1,000,000 dollars of it has gone from this port.

One vessel took 400,000 dollars. Two-thirds of all that has been exported has gone to foreign countries, and consequently, to foreign mints.

Since I last wrote to you, the affairs of this country have been constantly getting worse. We have no government here, either civil or military, and the country full of lawless men, who are committing the most shocking outrages. *Murders and robberies are of daily, and I might almost say of hourly occurrence.* Not an arrival occurs from the north, south, or the interior, but notifies the community of new acts of villainy which go unpunished. Within six weeks *more than twenty murders have occurred in a white population of less than 15,000.* The people are now acting in self-defence; and four or five days since *three men were hung by Lynch law*, sixty miles from this place.

The inhabitants of San Francisco and the settlers have adopted very striking resolutions in self-defence. At a public meeting held on the 23rd of December they decided to form a *Provincial Government*, and agreed that a convention should meet on the 4th of March for organizing it, and that delegates to this convention should, in the meantime, be elected. This was to be expected; but the most curious part of the affair has been slurred over by the Press. The officers of the United States Government have, it seems, gathered in custom-house dues in the last few months a sum said to amount to 400,000 dollars. The Californians, in a plain strait-forward manner, lay claim to the amount. The resolutions were so singular that we must make room for them entire.

Resolved.—That in the opinion of this meeting, the duties which have been collected in the several ports of Upper California, since the 15th day of August, 1848, rightfully belonging to the people of this territory, as, at that date, the ratification of the treaty of peace between the republics of Mexico and the United States of America which occurred on the 30th day of May, of the present year, was fully known throughout the entire settlements of this territory, and rendered the continuance of extraordinary military occupation unnecessary, and of consequence annulled the military contribution duties that existed during the war.

Resolved.—That, in the opinion of this meeting, the right of any description of taxation exists only in the necessity of incurring and defraying the expenses of the government of the people so taxed; and as the United States of America have not established any government over California since its cessation by Mexico, therefore, such duties as have been collected since the disbandment of the extraordinary military force, justly belong to the people, of this territory, and should be claimed for our benefit by the government we may succeed in creating.

Whether the United States Government will yield, or the Californians abandon their position, so boldly taken, is matter of much interest. It probably depends on the turn that circumstance may take in that direction. To us the resolutions have a singular colonial twang in them that renders them still more remarkable.

But few who have contracted the California fever have counted the whole cost of going there, or the prospect after getting there. After the

the dangers of the voyage, whether by land or sea, are surmounted, the chances of making money are to be calculated. A large portion of those who reach there, especially from Mexico and the islands, (of the desperado character,) are unprovided with food or necessaries for any length of time, and they must purchase them from the proceeds of their digging. Now, prices are represented at 50 dollars per barrel for flour, and other things in proportion. In this country, say at New York, the great commercial metropolis, flour is 5 dollars per barrel, and other things in proportion; therefore, we may measure expenses by flour. Thus, a man in New York, with 10 dollars a week wages or income, commands goods equal to two barrels of flour. In California he must have 100 dollars per week, or say 17 dollars per day, to command the same supplies.

Having completed water, we sailed from Mazatlan on the 24th for the Islands of Santa Barbara Channel, and made the Island of San Miguel, the north-western of the group, on the 26th, and anchored in a bay on the east side of Santa Rosa, the middle island, the day following. In this bay we were detained till the 2nd of October, during three days of which it was blowing a strong gale from the W.N.W., from which the bay affords excellent shelter.

This part of the group consists of a chain of three large islands lying nearly east and west,—San Miguel the western and smallest, Santa Rosa, and Santa Cruz the eastern and largest; off the east end of which are a group of rocky islets called the Anacapas. We found good shelter from another strong north-westerly breeze in a small bay on Santa Cruz, abreast these islets. There is said to be also good anchorage in a large bay on the northern face of this island, which the boisterous state of the weather did not permit us to look at. Here we found good water, but in small quantities, at both anchorages; and both cattle and horses were seen on Santa Rosa.

On the evening of the 6th we left Santa Cruz for Santa Barbara, which island we made the next morning. It is a mere islet, one mile and a half in diameter, with a large rock off its southern end, and lies abreast of the north-western end of Santa Catalina, from which it is nineteen or twenty miles distant. The next day we ran along the north-western face of the latter island, on which there is a small, but very snug cove or harbour, quite defended from all winds. In this harbour we anchored the vessel, and found a bay on the opposite side of the island from which the head of the harbour is divided by a low peninsula of not more than one quarter of a mile broad; high hills rising on either hand direct from the coast line. We had some difficulty in getting to sea the next day from the calms and flaws caused by the high land; which, with the great depth of water close to the entrance, from 40 to 60 fathoms, and the swell constantly running, must always prove a great drawback to its use as a harbour.

Goats in thousands were met with; but we could find no water in either of these bays. There are said to be some wells in a bay on the

southern end, which we did not meet with; but most of the gulleys must contain pools of water, else so many thousand head of goats could not exist. San Clemente is the southern one of the group.

From San Clemente we stood over to the Coronados, and from thence along the coast to St. Quentin. And from thence to the Island of Cedros, off which we arrived on the 21st, having experienced strong southerly and south-westerly breezes with rain and general bad weather the whole of the time. We reached the anchorage at the south end of Cedros the next day, from whence we visited San Benito and Natividad, and left for Mazatlan: light airs and calms retarded our progress so that it was the evening of the 6th before we arrived abreast Cape St. Lucas; we were becalmed two days off it, and did not reach Mazatlan till the afternoon of the 9th. On the 31st of December we arrived at Panama.

This place is in a state of effervescence from the arrival of crowds of Yankees bound for the gold mines; five hundred have come into this small town during the last week or ten days, so that neither food nor lodging can be found for them, nor can they get away, as there are no vessels here to convey them; and the steamer on which they all build their hopes will not be here for these three weeks or a month, and when she does come she will be too crowded to take more than those who have paid their passage in New York. The Governor of California, a general Secretary, and his suite are amongst them, as also Surveyors, Judges, Land Agents, and a motley crowd of others not more different in their occupations than in their garb, and that is queer enough in some. Provisions have risen more than 100 per cent. and cholera, &c. is at work amongst them, owing to the bad food they have been eating, and the weather they have been exposed to. I fear there will be some sad scenes here before they get away.

Some cases of cholera have occurred also amongst emigrants who now crowd this place; several have died, and the remainder are much frightened. You would be amused to see the specimens of Yankee land that fill the streets: amongst the various *professions* are, a round dozen of professed gamblers, who are going to California for the express purpose of easing the gold-gatherers of the proceeds of their diggings. Several lady-like women, who are accompanying their husbands, have suffered very much crossing the Isthmus, which they had to do "Como Caballeros," much to their shame, horror, and punishment, for the road (if such it can be called) is now almost impassable from the rains and effects of the traffic. Three hundred men are at work repairing it, but I fear they are too late.

A small schooner, the only one in the port, was bought for 6,000 dollars, and sailed immediately, taking forty passengers at 150 dollars each. There is also a large ship here with coals, which they are going to clear, and bundle as many off in her as she will stow, which I suppose will be about 300; but there are so many more coming that this will go but a little way towards clearing them off; in fact, the Isthmus will soon be as much Yankee as Texas is, for they have the grant for the railroad, and will not fail to make the most of it.

The *Isaac Walton*, a naval store-ship, had arrived at San Francisco, and it was calculated that it would cost as much to discharge her as the whole price of her freight around Cape Horn. Indeed she could not discharge without the aid of a man-of-war, and the result would be the loss of some hundred sailors. It is in vain to talk of sentries, the sentries will run. The only remedy was to cut off all connection with the shore; and in that case a man-of-war might as well be in the midst of the Pacific as on the coast.—But enough of this. That the American Government are in earnest about a railway across the Isthmus appears from the following:—

Legation, of New Grenada, Washington, Dec. 18th, 1848.

Gentlemen,—I have had various conferences with Mr. John L. Stephens, as representative of the Association which you have formed, and with powers sufficient to solicit the privilege of constructing a railroad in the Isthmus of Panama, under the conditions which, in the name of my government, I have proposed to him. From these conferences it has resulted that Mr. Stephens has given me sufficient guarantee, besides those which are expressed in the privilege conceded to Matthew Klein, under date of the 8th of June, 1847, to ensure the execution of this work, and that your Association binds itself to fulfil the conditions which I have proposed in favour of New Granada, besides those which are set forth in the privilege.

In virtue of this agreement I declare that you are in possession of the privilege conceded by the government of New Granada for the construction of a railroad over the Isthmus of Panama.

I am &c.,

(Signed)

P. A. HERRAN.

Messrs. W. H. Aspinwall, John L. Stephens, and Henry Chauncey.

It may be further stated, that the grant from New Granada, alluded to in the foregoing letter, gives the following advantages.

- 1st. An exclusive right of way across the Isthmus, with the right to use gratuitously all the public lands lying on the route of the road.
2. An exclusive gift of 300,000 acres of public land, to be selected by the Company.
3. All the materials used for the road, as well as effects of persons employed thereon, are declared free of duty.

4. Two ports viz :—One on the Atlantic and one on the Pacific Oceans, which shall be made the termini of the road, are declared free ports.

Note.—The Company have arranged with an eminent engineer, W. Norris, Esq., who is to make further surveys at once, and it is thought the road can be in operation by January 1851. The opening of the road will change the avenue of trade now done with the Pacific and China, by the United, as well as by the European nations.

The further resort of gold hunters seems likely to be checked by the following letter addressed by the American General to our Consul.

IMPORTANT NOTIFICATION.

Panama, January, 19th, 1849.

SIR.—The laws of the United States inflict the penalty of fine and imprisonment on trespassers on the public lands. As nothing can be more unreasonable or unjust than the conduct pursued by persons not citizens of the United States, who are flocking from all parts to search for and carry off gold from the land belonging to the United States in California, and as such

conduct is in direct violation of law, it will become my duty, immediately on my arrival there, to put these laws in force, and to prevent their infraction in future, by punishing, with the penalties provided by law, all those who offend.

As these laws are probably not known to many who are about starting to California, it would be well to make it publicly known that there are such laws in existence, and that they will be, in future, enforced against all persons not citizens of the United States, who shall commit any trespass on the lands of the United States in California.

Your position as consul here, being in communication with our consuls on the coast of South America, affords you the opportunity of making this known most generally, and I will be much obliged to you if you will do it.

With sincere respect, your obedient servant,

PERSIFER F. SMITH, *Brigadier Major-General,*
U.S.A. commanding *Pacific Division.*

To William Nelson, Esq., U.S. Consul at Panama:—

A VOICE FROM THE DEEP.—*On the present state of the Merchant Service.—By Aliquis.*

THAT the greatest naval nation in the world should have the most unsightly, the worst constructed, and the worst regulated merchant ships in that world, (saving the Chinese), besides its being the only European one without a special code of marine law, is a circumstance not less surprising than it is true; and one which has been long well known to all connected with shipping; the separate interests of whom, however, have been such as to have left matters to go on from year to year without the slightest attempt at a change, notwithstanding the extreme urgency of the case. There is an old, and it may be a true saying, viz. "what is everybody's business is nobody's business;" but I am sceptical enough not to believe this. And having for many years both seen and felt the evils existing in the merchant service, I have determined to make it my business (since nobody else will) to expose them, with a view to calling the attention of those who may be able and willing to try at least to effect that alteration which now I may say is absolutely necessary for the safety of all Her Majesty's liege subjects "who go down to the sea in ships, and do business in great waters."

This, I am quite aware is rather an invidious task; but it must be gone through, and I shall endeavour as much as possible to deal in *generalities*, and not in personalities; and trust to the leniency of the public in judging of the merits of a production, which nothing but a wish for its benefit could ever have called forth.

The first item remarkable in merchant ships, is their model and mode of building! The second is their internal economy; and the third is the discipline on board of them. All of which I mean to shew are in every respect defective, and call loudly for legislative interference, if such can ever be obtained! but, this I shall discuss in due time, and proceed now with my first division of the subject.

With regard to the model of a merchant ship, I believe there are few indeed, who will say that it *is* what it *ought* to be, even in those of the very best class, excepting in some of the late built India passenger ships. The wish to make a ship carry a large cargo at the least possible expense, would appear to be all that can ever be required; and hence symmetry or sea-worthiness in model, is set at defiance; and oblong boxes are built to sail eight or nine knots before the wind, and trust to Providence and *insurance* for the rest. To such an extent was this greediness of cargo-holding carried a few years back, that government had at last to interfere, by ordering a new method of measurement, which certainly has in a trifling degree improved the models in so far as depth of hold is concerned. But, still the present models are far too deep, too narrow, and too straight both in sides and bottom, for a ship to sail, or go to windward well; and place almost any merchant ship in difficulty on a lee shore; she has not a single chance of beating off even were she well manned, which she is not.

Sailing and carrying qualities *can* be combined sufficiently to answer every purpose, and it is only necessary for government to limit the depth according to the breadth and length, to insure that safety in model which in nine out of ten merchant ships is not to be had, and which in a great measure constitutes sea-worthiness.

But the mode of building is at least as necessary to be looked after as the model; and in this particular merchant ships are most lamentably deficient! No one ever for a moment fancies that a merchant ship is as strong as a man-of-war; but, why should this be? I mean to say that they *ought* to be as strong in every respect, particularly if they are allowed to be loaded as they generally are at the present time, which even if their models were good, is enough to prevent them ever beating off a lee shore; hence strength is doubly necessary to prevent them going to pieces *immediately* when they *are* driven on shore. Marine insurance and Lloyd's register system seems to be the cause of this; and on that account is well worthy of observation.

The worthy Company of Lloyd's have *decreed*, (and the public seems to allow *them* only to know anything about ships; why, I do not know,) that vessels, if built of a certain kind of timber, and of a certain scantling, *shall* last so many years, and be called A 1, or, first class; and when those years are run out, the said ships shall be opened, and cost a great deal of money, for them to take a peep into the state of their timbers, &c., before they can be continued on this letter, A 1. Now, as these gentlemen, of course, do not like to be found out in having predicted wrong, they are not likely to pass the ships on the same A 1 without a considerable repair, whether they require it or not; hence it becomes the interest of an owner to build a ship which shall in reality only last the time *predicted*, and then *get her lost* if he can, or sell her to somebody else who may pay these extraordinary expences, or be content with less freight, and let her go down the alphabet. Now, if the owner builds a ship, stout, staunch, and strong as a man-of-war, she would still have to cost him £200 or £300 to open up, besides all the

extra expense of building a good ship, and it is ten to one if Lloyd's surveyors would think her worthy of being tried for more than three years in addition; then comes a second opening, &c. So to get rid of this humbug and expense an owner builds a ship to last a certain time only, and prays she may be lost, (if he does not bribe a man to do it,) about the time her term will be out. Thus it is that strong ships are not built, and that men's lives and property are risked daily in the most cold-blooded manner. Merchant ships are not built of sufficient sized timber, even if according to Lloyd's *twelve years' class*; neither are these timbers nearly sufficient in number, nor put together as they ought to be; in short, it is any thing for cheapness, so long as it is *according to Lloyd's, who alone can tell anything about ships!*

It certainly is very extraordinary how the public, with one accord, should put such faith in a company of men, as to believe their predictions to a month, or a day, in regard to a ship lasting in this perishable world, and that this ship could not get insured did she not appear in the book of this same company as something or another. Verily, Lloyd's surveyors, &c., have a deal to answer for, and I hope they are generally conscientious. But they are sometimes wrong in their judgment I know, and I have seen and can prove this in more cases than one, which perhaps, is not much to be wondered at; *man is mortal*. However, it is not quite A 1 to see a ship condemned six months after the following certificate was granted, and that ship only 6½ years old, and classed in their book A 1 for eight years:—

"No. 2, White Lion Court, London, — 184—.

"These are to certify that the barque — of London, — master, — tons, bound to — has been surveyed by the surveyors to this Society, and was reported to be on the — 184— in a good and efficient state, and fit to carry dry and perishable cargoes, and that she has been classed in the Register Book of this Society on the list of ships of the First Description of the First Class, No. — A 1, for eight years, from one thousand eight hundred and forty—, subject to periodical survey.

"Charge 10s.

"(Signed) CHAS. GRAHAM,
"Secretary.

"Witness my hand,

"(Signed) THOMAS CHAMPLIN,
"Chairman."

With such a certificate as this the ship would have been insured anywhere, and her cargo also to any amount, yet in six months in a British port, two first-rate carpenters, one shipping-surveyor, and the harbour-master declare this ship *totally unseaworthy*, having experienced no particular bad weather to cause the same! Far be it from me to disparage the usefulness of Lloyd's. But this fact will sufficiently shew the absurdity of any man, or body of men, pretending to say how long this or the other ship will last; and I hope also, that it will shew a ship *may* be unworthy of insurance although A 1 in Lloyd's book; *ergo*, that same book ought not upon all occasions to be the criterion of seaworthiness.

This classification system should be put down and abolished, and government surveyors appointed in all ports to regulate the *building* of all ships, both as to model, (so far as comparative length, breadth, and

depth go,) and scantling, fastening, &c., the whole to be constantly subject to an overhaul, and reported upon accordingly. That merchant ships are weak, very weak, every nautical man knows! aye, even the very finest 1000 tons London and India passenger ships I have known so weak as constantly in a double-reefed top-sail breeze to wash the passengers out of their cabins on the lower deck, and make them glad to take refuge in the cuddy.

How often do we hear of a merchant ship when she gets on shore going to pieces instantly? When, if she had been properly and strongly built, she might have held out long enough to allow of the crew being saved.

How many ships are missing every year? Perhaps, the whole of them attributable to their weakness and overloading together. Compare the strength of the *Abercrombie Robinson* troop-ship, with the *Waterloo* convict-ship, both wrecked at the Cape, and both old ships! The one was formerly built for the East India Company (who never insured,) as strong as any man-of-war, and did not break up at all, so that almost all were saved! The other a common merchant-built 10 or 12 years ship went to pieces in a few minutes, and all, or nearly all, were lost. Compare the ships of any owners who do *not* insure, with those who do! those of the one are strong and substantial; the others weak. Marine Insurance*

* The following view of Marine Insurance is given in a useful little work entitled "A Guide to the Investment of Capital." Marine Insurance is a description of risk, perhaps even greater than that of Fire Insurance. In the latter case the element of destruction gives always some notice of its approach, and is more or less under our control, but no human arm nor sagacity can prevent, arrest, or control a storm at sea. Winds, waves, and tides, leaving other casualties out of view, are entirely beyond human influence.

The general principle upon which Marine Insurance Companies are conducted is, to distribute their risks over as great a number of vessels as possible, so as to increase the chances of escape from loss, that is, not to insure a large sum upon any one vessel. Thus it will usually be found that if a vessel be insured at all, she is in two or three different clubs or Insurance Companies, whose aggregate subscriptions of risk make up the value of vessel and cargo, or such proportion as the owner or merchant deems it necessary to insure.

Marine Insurance Companies are found principally in large cities and sea-port towns. The principal establishment for this purpose in London is Lloyds, which has agents in every sea-port in the world, and is constantly supplied through them with the most accurate information as to the character and condition of almost every vessel in our merchant service. Persons in the practice of insuring vessels, will seldom hazard any large sum upon one ship or cargo; few will risk so much as £500 upon a single policy. The usual average risk of each underwriter is about £200 on each vessel or cargo. In this way a shipment supposed to be worth £2000, will probably be secured by a policy bearing the names of ten different Underwriters, each responsible in case of loss for the sum he has Underwritten, say £200. Any person may become an Underwriter or Ship-insurer. The risk is of course very great, but where proper judgment is exercised as to the description of the vessel, the skill and character of the master, the voyage to be undertaken, and the season of the year, money may be staked to some profit. The rates of premium charged by Underwriters, vary according to these circumstances. Such risks, however, ought not to be undertaken, except by persons possessing considerable knowledge of nautical affairs.

is the very bane of all shipping, and a direct encouragement frequently to the worst species of robbery. And while it lasts and government is apathetic, ships never will be strongly built. But I hope for better things, and that government will yet be led to see the same necessity to look after the safety of the public in merchant ships at sea, as they have done in the railway coaches on shore, as well as river steam-boats.

To illustrate this part of my subject still further, however, I shall mention the case of the barque *Mary* wrecked in Bass' Straits about two or three years ago. This vessel and cargo were fully insured, and she had been surveyed previous to leaving Sydney (N.S.W.) for London by the surveyor for *Lloyd's*, and pronounced sea-worthy, although one master had left her because he declared she was *not* so! She sailed, and in a light breeze was drifted on a reef near Flinders Island, Bass' Straits; the captain's words were, "She went *alongside* the reef, steep to, the same as if hauling to a wharf; a gentle crush was heard, and next minute up came casks of tallow, &c., to the surface, down went the main-mast through the bottom like a piston, over the side tumbled the foremast; and in *seven minutes* the *Mary* was in a thousand pieces." Fortunately most of the crew and passengers had got into the long boat so quickly that they were saved by her floating off the deck when it *broke in two*, but nine or ten lives were lost. And, be it remembered this was during a calm, or so little wind that the ship would not stay. The owner of this vessel was a Director of the Company with whom she was insured, and I *did* hear that the shippers of the cargo were also Directors. Comment would be superfluous!

The second remarkable feature in merchant ships, which calls for animadversion, revision, and radical change, is their internal economy, or the actual state and disposition of things on board.

Now, it unfortunately happens that shipowners are a class of men who are not very easily pleased in this grasping selfish world, and to save money, or make money, are sometimes what are called "penny wise and pound foolish," by finding their ships badly in stores, provisions, officers, men, &c., which is not likely to add much to the strength of a weak ship, or help her out of a difficulty when she gets into one. They are also so downright greedy in many cases as to oblige the master to carry his provisions and water on deck to make room for cargo, thereby not only endangering these most necessary articles being swept overboard, but lumbering the deck to such an extent as seriously to impede the working of the ship and cables. This clearly ought to be put a stop to: nothing whatever in the shape of provisions or water be allowed on the upper deck, and a certain quantity of stores of every description, according to a government regulation, obliged to be put on board and inspected by a government surveyor. Not one ship in a hundred is properly found in stores; and not one in five hundred has more than two cables, or could bend a sheet if they had it, for want of a third hawse-hole.

Provisions too are a fruitful source of disturbance in merchant ships; to avoid which it would be well to have a scale ordered by government, and quality approved. But the efficiency of a ship does not depend even

so much upon her strength, stores, &c., as on the qualifications of her masters and mates, and the number of seamen to do the work of this piece of mechanism.

In these particulars, I am sorry to say, there is great reason to find fault in merchant ships generally, but especially in those under four or five hundred tons burthen. Many owners of ships will not allow a *gentleman* to command them, being under the impression that he must have expensive habits, and that the man who has been brought up before the mast has none of those, and will sail for less wages, &c., forgetting at the same time how easy it is for a man of no principle to help himself, and how likely those men are to cling to their early fore-castle habits of drinking, thereby rendering themselves totally unfit either to manage themselves or their ships, and hence all is anarchy and confusion; can there be any saving there? That this was the cause of nearly a half of the numerous shipwrecks which occurred some years back, the Committee at the House of Commons fully proved! Mates in too many instances, of small vessels in particular, are exactly the same, and owners have it not in their power to find it out, sometimes for several years, as Jack will never "*split*" upon a shipmate; especially for drunkenness.

Thus, it is necessary that masters and mates should pass an examination, producing at the same time satisfactory certificates of good and *sobber* conduct for the last two years, as well as of having received a tolerable education, from one or more respectable individuals, not only for the safety of the vessel, but the comfort of all on board. This has already, I am happy to say, been partially put in force by Government, in so far as making it imperative on those who are to command ships hired by Government; and I hope soon to see it equally imperative upon all, with the addition of the most stringent certificate of good conduct, sobriety, and education.

The number of men generally allowed to merchant ships is undoubtedly too small, and much risk is run occasionally by such foolish parsimony! Owners have an idea that a ship only requires men enough to get the anchor up with a *patent windlass*; never taking into consideration the working of the ship in pilot's water, or other difficult navigation, or when blowing hard upon a lee shore, &c., and leaving sickness or death out of the question: in short such is the want of men generally, that I will venture to say, not one merchant ship in a thousand could be worked, blowing strong, under double reefed topsails and courses. And as to doing anything smartly, it is equally improbable, if not impossible. This will not appear very surprising, when I say that I have seen 650 ton vessels with from 22 to 26 people in all; and those of a smaller tonnage much fewer in proportion.

The Americans pride themselves in sailing their ships with few men! certainly one-third less than the English, and our owners wish to copy this system as much as possible; which is totally disregarding the safety of all on board, as well as causing continual growling and grumbling amongst the crew. Thanks to Marine Insurance for this!! Some Legislative enactment is absolutely necessary to be passed, making it

compulsory on all ships above 300 tons to carry not less than 7 men and 1 boy to every 100 tons; under that tonnage, 8 men and 1 boy; and surveyors to see that such is the case before allowing the vessel to go to sea. Were this once put in force, freights would soon be regulated according to the increased expense, and owners would be gainers in every way. At present there is no security for a ship being at any time properly manned, and I maintain that few indeed, if any, are so; but I have been told by owners that the security for this is, that no master would go to sea without a sufficient number of men for his own sake. Such reasoning, however, would stand but a poor test. Should a master really refuse to go to sea with the number allowed by the owner, he would very soon be told that somebody else could be got who would think differently from him; and *would* be got forthwith to command the ship. So it is with every thing else in the ship, and a master *must* do just as his owner pleases, if he intends to hold his berth. There are too many men idle in these times, and glad to get employment, even at a low figure, to allow of any master having it in his power to change the state of things, almost in any way; and if these evils ever are to be rectified it must be through the Legislative interference alone.

(To be Continued.)

NAUTICAL REMARKS ON THE BAY OF HONDURAS.

Gulf of Mexico, December, 15th 1848.

SIR.—I beg that you will oblige me by inserting in your valuable journal, the papers herewith forwarded, at your convenience. The charges upon shipping are enormous in Honduras, and what do they receive in return? Upon the dangerous Mosquito shore they are subject to a quarter dollar per ton, which is called "port charges", and five dollars for clearance. At Belize you pay half a dollar per ton, called "tonnage dues", and thirty dollars clearance; eight dollars harbour master, and one dollar for each man and boy on board as hospital dues; and for all this in its intricate channels there is neither *buoy* nor *beacon*. There is a small light at Mauger Cay, but *no dependance* can be placed on it being lighted or kept burning; another small light at English Cay, which I observed was not lighted until an *hour after* sun-set; the "sun-set to sun-rise" rule is more particularly required here, where there is little or no twilight; but repeated instances occurred of the important light upon Half Moon Cay, not being *lighted* or allowed to *go out*; and it has since come out that there was *no light burning* there when the *Packet Schooner "Lee" was wrecked*. The new light is good provided that it be attended to. The cause of neglect which has occurred with the old light, should not to be heard of in a country making any pretensions to *civilization*, much less where the British flag flies.

I am, &c,

R. LEIGHTON,

Master of the barque Royal Adelaide.

To the Editor N.M.

Season of Breezes.

Having had a five months' cruise in the bay, and paid particular attention to the different elements as well as much information derived from intelligent baymen, I trust that the following remarks may be thought worthy of a place in your valuable journal.

Season of the breeze from *April to September* both inclusive, may be divided into three parts, viz. April and May: In these two months they do not expect hard sea breezes, but rather that the moderate sea breezes will be occasionally interrupted by moderate westerly winds.

June and July:—In these months they generally experience heavy sea breezes, frequently attended by hard squalls, thunder, lightning, and rain. In this season vessels upon the coast have parted from both anchors, and great difficulty and danger occur in getting off mahogany; but, as the winds blow along the coast, or at an angle of two points from seaward, there is little danger of the ship drifting on shore, if she does part her cables in the season of the breezes.

August and September:—The first is considered a good weather-month, moderate sea breezes and occasional winds are expected. In September light winds and fine weather are positively relied upon, and those are the two finest months for loading upon the coast. But during the whole of this season the influence of the moon, at the new and full, is undeniable. Sometimes in August, and more frequently in September, those changes may pass without breaking the fine weather; but, even then they are apprehended, and at all other times *expected* to bring a change for the worse in the weather. It is found to be a pretty good rule that, if the weather breaks a couple of days before the change, it will continue four days; but, if not until the same, or the following day, that it will continue for six days. I addressed a letter to you from Bermuda, upon the present voyage, relative to the effects of lunar and solar influences upon the winds, barometer, &c.; those influences cannot be disputed in the bay.

To beat to windward against the sea breezes, the rule is, to stand to the southward from 2 P.M. until 2 A.M., and then to the northward until 2 P.M. again, until you get hold of the coast, when you must study to take advantage of the *land winds*, which are not at all regular; sometimes they come off before 8 P.M., at other times not until midnight, again not until 4 A.M., and even daylight: the regular course is for it to be calm morning and evening—land wind in the night and sea breeze during the day; but, they are seldom so regular. Sometimes the land winds almost fail altogether, but generally the later they are coming off the farther they break into the following day, so that in the latter case they may blow from daylight until noon, and this you may expect to be followed by a fresh sea breeze until midnight, so that the experience of the first night and morning may guide you in closing in with the coast for the land wind the following night, and once you get inshore after dark, you must work short tacks until you get the land wind, and as that breaks you off let her stretch off until you think that you can close in with the shore to take advantage of the next night's land breeze.

The bank of soundings from Cape Honduras eastward is very regular, the lead is a good guide, the coast is low and wooded, and a sandy beach, except the two points called Great and Little Rocks, at Black River; the high interior mountains terminate, and the low level coast is only occasionally over-topped by small hills.

The land winds do not extend over to Ruatan Island, and it being narrow and parallel to the sea breezes has none of its own, but in the night we felt the effects of those winds upon the coast, whilst lying in Coxon-hole, or Port McDonald. The weather during the day was generally clear and very hot, but in the night the land winds from the opposite shore appeared to deflect the sea breeze, and at different periods of the night (according to the commencement of the land wind) we found the wind draw more to the south-eastward, and frequently brought with it thunder, lightning, and rain, with heavy squalls. When vessels came round the west end of the island in the morning it took them until the evening to beat up to Coxon-hole.

Leaving Coxon-hole bound to windward they start about 4 P.M., and the idea is to weather the Hog Islands upon the first stretch, get in with the mainland, and get the land wind. But when this is not accomplished much time is lost, and if it be found that there is much lee current, sometimes heavy ships go round the north side of Ruatan Island and come in again between Bonacca and Barburat Islands. Those islands with the small one of Morath are high, particularly Bonacca, which has a chain of cays upon its south side, and good anchorage opposite the Red Cliffs, sheltered from the *north* in the winter season: the cays also afford good anchorage, sheltered against the sea breezes. The Pigeon Cay and a considerable reef lying off the south side of Barburat render the channel between that isle and Bonacca unsafe in the night, with a sea breeze and a lee current. Elena Isle (divided from Ruatan by a narrow passage,) and the eastern part of Ruatan form a level plain. Port Royal lies under the first high land, and thence to the westward Ruatan is very uneven. This island has three harbours all affording good shelter against the prevalent winds both of winter and summer. Coxon-hole, the anchorage in 10 fathoms, is very small, and falls suddenly into 24 fathoms; but it is considered safe at all times.

Dixon Cove may in some respects be preferable to Coxon-hole. It appears that there is less danger in running on the ground here, than in Coxon-hole, being less fringed with coral reefs after you pass the entrance, but one lying on the west side of the entrance is urged as an objection to it. This refers to ships driven off the coast with loss of anchors: it is not yet settled. Port Royal is a fine harbour, but there was not a single inhabitant there, in the present summer, Coxon-hole being the principal settlement. They commenced late in the year 1848 to settle at Port Royal. Strangers always imagined that they had to call there for orders, until they found it void of inhabitants. I believe the land is not so good there. There were about 1200 inhabitants upon Ruatan in June 1848, chiefly emigrants from the Caymans; and a strange set they are. They have a wonderful specimen of a legislature, elected upon

genuine liberal principles, and a public treasurer who can *neither read nor write*, but others can do it for him,—wonderful sagacity!

Currents.

I could not find that the most intelligent baymen profess to understand the currents. That you must always guard against a current setting down upon the main reef (the coast running nearly north and south,) is generally admitted; but upon the coast it is different, it frequently obeys the winds: it is also found to be neutral when a lee current might be expected, and at other times to run against the wind. This may be easier understood in the winter than in the summer, as it has then been found that whilst it was blowing a fresh sea breeze at Bonacca, it was at the same time blowing equally fresh from the south-westward at Utila; and timber lost at Chinlico River has been found to drift upon the southern shore of Ruatan, whilst timber lost at Roman River has drifted upon the Swan Islands, and some of it down to the Northern Triangles. They assert that the current is found to run down upon the south side of Ruatan, whilst it runs up (or to the eastward,) upon the north side. The same is stated regarding Cozumel upon the northern coast. I have found a strong current running down the south side of Ruatan, and upon going round the west end with a fresh sea breeze; and afterwards for several hours of calm we certainly had no current upon the western half of the island; but upon getting a light south-west wind, gradually veering round to the north and north-eastward, we met a strong current running through between Bonacca and Barburat to the north-westward.

Season of the Norths.

From some accounts of and cautions respecting the norths, a stranger might be led to suppose that the usual sea breezes of the summer were only interrupted at this season by these norths, and that they commenced by the sea breeze veering to the southward and thence to the south-west, when you must leave your anchorage immediately, and gain an offing before it veers to the north-westward, and blows a hard gale. This is certainly too systematic, (at least in this part it is found to be so,) neither can I understand them as miniature revolving hurricanes.

In the first place westerly winds are not uncommon in the winter season. I found the first spell of westerly winds in October last for sixteen days, including what they call a “dry north,” which is a gale of wind at west, with dry clear weather, and does not differ from the ordinary westerly wind, except in *force*; but the baymen seldom refer to the points of the compass. Their way of expressing the winds is,—sea breezes, land winds, and norths; and in place of calling the moderate westerly winds in the winter by their proper name, they call this wind “a little north;” and if a day or two of those winds occur in the summer they call it “a little north.” In this season they look for a change in the weather every week, or at the quarters of the *moon*.

Forerunners of norths,—the water is found to be extremaly *low* immediately preceding a north. The weather is frequently remarkably fine

before those fierce winds commence; a black bank with lightning to the north and north-westward is a certain indication; but this frequently gives very little warning, and that warning upon the coast has been found unavailable by the north *not* being preceded by a westerly wind; but remaining quite calm with torrents of rain; a terrific sea coming in from the northward, and breaking out as far as the ship, not two miles from the beach, the gale bursting upon her at once from the north-westward. This certainly makes it a choice of difficulties whether to risk riding it out, or to get underway, with the ship in broken water, the sea breaking over her fore and aft, and throwing her steerage out of the water; and with lee way and a lee current if she slips, the wind will only admit of her making a very small angle off the land. I do not say that it is always so bad as this. There are moderate, heavy, and hard norths. But, this case actually occurred off Roman River with the barque *United Kingdom*, Capt. Foster, and the Agent on shore declared to having seen her throw her heel out of the water before she slipped from her anchors.

I did not experience a north upon the coast, (except "a dry north," before alluded to,) but I did in Belize. It was preceded by a remarkably fine day, a light sea breeze followed by a calm. Towards night the bank rose in the north-westward, with lightning, and after dark the gale came on suddenly with torrents of rain. The weight of the gale was at N.N.W., and was followed by broken weather, and winds hanging far to the northward, when a second occurred with which I left Half Moon Cay lighthouse. The day had got out fine, a strong breeze at N.N.W., the glass ran up to 30.05; it had never been so high while I had been in the bay, (nearly five months). I had just got the pilot discharged at Hat Cay when it came on thick with rain, blew rather heavy for thirty hours, succeeded by a light southerly wind, and then a sea breeze. There was no error in my account from 5 P.M. until noon next day; but the following day I was set thirty-two miles E.S.E. by current. Both those norths agreed with the baymen's account, "that they may veer between N. and N.W., but blow heaviest from N.N.W.," and that "whilst it blows a north at Belize and upon the coast, it blows a gale from the south-westward in the Gulf of Dulce, south of Point Yeacos." This is their account of the norths, and I was very particular in my enquiries of an intelligent man, (Mr. Elwin, a seaman,) who had traded in the bay for years, and was then a resident agent, as to the action of the *hurricanes* which have visited the bay.

Hurricanes.

Mr. Elwin was not ignorant of the hurricane theory, and he described the winds of one, the centre of which passed over Belize, and by comparing the winds at Belize, at Rio Hondo northward, and a place respectively distant southward, it was found that they agreed with the theory remarkably well. He was a passenger on board one of the droghers in another hurricane in the bay, which ranged farther to the southward, and they were taken by it somewhere in Gulf of Dulce, and in this we could

not at all reconcile the winds to the theory. The vessel was at anchor, blew on shore, and became a total wreck. In this case the winds were evidently deranged by the high land in the vicinity; but in the southern part of the bay the action of the *hurricanes* which have visited those parts, was quite distinct from that of the *norths*. They maintain that although the hurricane wind may blow from different points, yet its violent force comes from the south-eastward. How are those differences to be reconciled?

SHIPWRECKS ON THE SCOTCH COAST IN 1848.

Edinburgh, April 9th, 1849.

SIR.—If the annexed extract from my Annual Report to the Commissioners of Northern Lighthouses, seems to possess any interest for the readers of your excellent journal, it is at your service. I would only premise that the table alluded to does not necessarily include *all* the shipwrecks which have occurred, but those only which are within forty-eight miles of any lighthouse, or have been reported by the light-keepers.

I am, &c.,

ALAN STEVENSON,
Engineer of Northern Lighthouse Board.

To the Editor N.M.

Extract from Engineer's Annual Report to the Commissioners of the Northern Lighthouses.

I have prepared, as last year, a table of shipwrecks, which have occurred near any of the Northern lighthouses, and have been reported by the light-keepers during the year 1848. A few additional circumstances not given in last year's table have been added; and it is my intention if the Board shall approve, to present a similar statement annually. It appears that fifty-five shipwrecks have been reported by the light-keepers, during the year 1848; and an analysis of the facts contained in the table lead to the following conclusions:—

First.—Of the whole fifty-five wrecks, the following numbers have been reported from the various lighthouse stations, viz.:—from Little Ross 6, Point of Ayre 6, Girdleness 5, Lismore 5, Sumburgh head 4, Isle of May 4, Rhinns of Islay 4, Calf of Man 3, Buchanness 3, Pentland Skerries 3, Kintyre 2, Start Point 2, Cape Wrath 2, Kinnaird head 1, Mull of Galloway 1, Loch Ryan 1, Dunnet head 1, Chanonry 1, and Hoy Sound 1.

Second.—The following numbers shew the proportion of wrecks in each month, viz. December 16, August 5, January 9, February 5, October 5, November 5, June 3, September 3, March 2, April 1, May 1, and July none.

Third.—The total number of lives lost was forty-six; but it is impossible to state the number who escaped, as the complement of each vessel is not known.

Fourth.—Of the fifty-five wrecks, seven occurred during the day time, and forty-seven by night, and there is one, the hour of which is unknown.

Fifth.—In four cases the lights were not seen; in twenty-four cases they were seen; and in twenty cases no statement could be obtained on this head.

Sixth.—Out of the twenty-four cases in which the lights were *seen*, in twenty-two they were at the same time *recognised*; and in the remaining two cases, no exact information could be procured as to the *recognition* of the light.

I find it impossible to draw any general conclusion as to the proximate causes of the fifty-five shipwrecks in the table; but stress of weather, inadequate crews, and defective rigging and materials, are perhaps the most prominent.

I am endeavouring to remedy some of the defects in the present mode of obtaining information, by extending, in the new issue of Forms for Shipwreck Returns, the number of queries to be answered by the light-keepers; and I confidently hope that the shipwreck table will, in future years, contain information of a more precise character, and thus, perhaps, tend to throw some light on this important subject.

PASSAGE INTO THE BAY OF FUNDY.

OUR Directories recommend ships bound to the bay to make the Shuttock hills upon the United States coast, and enter by the Grand Manan channel; one side of which is formed by the mainland, and its approach is facilitated by lights and soundings. Where the shores are not bold, and the lead a good guide, the dangers are pointed out by lighthouses in clear weather, and fog signals when it is thick: thus the danger from fogs in this channel is much lessened, and as the assistance of St. Andrew's pilots is generally procurable here, with this local aid detention seldom occurs, when bound to St. Andrews.

The tides in this channel are regular, and by using it you avoid, by closing with the mainland, the rapid tides setting upon Grand Manan and its ledges both ways. It is allowed to be the best channel *into* the bay, but is not much used by St. John ships. The reasons which they assign, are chiefly, that within the bay the channel for them is on the wrong side. They first object to running to leeward when approaching the bay with north-easterly winds, which occasionally continue a considerable time, and they hold to the weather shore, making the Nova Scotia bank of sounding a check in making Bryer Island; but this is an isolated point, being divided from the mainland by St. Mary's Bay, and the guides in approaching it not equal to those on the other side.

In the channel there is a ledge upon the Bryer Island side and the Old Proprietor, forming the long projecting point of the Grand Manan ledges, and they not being indicated by beacons or lighthouses, render this channel

dangerous; the banks are too steep to render soundings a good guide; and the marks upon Grand Manan frequently, even in fine weather, cannot be made out, and there are no guns, or gongs, when you meet with a thick fog. But, this passage with all its faults is generally used to St. John, because the Nova Scotia side of the bay is more bold and straight than the other, and the tides more regular; so that in thick weather their effects can be better calculated, whilst upon the other side the freshets, in that season, cause a superficial current, which both upsets any calculation of the tides, and renders the log useless; and, in the lower parts, the rapid tides setting upon Grand Manan, render the calm almost as dangerous as the gale in thick weather.

But, however, you may avoid tides and currents bound to St. John, there is no avoiding the dense fogs of the Bay of Fundy; and, in this respect, the position of St. Andrews gives it a great advantage. It is known that upon the American coasts it is, frequently, a thick fog over the sea, while the land is clear, particularly if the wind be not blowing directly upon the coast, and provided that soundings give sufficient warning, and the wind admits of hauling off, the land may often be approached by the lead, and your position ascertained or even your port gained.

Whilst the Bay of Fundy is full of dense fog, St. Andrew's Bay with the islands forming it, and the channels between them, may be all fine and clear. I have laid wind bound upon Bar Island reef for four days, with the winds south and south-easterly, and the edge of a dense fog in the bay, running along from Head harbour to Wolfe Islands, while we had fine, clear weather; and ships coming through the Grand Manan channel, and bound to St. Andrews, emerging from the fog, like coming through a door in a wall, and finishing their passage in similar fine clear weather; but those bound to St. John must still contend with that formidable danger to this navigation.

The freshets in the spring of the year, the nearness of the Falls to the town of St. John, throwing so large a volume of water into that harbour, and the tortuous points of the river, render the current so strong, and produce such whirling eddies, that but a small portion of the river is available for ships to anchor in; and with strong southerly winds a strong lipper comes into the harbour, and their roadstead also, is open to this wind. But whatever natural defects the harbour may have, or whatever obstructions there may be to the navigation in reaching it, the skill and energy of its inhabitants are undoubted; and all must admire the fine model of their ships, and their admirable combinations of sailing and carrying qualities. But nature has been more favorable to St. Andrews; her capacious land-locked bay guards her fine anchorages. St. Andrews is a fine harbour, but the anchorage in the stream is rather small, and some of the wharves are dry at low water, but have a fine gravel bottom.

Chamecock is the best natural harbour that I have ever seen, and I think may challenge comparison with the world. It is completely land-locked, and although it has a rise and fall of 30 feet, yet it is nearly tideless. The high bar of Minister Island which connects that island to the

mainland only overflowing at high tide. Minister Island forms the outer boundary of the harbour, leaving the entrance rather narrow, having a spit from each point, (as there are from all points,) but quite safe. They would only require a beacon on them; the anchorage is large, and good-holding ground. I found the bottom foul within 3 fathoms at low water, but a fine line of tidal wharves might be constructed upon the sides of the creek, which brings down the water from a lake at a considerable elevation above the tide level, and which passes through the saw-mill dam. I beg the worthy proprietor's pardon, I should have said that the lake was a reservoir and sluice to the *first* float dock in British North America. Nature has in those respects been more favorable to St. Andrew than to St. John, and now that it is to be the terminus of the great North American railway, there is a great field open for the skill and energy of her inhabitants to raise her to a flourishing condition; and it is to be hoped that the results of that great work may be good and widely spread, and facilitate both commercial and social improvements in extension.

R. LEIGHTON.

THE SAILORS' HOME OF THE PORT OF LONDON.—*Wells Street.*

THE "Sailors' Home" was established for the purpose of improving the social habits and the moral condition of the seamen frequenting the Port of London, by affording to them, at a moderate charge, decent and comfortable accommodation during their stay in port, and removing them from many injurious associations to which they were previously exposed.

It cannot be doubted that previously to the establishment of this Institution, the social condition of seamen had been neglected. It was too much the habit to look upon them as thoughtless, careless beings, little susceptible of sober reflection or forethought.

The experience of the "Sailors' Home" has proved this notion to be unfounded. The use made of it by seamen has shown that they know how to appreciate the advantages of order, cleanliness, and comfort; and the manner in which they avail themselves of the uses of the savings' bank, under the management of the "Sailors' Home," shows that they can exercise prudence and forethought.

Encouraged by the success which has thus far attended the Institution, the Directors deemed it desirable that an appeal should be made to the public for support in building a Church specially for the use of seamen. The appeal was answered, a committee formed, and the Seaman's Church, in Dock Street, (called "St. Paul's Church for Seamen,") is the result of the energetic labours of that Committee.

The seamen's church has now a regular and attentive congregation of seamen, under the pastoral care of the Rev. C. B. Gribble, M.A., the Incumbent.

It is in connexion with this latter event, that the Directors take leave

to address you. There is every reason humbly to hope that the seamen who attend this Church profit by the instruction which they there receive. But there is reason, at the same time, to apprehend that in many instances this instruction fails of producing a lasting effect, in consequence of what follows when the seaman resumes his duties afloat.

The seaman learns, both in the Church and in the religious instruction otherwise imparted to him at the "Sailors' Home," that his first duty is to fear and put his trust in God, and to worship Him, with feelings of adoration and thankfulness, for the salvation offered to all men in the name of Jesus Christ. He is specially reminded of the particular obligations attaching, in this respect, to the observance of the Sabbath.

But it is unhappily notorious that, in many cases, the seaman makes a voyage at sea without seeing religious worship of any kind performed on board his ship. Day after day, and Sunday after Sunday, pass on board some ships without the crew being assembled in any form for Divine Service. And it is too true that, in many ships, men, who are every hour peculiarly exposed, by the nature of their calling, to the dangers of the elements, depart from port, traverse the ocean, and return again to port, without having been once assembled together by the master of the ship, to acknowledge their dependance upon the Almighty Governor of the Universe, or to pray for his continued protection.

There is great reason, therefore, to apprehend that any religious impressions which may have been produced during the seaman's stay on shore, would have but a faint hold upon his mind, when he finds religious duties wholly neglected on board ship. There is no difficulty in a ship-master assembling his crew together at stated periods for Divine Service. The Book of Common Prayer supplies to every seaman the same "form of sound words" in which so many of his fellow christians are worshipping on shore.

The Directors of the "Sailors' Home" take the liberty respectfully to urge on ship-owners, the expediency of their making it a matter of duty that, at appointed times while at sea, (unavoidable hindrances of course excepted,) the crews of their ships be assembled together for the purpose of Divine Service. The Directors have no motive in making the suggestion but an earnest desire to promote the welfare of seamen. They trust that they shall not be considered obtrusive in doing so. They venture to assume that a ship-owner has the same right to order, as far as he can, the regulating the crew of his ship as any other employer of human labour has to concern himself with the well-being of those he employs. Particular circumstances have led the Directors of the "Sailors' Home" to observe the condition of the English seaman, and one of the results of that observation is the suggestion now respectfully offered.

Small Libraries, in a case, containing any number of interesting and useful books, may be obtained for the use of any ship or vessel, at a moderate price, from the Depository of the "Society for Promoting Christian Knowledge," No. 4, south side of the Royal Exchange; and the "Religious Tract Society," St. Paul's Churchyard. And the Incumbent of the Seamen's Church, Dock-street, will be happy to advise any ship-owner or captain of the best mode of obtaining them.

A NAUTICAL SKETCH.

A non-scientific view of the unparalleled feat of the brig "Charles Heddle" in a Hurricane northward of the Mauritius, 1845.

"——And now another change is on the sea .
That which was late so bland and beautiful,
Has taken now a stern and iron hue,
Turbid and threatening ; above, below,
A growing darkness closes on the scene :
The elements are mustering their strength
For desperate conflict. The determined wind
Lays on the waters its continuous blast,
While myriad billows whitening in its track
Wave over wave, roll on their ousted heads
In emulous confusion."

"——Fierce and more fierce the warring elements
Engage ; as if the strength and wrath of heaven,
Driven before the presence of its God,
Were poured along in one collected blast ;——
Such is the onset of the hurricane,——
Old Ocean writhes beneath it, and resents
The insult, flings its monstrous waves aloft,
And roars defiance."—*Thoughts on the Sea.*

THE above delineation is a well outlined picture of a very sublime scene, and an appropriate opening to the less pretending sketch with which I purpose to amuse the nautical reader in a leisure moment.

All have, no doubt, read the clever paper of Mr. Piddington, in the *Nautical*, on the "*Charles Heddle's Hurricane*," and are, therefore, aware that the brig, from the effect of current, was detained in the storm-circle during the long period of five days, uninterruptedly scudding the whole time round and round the centre of commotion ; and that successfully, notwithstanding her small size, even without losing her mast, although she broached to several times ; and, indeed, upset !

If I should appear enthusiastic in my praise, let none inclined to scepticism imagine for a moment from my style, which is merely idiosyncratic, that I am not sincere ; I here, at the outset, declare that I am so ; indeed, how could I be otherwise ! Was not the escape almost as miraculous as that which Herodotus, the 'father of history,' relates of the surprisingly rich Lydian king Cræsus ? Whether it was a mere Hali-carnassian yarn or a fact, it does not become a simple seaman to determine : that must be left to those who are versed in antiquarian lore,——I content myself by giving the curious story in a note below.* We have

* Cyrus caused a mighty funeral pile to be built, upon which he set Cræsus in fetters, and with him fourteen Hydian youths ; and the historian conjectures that this might be to perform some vow, or because he had heard of Cræsus' piety, and therefore set him upon the pile, that he might know whether any god would deliver him from being burnt alive. He adds, that upon the pile being kindled, the unfortunate monarch remembered the remark of Solon, and loudly ejaculated his name, which led to enquiry concerning the cause, and to the relenting of Cyrus. He ordered the flames to be extinguished, but the officers found it to be impossible to master them, till Cræsus called upon Apollo, in tears, when

to deal with the race round the storm-circle. The whole feat stands alone in its singularity, and, without flattery, in its glory! Such an example of extraordinary success may not occur again for a series of years.

Our little inquisitive craft has given a sort of guide-map to the interior of a hurricane; and the enthusiast would be almost hard-hearted enough to regret that Arachne (*Æolus* and *Neptune's* feminine prime minister on the wide domain of water,) had not "hooked," her into the web surrounding that genius' chair of state, to have seen what a "fly" she would have made of her, of course, not to utter destruction, but as a "plaything."

Her case would have been less curious had the meteor remained quite stationary, and the sea had been without current; for, the singularity is that of her having been entrapped, and baited round and round the ring by the genii of the storm,—still dashing madly onward with hare's-foot speed,—and, perhaps, a glimmering hope of escaping by that evolution, yet, unconscious of the fact, it may have been, that if all this energy did not tend to rivet her chain the closer, it would not extricate her until it should be the pleasure of those aerial beings, at the will of the presiding *Arachne*, to give her the "good-bye," and cast it loose!

This desperate flight is rather too serious an affair for pleasantry, though successfully performed; but a very faint image of all that was passing in the excited thoughts of the hunted chief during the long chase, with a racket about his ears, a million-times more intense than the yell of hounds and the blasts of the echoing horn on All-hallow's morn, can well be lighted up in the imagination of those who are "safe and snug" in the warmth of their own comfortable fire-sides. It is a fact, however, that the ludicrous will, in spite of the sober, thoughtful, and even sad disposition among seamen, sometimes rise up during the contemplation of incidents which, abstractedly, would seem not likely to touch that spring: the images of what we have seen, heard, or read of, are painted faintly or deeply upon the canvass of the mind's recollection in dissolving views; but these are often renewed, and for a moment brightened by contrast. These effects are involuntary, and for the most part pertain to the dead-nettle species of human inconsistencies of thought, and which, perhaps, no effort of reason could very clearly define.

The Germans are truly our masters in all that relates to imaginary feats; they conjure up fairy scenes without effort, wild, extravagant; and to which, the stretched probabilities of *Don Miguel de Cervantes Saava-*

suddenly clouds collected in the serene sky, a storm broke down, and a torrent of rain extinguished the fire."

Croesus is said, by *Ctesias*, to have ended his days in honorable exile in a Median city, surviving the termination of his victor's wonderful career. *Croesus* must not be confounded with *Crassus*, surnamed the 'Rich'; he was a Roman, who acquired wealth by educating slaves, and selling them at a high price. He lived in the days of *Pompey* and *Cæsar*. His head was cut off by the Parthians, and *Orodes* caused melted lead to be poured into his throat,—and thus ended the slave dealer!

dra's fantasy* is, as it were, a mere glimmering rush-light. But here we have a picture before us real and not fanciful, which only requires a little embellishment to make it equal to any which their sportive genius or crazy brain, could summon up out of nothing!

If we could personify the little craft, during her flight, into a living thing, and conjure up Arachne's hosts of whippers-in, in full cry after her, doubtless we should see the same expression of extreme terror in the phiz of the fugitive *Charles Heddle*, that was depicted in that of the astonished donkey, which had, through laziness, lagged behind the patriot troops in the woods of Caracas, when, after they had halted, he came in dashing full tilt, tail on end, with his unearthly nasal strain† at the highest pitch, and unmercifully switched by about a hundred wicked monkeys hanging from all parts of his smarting body! But, funny ideas will not disarm the terrific effect of such an ordeal as the crew of the little vessel went through. To each individual it will be an era in his life; and the record will last long after oblivion throws her pall over their existence; but, whilst they live, they will still find, in their moments of deep sober thought, ringing in their ears, the voice of the storm's genius;

"I ride the wave,—on its crest I roam,—
I ride on the sea's high-way ;
The track of my car is marked with foam,
Like the smoke on a battle day !
Whate'er I pursue, in vain is flight,
There never was bark so fleet ;—
Whate'er I assail, in vain is might,—
I rule from my central seal!
On me, like Death, no mortal shall look—
Although he be stout and brave—
Unmoved. Each blast of my breath's a knell for the dead,
And each trough is the span for a grave !"‡

One little pet clipper sailed from the Mauritius, that speck in the midst of the tropical ocean, immortalized by St. Pierre's touching tale of Paul and Virginia. Having pushed on two or three hundred miles north of it, was unluckily arrested by the great water-baillie, and unmercifully whipped into durance vile, and brought back, very much against the will, to the very same line (20° S.) she had started from; and we are sure that, the Oriental gods must allow that she made fair wind of it; but, to what purpose?

If the captain was aware of having entered a hurricane circle, it was apparently, a bold resolution of his to scud in a low and small vessel; but it is probable he rightly judged that she would not bear the buffeting of the frightful seas if he hove to; and that, of two desperate alternatives before him, he had the better chance of safety by running before the gale. It was a life or death necessity, a sort of forlorn-hope, of which the issue could not be calculated; that is, supposing the captain

* Don Quixote de la Mancha.

† Guttural, no doubt, but they seem to issue from the nostrils.

‡ Altered from an Extract of "Death's Horse".

to have been fully alive to the extreme hazard he was compelled to run; and, we may believe that to have been the case, otherwise his simplest course would have been to have hove to. Be that, however, as it may, assuredly it was precisely one of those situations which calls up the fortitude, skill, persevering care, and vigilance of the seaman; and where the exercise of these must be unremitting; giving the physical and intellectual powers of the man full scope for display! The long detention could not, of course, have been anticipated; and, perhaps, the pendant hope that was uppermost was, thereby speedily getting clear of the storm; the current, however, proved a chain to the little light-footed bark, against which the fair wind would have blown to no purpose, had not the meteor made its bow.

Thus ended the truly marvellous feat of the *Charles Heddle*, and of her (now celebrated) commander. Like the Roman warrior of old, he came, saw, and conquered;—What more could the classical renowned have accomplished? His success was achieved against the ordinary power of human endurance; but here was a tilt against the physical powers of nature, so highly formidable, and so truly appalling, as to leave all stratagetical skill, all mere chivalrous feats of the shore, far far in the distance! What are your romances of high-wrought imagery, the terrific,—the mysterious,—of the Radcliffe school; what the Iberian daring—the adventures of Cid, to wit; what the hair-erecting (to the Italian) visions of enchanted forests of a Tasso—could furnish an incident more replete with excitement, more surprising and *outré-mesure* extraordinary to the dramatis personæ, who accepted the challenge of the wind-god; or, produce a feat more marvellously grand and awful, than this *dierum quinque* rotation of the wee-bit o' a brig?

We wonder if the worried skipper during his long long tric, or spell, ever caught a nap,—that parenthesis of human woe! Whether

“Wearied not with watching long, he dropp'd
 Into a slumber sweet; 'till, madden'd with the race,—
 His little bark into the wave pop'd
 Her nose;—and, suddenly arrested in his pace,
 A show'r-bath thus to his senses spak:—
 ‘Rouse thee sluggard,—thy drowsy eye awake!’”

At any rate our brave tar deserves a golden medal, for he has won the “championship of the ring,” and beat all competitors, going through the ordeal like a gallant Trojan. Indeed, with great propriety he may claim the notice of the Humane Society, (what is it about?) for, by his intrepidity and skill, he not only survived himself, but under Providence, saved the lives of his crew. We shall say nothing of the “poisonous laurel-leaf,” that

“Night-shade of the soul, beneath whose boughs
 All fair and gentle buds hang withering.”

(according to Miss Fanny Kemble,*) because we think a chaplet of *fucus natans* would best become the brow of the honest tar, who wins a game upon his own element. We hear repeatedly of this and other

* Now Mrs. Butler.

governments complimenting the captains of vessels who have been instrumental in saving lives from shipwreck, &c. It is a praiseworthy observance in the cause of humanity. The motive, we may be assured, is not alone from the cold consideration that the praise will be an inducement or encouragement to others to do the like; but is prompted by a generous spirit, at least, in all those who have souls endowed with true feelings, from admiration of an act which is one of the most noble that can actuate the human heart and the will. But, why should not those who have skilfully and successfully extricated their vessels, and thus saved life from the awful dangers of a hurricane, under peculiar circumstances be also complimented? Why should not Captain Barnett, R.N., and Master Finch, M.M., be awarded a Neptunian medal? Surely, if we look closely into the perils, the hazards, and the performance, we shall be satisfied that these officers, in their individual capacity, merit applause and some honorary testimonial; nay, not they alone, but every individual of the crews too, is deserving of special notice.*

To the mind practically alive to all the exciting horrors of a furious tropical storm, the contemplation of this hurricane, as narrated in the pages of the *Nautical*, calls up instantly a visible picture of the little craft's weary, but swift flight round and round the circle of commotion; her low hull all-but buried in the foam of the too active wave: now rising like a sprite upon the very crest of the dark swelling billow! and, anon, as if maddened by a sudden paroxysm, shaking off all restraint, flying up in the wind's-eye, and falling prostrate! Again, as it were, by a dying and last desperate effort, regaining her equilibrium, and starting off wild and fleet as the stoop of an eagle, down into the shade of the aqueous vale! Then, when night throws her sable panoply over the awful scene, Fancy with her perspective eye, still sees her dashing perturbatingly through the frightful surges of the lashed ocean, like a spectre, dimly sweeping through the dusky regions of the lower atmosphere, with a long train of phosphorescent light streaming in her wake, amid the roar of the warring elements.

To a seaman, or a landsman familiar with the ocean and its storms, alone could the truthfulness of such a vision, perhaps, occur. The effect of such a mental picture has a closer relationship with poetry than with science or philosophy; it acts upon the imagination. But, the thinking mind of the practical man, though it should be almost bewildered in the mere human contemplation of the escape of so small a vessel under such an ordeal, rests not there; the "sweet little cherub," &c. elevates to the sublimer consideration. "Why are you not afraid?" said a hardy sailor to a child in a storm, "My father's at the helm," responded the boy.

The assurance that, He who rules the whirlwind and the storm, is able to keep that which is committed to Him, gives the confidence of safety.

"If He is thy pilot, why fear?"

Well, the storm is ended; but we may be permitted a few words

* Again, what is the Royal Society about that, such names as Redfield, Reid, and Piddington, should be unfavored with the valued—F.R.S.?

more, with the hope of averting any reflections upon our hero of the hurricane ring, for having placed himself in such a dilemma.

Theoretic rules, to guide the masters of ships, for *avoiding* a hurricane would hardly be required if the meteor was visible. The question is, however correct these may be, can they be of practical use, as it is not visible?

To attempt to predict in any case which has to be developed, appears rather a puzzling matter. Theoretically, wrinkles are probably gained in this way.—Some known case is mapped, and the relative positions of the ship and the meteor are dotted; her course is then traced. How clear it appears that, if the captain had done so-and-so, he would have escaped the storm. What, therefore, the actor omitted to do, it may be thought, should be done by all his successors on the route, to avoid his lubberliness in thrusting his vessel's whole length into a swaggering whirlwind.

But observe that, the difference between the theorists and the captains of ships is that, the former have all the facts before them; with the latter, these are to come. The theorists have this advantage, they work in the light, and their words and their points may be true and correct, but valueless to the others, who have to labour in the dark, and wait the development of facts lying in embryo.

The clair-voyant mystery is not yet established; though a surgeon has predicted that by-and-by, beings so gifted (for it seems that all are not in possession of the faculty,) will be enabled to *see* submarine rocks, shoals, and banks which lie in a vessel's course, so that these may be avoided! The credulous, however, will have to exercise their patience until that desirable period shall arrive, which, indeed, will prove a happy one to the shipmaster, and lighten the labour of the marine surveyor!

But, at present, though the captain of a ship may have studied the theory of circular storms, and may be perfectly aware of the *general* route which the meteors follow in the latitudes he is passing, if he is not a clair-voyant, there ends the amount of all he can possibly know by anticipation. Avoid what?—A thing he cannot see, hear, or touch; and, feel its effects only upon his intromission within the pale of its action. You may as well, and as reasonably expect him to predict the events which will occur on New Year's day of the twentieth century.

It is true that, the warning of the approach of a commotion is unusually apparent; but, the entire circle of the heavens is obscured in a very short time. We conceive it to be impossible that within the visible horizon, the retina could embrace the image of a hurricane meteor in a distinct shape; the human eye is not microscopic; and though there is a wider field above and around the horizon, unless the storm-circle be formed at the time of observation, and of a small size, it seems also highly improbable, if not impossible that, a well marked vapoury sign shall show its position, and which is no where else observable. The experience of observant seamen will have informed them that, the most angry appearance of the clouds is generally seen to leeward; and that

where heavy vapoury banks rise, does not always denote the point from which the wind follows.

The consequent swell of the sea preceding a meteor is not always to be depended upon, for this reason, that, undulation continues for some time after the storm has passed any given meridian; and farther, opposing, or cross-swells may disarrange its premier impression, and thus the judgment may be misled. It is, however, unquestionably, the best guide when a ship meets it suddenly, and it is regular, whilst the wind blows in a direction, not accordant with its course; and, we may add, that it is particularly valuable, when distinct, in those latitudes where the meteors curve.

The lightning, though often abundant *within* a meteor, may be as active all round the horizon *without* it; in short, there is no sign yet understood, to guide, infallibly, the judgment; how then can the captain of a ship know whether the hurricane is to the north, the south, the east, or to the west of his position? The barometer will not denote the meteor's place; it is exceedingly useful in warning the mariner to prepare for a "brush" in so far it is invaluable, but it is not an "index hand"; it may fall as the storm approaches, and rise again when the focus has passed (or even before); but, the transit of the meteor may be made to the *right* or to the *left*; or the ship may be advancing toward the circle of operations, or it may be astern of her coming up; which, the captain is not wizard enough to tell.

If under this uncertainty, the captain guesses, he may guess wrongly, and by following conjecture, run into the danger he wished most to avoid. There is too awful a stake in such a game of hazard, to induce a wise man to run it, when the most likely guerdon that may follow is a "watery grave."

'Tis not an occasion when you may run, nay, court hazard, with a mortal enemy, and "*mourir pour la patrie*", there is no sublime feeling of that sort to sustain you against odds. Here, if you needlessly wrestle with the giant winds, and you receive your quietus, you die ingloriously; it will be said of you, "No better could be expected of a simpleton!" but, there is something more,—your rashness meeting with such a finale, carries with the loss of your life's breath, the last sad pulsation of the heart of each and all of your crew and passengers,—mind, committed to *your care*; and, moreover, please to recollect that though you may have no antipathy to be smothered in brine, it may be confidently relied on all the others have a rooted aversion to such a process. As a unit yourself, the lament that will follow your exit, may be confined to a small circle; but, think how extended it will be on the inclusion of those who weep for the many who go down with you! Study the theory, be vigilant, but do nothing rashly by, or without, advice. Rashness may be backed by courage, but loses the support of skill and judgment. The caution of Fabius in his opposition to Hannibal was not a fallacy: it is very much required after entering the storm-circle, as the attempt to run out of it is not unattended with peril. A contingency,

unlooked for may arise to place a ship running under sail in jeopardy; the meteors are sometimes eccentric in their motions, the consequence of which may be a sudden shift, or a reversal, of the wind; to scud after the ship has been drawn well in, within the circle, before the *focus* has passed, seems to be a desperate plan; to do so after the centre has gone by, would be unnecessary in the open ocean, and may also be attended with danger. "Well so far, but it has been done;" without a question; are we not telling you of a cock-boat (without meaning to offend,) whisking round and round a storm-circle for the unprecedented period of *one hundred and twenty hours!* But compare the number of successful attempts to *sail out* of a hurricane, to the number of missing ships conjectured to have foundered in those storms.

The master of the little brig *Charles Heddle*, no doubt, expected a heavy blow; but, it is pretty certain also that he knew no more the whereabouts of the mysterious annulus in which he subsequently performed such a dashing exploit, than did Tom Coryat (one of Fuller's worthies,) the site of the palatium of the great ubiquitous Prester John, of whom he was desirous of making acquaintance. Nay, we may swear he saw it not even when at the threshold, there was a sinister (often jet black) curtain drawn around him, which acted as a sort of crape blind or blink to his eyes; but when, doubtless, to his especial mortification, if not extreme surprise, he had actually passed the rubicon, caught in the trap, as it were, he saw at once with a seaman's eye that there was no help for it. Well, he made a fair wind of it, so far as his safety seemed to him to be concerned, or, at all events, could be hoped for under very critical circumstances; but, foul enough, without a question, it proved with respect to his destination, as the 366 miles retrograde testify. We may not be able to define his sensations and feelings, but it is not to be wondered at, if the high pitch of the racket was new to him, it should have impressed him with thoughts similar to those entertained by the worthy abovenamed, in describing some gloomy lake that crossed his path, viz. "The horrible and hideous noise thereof" was equal to the hubbub of the river Cocytus,—"which the poets do extol for the murmuring thereof."

We have thought it, in admiration of his exploit, but an act of justice to our circle-sailing captain, to touch upon these points so far, as he may, from the ready batteries of the press opened upon ship-masters who have the misfortune to get a shaking from a storm's genii, be of the same mind as Tom Coryat was, and dread least "some virulent and rancorous spirit, some lurking pedantical tenebrious Lucifuga" should be throwing into his teeth, the "Why didn't you steer away S.S.W., with your south-easter in the forenoon of the 22nd, and so avoid the hurricane."

Reproach and lament flit about the world, like mosquitos in a man-grove swamp, stinging their victims with as little remorse as the shaft of the cholera does! Here is a pretty rap at humanity, a sentimental dot of the *Foreign Quarterly*; may we avert its stroke from our gallant

skipper. "We rise (quoth the Q.) betimes in the morning, and late at night do we take our rest; and upon what are our waking thoughts, and our latest reflections employed upon but upon gain, mean and selfish gain? The age of chivalry is gone and the poetry of life fled!" Fled! Ah! *pauvre malheureux!* gone! no, no, no dream of thine within those long, dreary, black, one hundred and twenty razor-cutting hours, whether the spec had been thine own peculiar care or not, we may safely swear, was of that cast. But thou art belied upon the second count, too; gone! Why, thine was one of the most exquisite exploits of chivalry upon record; it throws all others into the shadow of its trail: it stands confessedly the *ne plus ultra* of nautical daring, of skill unparalleled, and, as a victory gained against the two most formidable elemental powers, unprecedentedly glorious! No! the poetry of life, of thine at least, is not fled; no, nor the lyre unstrung; there was music enow, we ween, in thy cordage, and poetry galore in the very language of the wind, to vindicate thee from the charge!

THE HAVANNAH'S HURRICANE.

In our paper of the 16th October, when announcing the progress and track of the hurricane which committed such fearful mischief from the 11th to the 14th of that month in the Bay, we anticipated that some of the ships might find time to cross in front of its track. Two vessels, the *Fattle Rozack* and *Easuram* certainly did so, and we have been favoured with an extract from a letter from Aden, from Capt. Andrew, of the ship *Fattle Rozack*, showing that, for commanders who understood their position, even when hampered between the advancing hurricane, the Sand Heads to the North, and the land off Point Palmiras to the West, the course we pointed out was the one which might be safely taken.

The extract is as follows:—

"I have once more to be thankful for the information I have derived from the 'Law of Storms.' This ship left Calcutta very deep, and after going through that fearful hurricane (for fearful it appears to have been) I have lost not a rope-yarn, except an old worn-out jolly-boat. Your letter to Mr. ———, has horrified us, for you are aware I suppose that the *Hope*, the *Washington Alston*, the *Victoria*, and an Arab, the *Seilha*, left at the same time with ourselves. I send a copy of my log and shall be too happy if it adds any thing to the furtherance of this beautiful science.

"I do not think we were within the influence of the revolving disk until we had the wind from N.N.E., consequently I do not think by any manœuvre I could have got better weather.* I made a sort of diagram and made the course of the hurricane about N.W.b.W. $\frac{1}{2}$ W., but a single ship cannot come very near the truth. (He is within about half a point of it.) I made the centre at the time we had it hardest about 100 miles from us."

* Certainly not, and to scud across the front of the hurricane was the proper course. Heaving to would have been waiting for the centre to reach him.
—Ed. C.E.

This is a capital instance of escaping the fury of a hurricane while profiting by it; but we have another curious application of these meteors to our purposes to announce, and one which will greatly interest many besides our sailor, and scientific readers, as being in part on our own high road from the Cape to India.

This is the able management of Capt. Erskine of H.M.S. *Havannah*, in his passage of only 34 days, from the Cape through Bass' Straits to Sydney; who, keeping as nearly as possible in the parallel of 39° S., and taking advantage of the Northern or left hand quadrants of the hurricanes, which there seem to travel about from the West to East, and paying due attention to his barometer and simpiesometer, obtained all the advantages of comparatively moderate weather, and, so to say, "used the hurricanes to ride upon" as far as they would carry him; having had altogether between Simon's Bay and Cape Otway ten days of hurricane sailing out of 29. One of the hurricanes lasted five days, and accompanied the ship for 1,185 miles, or at nearly the rate of 10 knots an hour. The *Havannah* averaged in this run, with three days of light winds, 191 miles per day, or nearly 8 knots per hour!

When a few years' more researches shall have given us an accurate knowledge of the tracks of hurricanes in different parts of the world, and at different periods of the year, and when we obtain by the labours of such men as Lieutenant Maury of the U.S. Navy, of whose researches we lately published a notice, accurate charts of the prevailing winds in every frequented sea, it is difficult to say how much advantage may be derived by those commanders who will take the trouble of mastering and applying the new knowledge, and with what comparative safety and comfort long voyages will be performed.—*Calcutta Englishman*.

HURRICANES OF THE ATLANTIC.*

Liverpool, March 29th, 1849.

MR. EDITOR.—I noticed your advertisement of Mr. Piddington's work on the "Law of Storms," and when I was in Liverpool last December, I sent to London and procured both it and Colonel Reid's work, and I feel very much gratified with the perusal of these works, and I think the generality of masters and officers would praise those works, and endeavour to procure them if they knew of their existence. I find in page 101, par. 128, Mr. P. says:—"If I venture to give any examples for these parts (coasts and seas of Europe) it is rather with the hope of exciting the attention of seamen to the subject, &c." In that part of the work "Directions for observers" I find he is desirous of obtaining all the information he can from men of moderate, as well as of superior ability. I have all my logs during the few voyages I have had command, which are not many, only thirteen voyages between New York and Liverpool, they have been kept merely for my own eye and reference, and I often find them useful to refer to. I have always paid particular attention to register the barometer, and likewise the temperature of the ocean, especially between the Grand Bank and Nantucket. Worthless as they are I should not wish to part with them altogether. Still if they contain anything

* Our limits oblige us to reserve the log of the *Marmion* for our next number.—Ed.

that would be of any use to illustrate any point, I would send them to you. I need not say here that the storms we have to encounter on the North Atlantic, are very rarely if ever so terrific as within the Tropics, according to all I have read, for though I have been twice in the East, and often in the West Indies, and South America, I never had the misfortune to be in one. But that they are very violent at times I can attest from experience, so much so, that I should have had very little expectation of making a passage across except in a good ship.

I suppose no person will dispute with me, when I say that, even if the Theory of the authors of the Law of Storms cannot always be made available to avoid it, it is positively necessary to know correctly which side of the storm we are on, and how the centre of it bears from the ship, and the general track of the storms in the quarter we are then navigating. I prize the works for these points of themselves, beyond this I am not yet convinced at present the theory can be of much use in the North Atlantic. I believe these storms are so extensive in general that they cannot be avoided when bound westward at any rate, and I do not assert this without some reasons for so doing. I shall enclose you a copy of my own private log for the 17th December, 1848, shewing the position of my ship that day, and also send you an extract I copied from a New York paper after I arrived there, which will I think convince you that had I had a steamer instead of a sailing ship I could not have avoided the fury of that storm.

The ship *Caleb Grimshaw* which sailed from Liverpool in company with me was 120 miles to the southward, and within 10 or 15 miles to the westward of me at noon that day, and his barometer stood at 28.10; we compared logs after we both arrived at New York, and they appear to have had it as heavy as we had, according to the relation Captain Hoxie gave me, though his barometer was not so low as either mine or the *Cambria's* (Cunard Steamer) which vessel appears to have been in 51° N., 150' south of the *Caleb Grimshaw*. I dare say Captain Harrison would forward his account of this storm to explain this. My barometer is very correct, agrees very well with the standard glasses both at New York and Liverpool, and is carefully registered. Page 100, paragraph 127, I find Mr. P. says:—"it is very uncertain what are the sizes of hurricanes hereabouts"—"most seamen will prefer heaving to, and allowing the centre to pass them." Now in point of ascertaining the extent of hurricanes in the Atlantic that must rest with seamen, and it might soon be decided if they would only give the subject that attention it deserves, and communicate their observations. Many perhaps feel a backwardness in writing anything that will appear before the public for various reasons, and one no doubt often is that they feel conscious they have no great ability. To be plain, they do not in many instances feel competent even to pen their thoughts, in a way satisfactory even to themselves. Neither can I. But if any man or men choose to ridicule my want of learning or ability, let him do so. My only answer is, had he been situated as I have (at sea since I was 12 years of age) perhaps, he would not have been a greater proficient in knowledge than myself. Therefore, I shall not refrain because I am not talented, and I hope I shall be careful, not be presumptuous, or dogmatical, when shewing my opinion.

As regards heaving to, allowing the centre to pass over them. Bound to New York the principal chances of getting to the westward are with south and south-west winds, with a few hours of south-easter occasionally. I speak now of the stormy part of the year, and as a general rule I can see no advantage to be derived from heaving to. Put the ship's head which way you please, the wind at south, we will suppose as the wind was with us on the

17th December, the storm then bears due west by compass, and is travelling I presume in about an E.N.E. direction per compass, and coming right down on the ship. I think it can very rarely happen that you can cross the path of the hurricane in port until you bring the barometer to rise, and the wind hauling to the E.N.E. It in general blows so heavy that close reefed topsails and reefed foresail is as much canvass as a ship can bear, and as much as can be handled; and it would never do to drag on to the last minute blowing so very heavy with such plain indications of a severe storm approaching, and probably be caught and not have time to get it in. I have heard some men say they never close-reefed their topsails. I have seen considerable difficulty to take a close reefed topsail in with plenty of men and good spilling lines round the sail; and if they are not taken in, they will take themselves wings and fly away. Nor does Mr Piddington advise this.

Every thing appears to have had its full share of consideration with that gentleman, the great difference that exists in the crew of a merchant ship and a man-of-war in every point, &c. It appears to me that, generally speaking, from the great extent of the Atlantic storms in general, and their track, it is no easy matter to avoid them; and it is as well to take it first as last as to remain in suspense. I admit if you heave to it will be some time longer ere it reaches you, and there might be instances where it would be a benefit to have the respite of three or four hours, and you might have more sometimes, according to the rate the hurricane was travelling. A ship bound to the eastward unless too near the land can I believe generally scud through them (I am now supposing the wind to have hauled to westward) if she *steers well* and is *carefully attended to*, until the wind hauls to north-west, as I remember it did with us in the storm of January 1843, then it became necessary to heave to. We were in long. 15° W., and wanted to steer E.b.S., to fetch in the channel.

I have enclosed a copy of my log for 21st and 22nd February, 1847, wherein you may perceive the wind hauled contrary to the theory laid down by Reid and Piddington, and I was much surprised myself at the time, because it was contrary to all I had experienced; and if I had only had time I should certainly have been on the starboard tack before the storm burst out from west. In this solitary case we should have headed off instead of coming up, and I should be much obliged if you can give any satisfactory explanation of this, by so doing you will much oblige yours very respectfully.

THOMAS F. FREEMAN, *Master,*
Ship Marmion of New York.

To the Editor N.M.

SUPPLIES AT THE ISLAND OF COETIVY.

THE commander of the ship *Simlah* has sent us the following letter, the information contained in which may be useful to mariners. It is to be wished that the example thus set of sending to the press all observations made on little known coasts and islands were generally followed, for, notwithstanding the extent of our commerce, there is a lamentable deficiency of accurate information on such subjects:—

Ship Simlah, Calcutta, Jan. 6th, 1849.

Sir.—Should you consider the undermentioned worthy of a place in your journal, perhaps you will be kind enough to publish it, for the information of commanders of ships bound from round the Cape to the Malabar coast, or other parts of India.

On my passage out in the *Simlah*, this voyage to Bombay, I adopted Boscawen's Passage, and being in want of water, I anchored off the small island of Coetivy, in $5\frac{1}{2}$ fathoms, lat. $7^{\circ} 6'$ and long. $56^{\circ} 26' E.$, by chronometer, with the large tope of cocoa-nut trees directly over the flagstaff, bearing $E. \frac{1}{2} N.$, north extreme of the island $N.E. \frac{1}{2} N.$, south extreme $S.S.W.$; found good water close to the anchorage. From the south-west point of the island a coral reef extends, as I was told by a person residing on the island, nine miles, on which the sea constantly breaks, it certainly broke; as far as the eye could reach from the poop of my ship. From the north end of the island there extends a reef about $2\frac{1}{2}$ miles, on which the sea breaks when there is any swell.

Any commander wishing to anchor at Coetivy, I would recommend his rounding the island at the north point, at, at least, three miles distance, and be careful of not standing too far to the south-west, as there are some shoal patches to the south-west of the anchorage. By keeping an officer on the fore topsail or fore yard, these will always be seen in time to avoid them. I was also informed by a person residing on the island, whom I found very obliging, that there were only 2 fathoms on the north end of Fortune Bank, and that the sea constantly breaks on the north end of Saya de Malha Bank. We obtained plenty of good water, and cocoa-nuts. Any ship requiring them could get plenty of vegetables and might get fowls, or turtle in the season. We hauled the seine and caught a good supply of fish.

I weighed from Coetivy at daylight on the 24th of August, 1848, steered $N.E.b.N.$, and did not see any land or shoal until we made the land about Bombay Harbour on the 10th of September; having experienced very light winds since leaving the island. As this communication may be of use to other commanders adopting the same passage, I hope you will insert it.

I remain, &c.

E. TAYLOR, *Commander.*

EXAMINATION OF MASTERS AND MATES.

A List of the Masters and Mates in the Merchant Service, who have voluntarily passed an Examination, and obtained Certificates of Qualification for the Class against each assigned, under the Regulations issued by the Board of Trade, up to the 28th of February last.

MASTERS.

R. Codner,* 2nd, 29, Persia, 658 t. 34695; E. Montgomery, 3rd, 32, Susannah,* 514 t. 33930; W. Deane, 1st, 47, Apolline, 453 t.—19th.—A. Cowie, 2nd, 34, Good Success, 700 t.; T. Williams, 2nd, 33, Magnet, 272 t. C. H. Bampfyld, 2nd, 24, Severn,* 1856 t. 265068; E. Gooch, 2nd, 24, Bombay,* 1260 t. 345361.—20th.—W. Campbell, 2nd, 30, Wansbeck,* 250 t. 163504, South Shields; J. Lonsdale, 2nd, 29, Hewson,* 199510.—21st.—T. Bremner, 2nd, 22, Pacha,* 650 t. 2006, London; H. Luke, 2nd, 28, Marmion, 388 t.; J. A. Barton, 2nd, 28, John Line,* 790 t. 19331; R. Harland, 2nd, 35, Mariner, 683; R. L. Jones, 2nd, 37, Saghalien, 377 t.; A. W. Mitchell, 3rd, 26, Ringdove, 176, t. 27171; R. T. G. Howes, 2nd, 37, Kent,* 815 t. 348412.—22nd.—F. A. Orfeur, 1st, 25, Tribvne, 210 t. Yarmouth; W. Robson, 2nd, 26, Agenoria,* 267 t. 22832, South Shields.—23rd.—C. F. Lambert, 2nd, 21, Mary Ann,* 500 t. 423097, Plymouth.—26th.—R. H. Newby, 2nd, 43, Orestes, 339 t. London; J. M'Ewen, 3rd, 34, British Empire, 642 t.; J. W. Lock, 3rd, 28, Nautilus,* 400 t. 2040.—27th.—R. I. Kirby, 2nd, 32, Veracity, 294, t. Newcastle; L. Dickman, 2nd, 35, Veracity, 294 t. 107968.—28th.—R. Milne, 2nd, 27, Derwent,* 362 t. 31622, London; A. Stewart, 1st, 28, Satellite,* 824 t. 276198; W. W. Stewart, 2nd

30, Satellite, 824, t. 32318; G. O. Hall, 2nd, 27, Theron,* 292 t. 13715, South Shields.—29th.—W. Lucock, 3rd, 24, Thomas and Mary,* 208 t. 101786; R. Foster, 3rd, 28, Conference,* 297 t. 110834.—30th.—W. J. Henderson, 1st, 43, Pemberton, 1255 t. Liverpool; G. H. Corbett, 1st, 42, Levantine, 347 t. 273072; J. Dobbin, 2nd, 48, Diana,* 600 t.; A. Boyle, 2nd, 25, Tulloch Castle,* 560 t. 53735; W. Caig, 2nd, 27, Warree, 130 t. 47098.

1st Feb. 1849.—G. D. Dempster, 2nd, age, 34, ship, Somersetshire, 450 tons, London; S. Moncur, 2nd, 37, Ganges, 418 t.; T. Restarrick, 2nd, 51, Eagle, 293 t.; T. Blake, 2nd, 27, Clio,* 385 t., 15259; C. Hodder, 2nd, 28, Phœbe,* 579 t., 1023; T. James, 2nd, 25, Balcarras,* 1480 t., 434991; J. Southwick, 3rd, 34, John Munn,* 634 t., 31609; W. W. Wilson, 3rd, 28, Jane Catherine, 350 t.; J. Abrahamson, 3rd, 25, Castle Lachlan,* 434 t., 22430; G. Langborne, 3rd, 42, Elizabeth,* 286 t., 119322; W. J. Clark, 3rd, 31, Tanjore,* 422 t., 14096.—2nd.—J. Maillard, 1st, 25, Percival, 262 t., 199092, Newcastle; W. Irwin, 2nd, 26, Garland,* 271 t., 338835; J. Cornfoot, 2nd, 33, Duncombe, 223 t., 96994; J. Davison, 2nd, 32, Crown, 232 t.; T. B. Sparks, 1st, 24, Joseph Bushby, 560 t., 274635, Liverpool; J. Groom, 1st, 29, John Mathie, 596 t.; John Wilkinson, 2nd, 31, Emigrant,* 753 t., 261792; E. May, 2nd, 52, Clyde, 1800 t., London.—3rd.—W. Thomson, 1st, 26, Signet, 539 t., Leith, A. Allan, 2nd, 30, Wanderer, 686 t., 120236; W. Robertson, 2nd, 25, Exporter,* 564 t., 31349; D. R. Kerr, 2nd, 28, Norman Morison, 564 t.—6th.—H. L. Hart, 3rd, 41, Castle Lachlan, 434 t., London.—7th.—A. Sibbald, 2nd, 23, True Briton, 180, t., 429, South Shields.—8th.—N. Arthur, 3rd, 32, Hannah, 201 t., 19172; J. Couper, 2nd, 24, Sandyford, 155 t., 190517; J. Pemberton, 2nd, 30, Sir Charles Napier, 589 t., 323943, London; E. O. Clark, 2nd, 28, Jordeson, 280 t.; C. A. Mackenrot, 2nd, 37, Hebe, 451 t.; H. P. Sawell, 2nd, 32, Eagle, 388 t.—12th.—W. Ellis, 2nd, 27, Symmetry,* 382 t., 15234; T. Mesnard, 2nd, 25, Berhampore,* 653 t., 199545; T. Daniel, 2nd, 25, Victory,* 385 t., 115644; W. Greengrass, 3rd, 30, Richmond, 158 t., 24566; J. Hedwith, 1st, 32, Walker, 350 t., Newcastle; J. Johnson, 3rd, 43, Rob Roy, 103 t., Hull.—13th.—Z. C. Pearson, 2nd, 27, Royal William, 292 t.—14th.—J. Parker, 1st, 36, Zion's Hope, 679 t., Liverpool; G. P. Lock, 1st, 39, Acadia,* 1400 t., 413815.—15th.—J. McLean, 2nd, 33, Saxon, 833 t., London; A. DREWETT, 3rd, 33, Statura,* 357 t., 33105; F. W. Plank, 3rd, 34, Maria, 460 t.—16th.—J. Fenner, 1st, 32, Prince George, 450 t., Yarmouth.—19th.—C. H. Hodgson, 2nd, 30, Berhampore,* 653 t., 89084, London; T. R. Smith, 2nd, 37, Berhampore, 653 t.; T. H. Hall, 2nd, 31, Lavinia, 180 t., 50891, Newcastle.—20th.—T. Trusfield, 2nd, 29, Hercules,* 482 t., 24747, London; E. W. Cutting, 2nd, 29, Milton, 94 t., Yarmouth; H. Grey, 2nd, 37, Lady Williamson,* 255 t., 68898, South Shields.—22nd.—T. Trevarthen, 2nd, 24, Ann Milne,* 564 t., 7505, London; J. Stevenson, 2nd, 39, Greyhound,* 348 t., 23654, London; R. Bainton, 3rd, 43, W. & M. Brown, 297 t.; T. Strickland, 3rd, 42, Scotia, 778 t.; W. Fraser, 3rd, 31, William and Joseph, 277 t., 162581, South Shields.—24th.—R. Leitch, 1st, 30, Cambria, † 1400 t., 418187, Liverpool; J. G. Wickman, 1st, 39, Britannia, † 1400 t., 421155; W. J. Anderson, 2nd, 26, Abarfoyle, 496 t., 176623; G. H. Haram, 2nd, 27, Cambria, † 1400 t., 421148.—26th.—B. D. Freeman, 1st, 33, Sir Edward Parry, 575 t., London; A. Sinclair, 3rd, 38, W. & M. Brown,* 297 t., 34903; J. Pye, 2nd, 24, Streatlam Castle,* 235 t., 163099, Newcastle; J. Sharp, 2nd, 33, Premium, 239 t., 259431.—27th.—D. R. Kerr, 1st, 28, Norman Morison, 564 t., Leith; W. F. Lapidge, 1st, 27, Cambria, § 1400 t., 187633, Plymouth; J. Gill, 2nd, 32, Hope, 377 t.; W. Giles, 3rd, 32, Princess Royal, § 1109 t., 273082; J. Hodge, 2nd, 26, Christiana,* 305 t., 5903, South Shields; R. Patton, 2nd, 37, Symmetry,* 249 t., 187587.—28th.—J. Kydd, 2nd, 32, Heroine,* 317 t., 23960, Dundee.

The following name was by error omitted to be inserted in the Gazette.

12th May, 1847.—E. G. Baynton, 2nd, 23, R. M. P. Thames, 803 t., 236170, Portsmouth.

MATES.

Dec. 1st.—W. Summerfield, 3rd, 28, Edwin, 220 t. 220775, Hull.—7th.—H. R. James, 2nd, 23, Hindostan, 708 t. 32853, London.—16th.—T. Noble, 2nd, 26,

Duncan, 356 t. 183945, Leith; J. W. Buchanan, 2nd, 29, Ganges, 770 t. 310187, 21st.—A. McCallan, 2nd, 21, Earl Balcarras, 1498 t. 434532, London; —J. Hall, 3rd, 28, Jessie, 301 t. 247066; R. W. Commius, 3rd, 24, Hasheiny, 638 t. 240651.

2nd Feb. 1849.—G. Barry, 3rd, 25, Inconstant,* 600 t., 5142, Plymouth; E. Barry, 3rd, 25, Inconstant, † 600 t., 299087.—7th.—T. Fyall, 2nd, 26, Sir H. Parnell, ¶ 209 t., 118639, Dundee.—8th.—W. H. Butler, 2nd, 20, Hindostan, ||| 544 t., 327929, London.—15th.—J. G. Caught, 3rd, 21, William Wilson, 407 t., 16163.—9th.—W. May, 2nd, 22, Heroine, ¶ H.M.S., 75263; C. E. Frazer, 3rd, 21, Hindostan, 544 t., 327931; S. Limmex, 3rd, 28, Elizabeth, 260 t., 32564; W. A. Granger, 2nd, 21, British Empire, 642 t., 344156; J. C. Burgess, 3rd, 24, Zion's Hope, 666 t., 245416.

* As Mate. † As First Officer. ‡ As First Mate. || As Third Mate.

§ As Second Mate. ¶ As Seaman. ||| As Apprentice.

CAPTAIN KIDD'S TREASURES FOUND.—*California Eclipsed*.—It seems, by the following account, that all the gold in the world is not packed away in the placers of the Sacramento. The other day Martin and Samuel Shaw, of Palmer, while on a hunting excursion, near the "Old Boston Road," on "Snake Hill," discovered a cave in the rocks. In this den they found a sealed bottle containing a letter, purporting to have been written by Captain Kidd, the notorious pirate, to some of his inferior officers, informing them where some large deposits of wealth were made, and entreating them to possess themselves of that treasure, and extricate him from some difficulty which the letter represents him to have been in. He adds that he sends the letter by a footman, as other conveyances were unsafe.

The letter bears marks of great antiquity, and some of the shrewdest men in the vicinity, after examining the document and the circumstances of the case, have joined with the discoverers, to go in pursuit of the buried treasure. Our informant, who is perfectly reliable, informs us that the letter would be submitted for publication, were it not for the fact that the place of deposit would be thus revealed, and the aims of the lucky finders be thwarted. That would be bad truly.—*Springfield Republican*.

PRACTICE OF NAVIGATION.

Many enquiries having been made of us respecting the probable appearance of the Third Edition of Mr. Rapers' Navigation, we take the opportunity of stating that, the long delay, upwards of two years, which has attended the publication of the new Edition, we have ascertained has arisen from the many additions made to the work, of which the most important, perhaps, are an enlargement in the elementary matter, and a section containing an epitome of the doctrine of revolving storms. The chief cause of delay however, has been the table of Maritime Positions, which besides containing a greatly increased number of places, affords many useful points of information, on anchorages, landing, places where water may be had, as also refreshments, with an abbreviated description of all the islands and dangers, with other particulars. The last object is effected by a system of symbols devised by the author, and of which, as the idea appears to be altogether new, we shall give some account in another number.

From the Shipping Gazette.

ca. crew saved.—d. drowned.

Vessels' Names.	Belong to.	Masters.	From.	To.	Wrecked.	When.
Acadia 205	Liverpool		Liverpool	Bremen	Terschelling	Mar. 11 cs
Achilles	Whitby	Harrison			Stathes	Jan. 29 cs
Ada Alice	St. John NB	Hunter	New York	Belfast	37°N. 44° W.	Jan. 9 cs
Altona	Goole	Dickson	London	Petersburg	Baltic	
Angler		McIntosh	Dundee	London	Cork sand	Jan. 27 cs
Anna & Mary 210	Banff	Wilson			B. Luce	Nov. 25
Arietta		Watson	Cnba		Mixen	Nov. 27 d
Atlantic	Greyboro'	Taylor	Leith		Nova Scotia	Sept. 28 cs
Baltic	Guernsey		Ltl Hampton	London	Ltl Hampton	Nov. 27
Caledonia	Drogheda	Murphy	Liverpool	Londonderry	Horse I. reef	
Cape Packet 215						
Ceres	Sunderland	Harrison	Penang	London	Penag by fire	Jan. 6 cs
Compton		Houghton	Sunderland	Southamp'tn	Foundered	Jan. 25 1d
Compton	New Ross	pas ed	abandoned	Cardiff	I. Burra	Feb. 15
Cove	Quebec	passed	abandoned		54°N. 13°W.	Dec. 28
Eliza 220	Liverpool	Snell			47°N. 24°W.	April 27
El z. and Sarah	Cork	Bailey	Cork	Bangor	Bahama B.	Sept. 21 cs
Elizabeth		Ducket	Mobile	Liverpool	Carnarvon B	Jan. 24 cs
Enchantress		Finlason			abandoned	April 9 cs
Free Trader	Passed	abandoned	waterlogged	in	St. Paul I.	Sept. 15 cs
Ganges 225				London	Foundered	Oct. 20
George	Arbroath				Herd sand	Sept. 26 cs
Herald	Dundee	Bothie	Grangemuth	Shields	Holy I.	Nov. 15
Hindoo			Swan River	London	By fire	April 14
Hope	Bowness	McKie	drove on	shore at	Bridlington	Dec. 29 cs
Ireland 230		Moreton			Nervo	Jan. 30 cs
James Blain			Norfolk		Fligo	Feb. 15
Jane	Newcastle	Tate	Newcastle	London	37°N. 60°W.	Oct. 20
Jane and Anne	Shields		Shields	Lowestoff	Gunfleet	Ap. 22 cs
John Bolton				abandoned	run down	Nov. 20 cs
John Jardine 235	Bristol	Samson	New York	St. Johns	C. Race	Sept. 30
Julia		Smith	Aberdeen	Newcastle	Brown I.	Ap. 9 cs
Juno	Shields			Built 1774	St. Abbs Hd	Jan. 24 cs
Lady Kenmare		Williams		Gloucester	Flamboro'	Jan. cs
Lady Sale			Kingston	New York	Goodwick	Jan. 29 cs
London 240		Ross	New Orleans	Liverpool	Long I.	Jan. cs
Lydia			Liverpool	Mobile	Cuba	Dec. 15 cs
Margaret	Newport	Griffiths	Newport	Liverpool	I. Burra	Mar. 7 cs
Mary	Sunderland		Black Sea		Bardsey sand	Feb. 1 cs
Mathew	St. John NB	passed	waterlogged	abandoned	Scilly	Dec. 31 cs
Messenger 245	Sunderland	Levinson	Sunderland	London	51°N. 31°W.	Feb. 6
Nabob	Liverpool		Calcutta	London	Gunfleet	Jan. 2 cs
Navarino	Lynn	Harris	London	Lynn	Ecrehos R.	Ap. 13
Newcastle	Whitby	Robinson	Whitby	London	Burnham F.	Ap. 15
North Briton 250	Timberlad'n	abandoned	waterlogged		East Cliffs	Feb. 21 cs
Ocean Bride			Honduras	London		Nov. 20 cs
Ocean Queen	Aberdeen	Suth'rland	Singapore	London	31°N. 70°W.	Sept. 30 cs
Palmyra		Robertson	Sydney	India	Off Lingin	Dec. 9 cs
P. H. Dean		Taylor	Liverpool	Cadiz	Java Sea	Oct. 7 cs
Perseverance	Hastings	having been	ched for disc	harging coal	supposed lost	Feb. 26 cs
Pheasant 255	Sunderland	Jackson	Shields	Barbados	St. Leonards	Jan. 10 cs
Porteus		Laird	Liverpool	Newfond'nd	Caithness	Jan. 19 cs
Regina			Antigua	London	Off Wexford	Jan. 19 cs
Regent	Shoreham	Griggs	Shoreham	Guernsey	abandoned	Sept. 25
Retriever	Dundee	James	St. John	Dundee	Guernsey	Ap. 21 cs
Richmond Hill 260	London	Neatley	London	Seaham	Lewis Head	Jan. 17 c
Robt. Lindsay			Moulmein	Cork	C. Yorkshire	Jan. 29 d
Roberts	St. Andrews	passed	abandoned	waterlogged	Rodriguez	Sept 16
Rover	Pictou	Dove	Preston	St. Johs	34°N 52°W	April 15
Sarah Crisp			Moulmein	Hong Kong	abandoned	Dec. 1 cs
Senator 265		Kavanagh	Dublin	London	16½N 114½W	Sept.
Sir W. Collings					Whitsand B	April 17
Supply	Newcastle	Kirkup	Newcastle	Bwinemund	Jersey	Jan. 10
Susan		Milliman	Boston	Halifax	Naze Norway	Mar. 9
'Union'		Cunn'ghm	Shields	Blyth	Lahore	Dec. 28 cs
Ury 270	Sunderland	Humes	Sunderland	Dunkirk	Foundered	Nov. 21 cs
Vestal	Sunderland	Edington			Barnard	Dec. 4 cs
W. McKie 272	Donaghadee		Dublin	Troon	Dudgeon	April 12
					CairseBrook	Jan. 10 cd

No. 5. Abstract of the passage made by H.M. steam ship *Terrible*, from Malta to Gibraltar in 1846.

Date.	Distance		Average.		Sail set.	Wind.		Boilers.	Draught.		Immersion of Paddle wheels.	Coal Expended.				Expended.							
	By the land	By obser- vation.	No. of days and hrs. steam.	Speed per hour.		Rev. pr m.	Course.		Direction.	No. in use		Step of cam.	Pressure—steam	Mean.	By stern.	Quantity.	Hourly.	Daily.	Dist. run	Oil.	Oakum.	Tallow.	
	Knt	Knta.	h. m.	Knots.					ft. in.	ft. in.	ft. ins	ewt.	c. q.	lb	tna.	ewt	Kata.	G.	lbs	lbs			
Oct. 4...5	187	...	20 0	9:35	10½	Fre & aft	NWbW.	S.	3 s	25 & 67½	18 11	24 7 3	41	51	16 2	0 43	16	5	12	7 3	60		
5...6	210	...	24 16	8:65	10½	none	W.b.N.	W.N.W.	2 do	7	18	9 25 7 1	43	71	16 0	14 43	7	4	79	8 3	60		
6...7	...	233	24 19	9:58	10½	none	W.b.N.	W.	2 do	7	18	6 26 6 10	47	31	19 1	4 47	3	4	88	8 3	60		
7...8	...	225	24 18	9:26	10½	none	WbN&N.	W.	2 do	7	18	4 27 6 8	49	32	0 3	26 49	3	4	52	8 3	60		
8...9	135	...	14 7	9:55	10½	none	W.	W.	2 do	7	18	2 29 6 6	29	12 2	3 0	19 51	16 4	4 2	5	2	60		
Totals	990	...	d. h. 4 11										210	10						36	14	300	
Average.....	9:25	10½																		

½ hd. s. head sea—s. smooth.— Coal used.— Middling.— Number of revolutions by counter 66,000.

ISLAND OF ST. PAUL.

Sydney, 18th September, 1848.

SIR.—Accompanying this (by the ship *Tasmanian*.) I have the pleasure to send you the Sydney Morning Herald of the 14th instant, which contains my contribution towards a correct position of the Island of St. Paul, and further avail myself of the opportunity to attach to this a plan that I made of Amsterdam Island. In Feb. 1829, when passing the N.W. end of this island, distant about $\frac{3}{4}$ of a mile, a strong gale and squalls blowing at the time from the N.W., I observed that the water became discoloured, but whether from the rain water running off the island, or being in soundings I cannot say. We passed through it before the lead was ready for a cast. Birds and fowls flew about in great abundance. The N.W. end is craggy and sloping to the waters' edge, about this part with a south or S.E. wind I think landing might be effected without much difficulty. Caution is necessary in running for the Island with thick weather, its height no doubt tending to attract the clouds. On this occasion about three o'clock in the afternoon with a good look out from aloft and below, it was not seen till within three leagues, and then, but a small black tract 3° or 4° above the horizon.

I remain, Sir, &c.,

SAMUEL ASHMORE.

To the Editor N.M.

To the Editors of the Sydney Morning Herald.

GENTLEMEN.—Observing in your paper of the 8th instant, a letter addressed to the Editor of the *Nautical Magazine*, dated November, 1847, stating the uncertainty of the longitude of St. Paul's, being by one authority $77^{\circ} 22' E.$, and that assigned to it by Lieutenant Raper, R.N., $77^{\circ} 52' E.$, a point that should be cleared up; I therefore to assist in so doing, beg leave to state that Capt. Wickham, in H.M. sur.-v. *Beagle*, in 1837, placed the highest part of Amsterdam in lat. S. $37^{\circ} 52'$, and long. E. $77^{\circ} 34' 30''$.

And above the level of the sea 2750 feet. Having made that island in three voyages from Port Louis, assuming the longitude of the pier head of the Fanfaron to be $57^{\circ} 29' 30'' E.$, I made the highest part of the island to be as follows:—

1829, Feb. 6, in 21 days 8 hours, by two chronometers	77	37	24
1830, Feb. 15, in 21 days, by ditto	...	...	77 33 20
1830, Dec. 21, in 23 days, by ditto	...	...	77 32 19

77 34 21

1829, Jan. 27th to 31st, 16 sets lunars, sun	}	$^{\circ}$	/	"
E. of moon		77	37	43
Feb. 8th, 3 sets lunars, sun W. of moon	}			
1830, Jan. 3rd, and Feb. 1st, 10 sets lunars				
sun W. of moon	}	77	35	24
Feb. 17th, and 18th, 17 sets lunars, sun E.				
of moon	}			
1830, Dec. 5th, to 10th, 23 sets lunars, sun		77	33	5
E. of moon	}			
		77	35	24

77 34 52

Longitude of highest part of Amsterdam 77 34 41

And the latitude of it I made $37^{\circ} 51' 20'' S$; height above the level of the

sea, 2685 feet; extent from west to east four miles; the same north to south. On the 21st December, 1830, the island bearing N. 72° W. (true), distant twenty-six miles, and having assumed a conical shape, I found the Variation, head S.E.b.E., to be E. 21° 13' W., and by Amplitude, head S. 18° 15' W. In passing between them February, 1830, at sun-set, I had a bearing of both islands, which would place the body of St. Paul's in long. 77° 23' E. It is generally considered to be on the same meridian as Amsterdam, from, I presume, the bearings given by Mr. Cox in 1789, from the anchorage, which appear to me to have been not very exact, from the angle he has made St. Paul's to subtend, and which I would gladly have further corroborated had my mercantile pursuits admitted of the necessary delay.

Your correspondent of to-day labours in some part under a mistake relative to what he writes as to the late Captain James Horsburgh, who sailed for many years in the country service out of Bombay, latterly in the command of the *Anna*. And when chief officer of that vessel, if my memory fails not, his *Memoir of the China Sea* first appeared. It requires but a glance at his truly splendid and unrivalled work to see his own observations, and indefatigable labours, throughout his sea-going career.

I am, &c., S. ASHMORE.

Sydney, September 11, 1848.

THE AUCLAND ROCK.—*East of Malta.*

Malta, April 2, 1849.

The English screw steamer, *Earl of Auckland*, came in on the 27th ult., from Constantinople, in four days. The night previous, at 11 P.M., when about 90 miles east of Malta, the steamer struck upon a shoal or bank, and received so much injury, and made water so fast, that on arrival the captain was compelled to beach her in the mud at the head of the harbour, to prevent her sinking.

The existence of a shoal 90 miles east of Malta has often been asserted, and as often denied. In fact the English and French charts of the Mediterranean have a shoal marked doubtful exactly at that bearing and distance. I remember some eighteen years ago, the master of an Austrian brig from Alexandria, reported that when at about a hundred miles east of Malta, he observed an unusual appearance right ahead, like a shoal or broken water. He immediately hove to and went in his boat to examine it, when it proved to be a shoal of about 100 fathoms in diameter, having on it from 10 feet to 3 fathoms, suddenly deepening to 10, 20, 30 fathoms. The master said it appeared like the summit of a sugar loaf mountain. This was reported to the then admiral-superintendent of Malta Dockyard; and I believe that Lieut. Graves, then commanding the surveying-vessel *Mastiff*, went in search of it, but without success.

In addition to the testimony of the Austrian captain, I saw an extract from the log of a Maltese letter of marque, commanded by Capt. Goffiero, in which was a statement of having seen and sounded upon this same shoal in the year 1806. Several other old seamen also asserted their belief in the existence of this shoal.

Since 1830 several captains have arrived, who have reported having fallen in with a portion of a wreck, at about that distance and bearing. Some have even hinted at a shoal but have been silenced by being told that no "government surveyor" has ever yet been able to discover it. All doubts about its existence must now vanish, for here we have proof positive, in the shape of a vessel with a hole in her bottom, caused by striking upon it.

Her Majesty's surveying ship *Volage*, will leave this on the 9th to survey the island of Cyprus. Probably Captain Graves, may receive orders from Admiral Harvey to seek for it on his passage there. The Earl of Auckland has discharged her cargo, and is to go into the dry dock at the naval yard to be repaired. The schooner *Dolphin*, which took over the guns to Syracuse, has returned to Malta, having landed them in safety. They are mounted in the lighthouse battery, and in the battery near the fountain.

Malta Paper.

[We shall have more to say on this in our next.—ED. *N.M.*]

LIGHT ON HARE ISLAND, TUTICOREEN.—A fixed light has been placed on the Dutch Obelisk at Hare Island, off Tuticoreen, having the following bearings: the large Catholic Church, W.b.N. $\frac{1}{4}$ N. $2\frac{1}{2}$ miles; the small Church on Vonteevo (the next island to the North), N.b.E. $\frac{1}{4}$ E., $2\frac{3}{4}$ miles; north end of the Coilnapatnam Reef, S.b.W., $10\frac{1}{2}$ miles; Trichendore Pagoda, S.b.W., westerly, 18 miles. It may be seen in ordinary weather at the distance of 8 to 10 miles, from the deck of a vessel of about 300 tons.

A vessel making the port at night may anchor with it bearing from W.N.W. to W.b.S., about $1\frac{3}{4}$ to 2 miles off shore, where good holding ground will be found in 6 to $6\frac{1}{2}$ fathoms. At $3\frac{1}{2}$ miles distance, with the same bearings, the ground is foul, on pearl banks.

In approaching from the south, the light may be kept about N.N.W., till within 3 or 4 miles, when the above anchorage may be selected; but should a vessel suddenly deepen her water from 7 or 8 fathoms to 12, 15, or 20, she should immediately steer north till she makes the light, taking care to keep farther to seaward if it bears north of N.N.W. The outer part of this deep water lies a little to the north of the head of the Coilnapatnam Reef, and bears S.b.E. 10 miles from the Tuticoreen Light.

From the north, a vessel may keep the light about S.W. till within 3 or 4 miles, when she must steer more out for the anchorage; but in no instance ought the water to be shoaled under $6\frac{1}{2}$ fathoms, excepting with the bearings on for the anchorage, and then not under 6.

In the N.E. Monsoon, vessels should lie with a good scope of cable out; as, although the seas are not heavy, they are sharp, and occasion a chain to jerk. The sea breeze at this time blows on the reef; and a second anchor, with chain ranged, ought always to be kept ready for letting go.

In the S.W. Monsoon, which usually lasts from the middle of May to the middle of August, the port may be made without fear; for, although the winds are very violent, they are invariably off shore from west to S.W., accompanied by smooth water. At this time, vessels may approach the reef to 5 fathoms; but should always have a stream anchor to seaward, as occasionally, during the lulls of the Monsoon, a light air comes in from the eastward.

Longitude of the Obelisk, assuming—

Madras Observatory to be in	80° 17' 20" E.	78° 14' 1" E.
Latitude	- - - - -	8 47 17 North.
Variation of the Compass, 1842	- - - - -	- 51 00 Easterly.

JOHN J. FRANKLIN,

In Charge of the Manaar Survey.

Jaffna, August 1st, 1845.

Published by order of the Court of Directors of the East-India Company.

JAMES C. MELVILL, *Secretary.*

East-India House, London, 4th April, 1849.

NEW BOOKS.

AN ESSAY ON THE CREDIBILITY OF THE KRAKEN, *Sea Serpent, and other Sea Monsters, with illustrations.*—London: Tegg.

A well timed account of Sea wonders is contained in these few pages, highly interesting to seamen, at a period when the Sea Serpent is becoming common among them. They are the result of a well digested view of the whole subject of those Sea monsters, which are often taken by seamen for rocks and shoals, when shewing themselves at the surface. The following is the account given of the kraken.

The term kraken, though probably of Scandinavian origin, seems to spring, from a similar root as the old German word "krabben," to crawl, (whence "crab,") and may be translated as ground-laying or crawling.

The existence of the creature so called, we find first pointed at by Pliny; who briefly states, that there is a submarine tree growing in one of the straits at Cadiz, of such vast size and extent of branches, that, as it is believed, the channel cannot be entered. Allusions to some monstrous amorphous inhabitant of the sea, may also be met with in the mystic histories of the early Scandinavian races; but the first and only account possessing any claim to the attention of science, is derived from the writings of the celebrated Norwegian bishop, Pontoppidan. As his description is, as it were, a text for all discussions on the kraken, it is only right to give it here. "Our fishermen usually affirm," says the bishop, "that when they have rowed out several miles to sea, particularly in hot summer days, they are informed, by various circumstances, that the kraken is at the bottom. At such times they generally find the greatest quantity of fish, especially cod and ling: and instead of the depth of water being 80 or 100 fathoms, as expected, they sound only 20 or 30. Knowing that it is the presence of the kraken which causes these unnatural shallows, they carefully observe whether the water becomes shallower. If this be the case, they find that the kraken is raising himself nearer the surface, and that it is no time for them to stay longer: leaving off fishing, therefore, they take to their oars, and pull away until they come to the usual soundings; then resting, in a few minutes they see the enormous monster come to the surface. He then shows himself sufficiently, though his whole body does not appear, which in all likelihood, no human eye ever beheld. Its back, which seems one and a-half English miles in circumference, looks at first like a number of small islands, surrounded by something like sea-weed. Here and there, a large rising is observed, like sand-banks, on which various kinds of small fish are seen continually leaping about. At last, several bright horns or points appear, which grow thicker and thicker the higher they rise, and sometimes stand up as large as masts of middle sized vessels; these are the creature's arms, and, it is said, if they were to lay hold of the largest man-of-war, they would pull it down to the bottom. After this monster has been on the surface a short time, it begins slowly to sink again and then the danger is as great as before, because the motion of his sinking causes such a swell in the sea, and such an eddy or whirl pool, that it draws every thing down with it. Besides these arms," continues Pontoppidan, "the Great Creator has also given this animal a strong and peculiar scent, which it can emit at certain times, and by means of which it beguiles and draws other fish to come in heaps about it. During many months the kraken is continually employed in eating; during many others, in carrying on the last process which succeeds digestion; and this operation is so peculiarly agreeable to the smell and taste of other fishes, that they gather together from all parts, and keep, for that purpose, directly over the kraken, who then opening his arms, seizes and swallows them." In the minuteness of this description, the good bishop's informant, (for I presume he received it from another) if he does lie, "lies like truth."

Pontoppidan thinks that the accounts of floating islands occasionally seen

about the coasts of Norway, and off the Sound of Sweden, in the Baltic are referable to the appearance of this prodigy. The belief in the existence of the kraken seems to have been pretty general among the Norwegian sailors and fishermen in the bishop's time, (17th century,) and may still linger with them. That of the sea serpent certainly does, and the two creatures are often confounded, though there cannot possibly be a greater distinction between the two, except, perhaps, between such objects as Mout Blanc and the Rhone.

It is most likely that much which is true of the alleged appearances of this huge monster, may be referred to the effects of refraction, which as every one accustomed to the sea well knows, is capable of producing the most singular optical illusions. Seen through the mirage, on a calm day, distant vessels are brought near, are elongated, depressed, raised in the air, divided, and, in some rare instances, reflected on an opposite stratum of air, on the other side of the beholder. Land too distant to be seen, according to the laws of perspective and the earth's figure, is brought up from below the horizon to the surface, and sometimes appears above it in an inverted position, and all this without any visible change in the atmospheric medium itself; so that it is only by the effect themselves that the unusual refracting condition of the air is recognised. Fish spawn, or any unusual assemblage of medusæ, seen at some distance, occasionally discolour the water so as to produce the appearance of a sand bank, in a quarter where none is known to exist.* With regard to the change in the soundings, reported by the fishermen, it is possible some such phenomenon may have been caused by submarine volcanic eruptions, similar to those in our own time, occurring in the Mediterranean and off the Western islands. These are known to be accompanied, also, by the rising to the surface of quantities of ashes, and the lighter portions of the ejected matter. In this two-fold effect of an eruption taking place at the bottom of the sea, we can realize many of the circumstances associated with the appearance of the kraken; and it is no wonder, that events so rare, and attended by such new phenomena, to the imaginations of the sea-faring men of the 17th century, already impregnated with all kinds of sea marvels and diablerie, should have presented the terrible conviction of the present existence of some protentous monster of the deep.

We have not met with any recorded appearance of *Pontoppidan's* kraken since his own days, except one referred to in the second volume of Transactions of the Royal Society of Edinburgh. It purports that in the year 1786, certain appearances off the east coast of Scotland were thought to betoken the presence of this creature; but from all the particulars which have been preserved, they may be satisfactorily believed to have been optical phenomena.

It is usual for naturalists to retire from the further consideration of this creature, by associating it, divested of exaggeration, with the colossal cuttle fish, whose reality, within certain dimensions, is established; and the only tangible circumstances on record, which may justify the claim of the kraken to remain in the category of natural history, even as an "open question", does certainly strengthen this conclusion. It is also given on the authority of Pontoppidan, who received the information from the Rev. M. Freis, minister of Bodsén "that in the year 1680, a kraken, perhaps a young and careless one, came into the water that runs between the rocks and cliffs in the parish of

* A few years ago, a vessel sailing two or three hundred miles to the westward of Africa, fell in with a sand-bank, raised apparently some feet above the surface of the sea. As nothing of the kind was laid down in his chart, the captain very properly sent a boat to examine it. Contrary to all experience of mirage, the bank did not disappear as the boat approached, but became more and more defined, until she fairly ran on to it, when it was found to be a bank, not of sand indeed, but of dead locusts, laying so thick that it projected several inches above the surface, the sea being calm at the time. The account was read from a letter written by a person on board the ship, before a society, the author of these pages being present, who now narrates from memory.

Alstasbourg. It happened that its extended long arms or antennæ, which this creature seems to use like a snail, caught hold of some trees standing near the water, which might have been easily torn up by the roots; but besides this, as it was found afterwards, he entangled himself in some openings or clefts in the rock, and therein stuck so fast, and hung so unfortunately that he could not work himself out, but perished, and putrified on the spot. The carcass which was a long time decaying, and filled most part of the narrow channel, made it almost impassible by its intolerable stench."

In the chapter on the kraken in the Naturalist's Library, it is stated (authority not given,) that about seventy years ago, the remains of a dead kraken were found driven to the mouth of a large cave in the island of Meikle Roe.

Like the good bishop Pontoppidan, we must all lament that these rare opportunities for solving doubt were not availed of. I would add a remark, that it is very probably consonant with the habits of the cuttle fish for them to project their tentacula above the surface of the water; but however vast we may imagine one of these creatures to become, still the phenomena of its appearance at the surface would not correspond with the accounts of the old Norwegian kraken.

The tentacula of a cuttle fish would be projected above the surface round a common centre, and no part would be seen beyond or outside the arms, unless the creature rose to the top horizontally, in which case the tentacula would not be vertical "like the masts of a ship," as Pontoppidan says. The only known animal form which magnified to a kraken would accurately conform to the circumstances of its legendary appearance, is to be found probably among the echinodermata; as, for instance, the star fish. These animals are found in very large size (and rare in proportion to their size), and singular appearance, in the Norwegian and Shetland seas, as much as two feet across the body and rays. The rays of this family are divided and subdivided towards the extremities, so as to present at a distance a dish-like appearance, and the whole surface of the side on which the mouth is situated, is covered with rows of retractile spines, which serve the office of feet when the animal is at the bottom. But if we imagine an individual of this genus, grown to the fabulous size of the kraken, and rising to the surface with its mouth uppermost, then indeed its tentacula would present the aspect of a forest rising up from the sea, and its huge bulk, even when below the waters, might well puzzle the fishermen in their soundings.

However, we may confidently assert, there is not the least vestige in our days of Pontoppidan's kraken. The west coast of Norway between the Naze and North Cape, may not be more, or even so much frequented by shipping as in the days of the Vikings, for our Archangel traders rarely approach it; but on the other hand, a remarkable phenomena observed in any part of the civilized world, is soon promulgated and made known, and the well-supported declarations of unlettered fishermen, even on such a subject as the kraken, would meet with due attention by men of science. Mitford, an intelligent traveller in Norway and Lapland in 1841, made special inquiries about the Norwegian sea monsters. Of what he gathered anent the sea serpent, we will speak presently, but of the kraken he says, "I searched for it in vain, both on the coast and in the fish market at Bergen."

Before entirely taking leave of the kraken, however, some notice must be taken of the following very remarkable communication made to the Magazine of Zoology and Botany, in the year 1834.

"Upon the 22nd June, in lat. 46° 57' N., long. 58° 39' W., Captain Neill, of the ship 'Robertson' of Greenock, then homeward bound from Montreal to Greenock, saw the head and snout of a great sea monster, of which a sketch was taken at the time. It was first observed about a quarter past nine A.M., on the weather-bow, about four points, and it then appeared like a large vessel lying on her beam-ends. The 'Robertson' was hauled up so as to near it, and running at the rate of eight knots an hour, she, at noon, got abreast of it, distant about a mile to leeward. On observation at this time, it was discovered to be the head and snout of a great fish swimming to windward; and though an

attempt was made to get closer, it could not be accomplished, because the fish without much apparent exertion, kept swimming as fast as the vessel sailed. Immediately above the water its eye was seen like a large deep hole. That part of the head which was above the water, measured about twelve feet, and its breadth or width twenty-five feet. The snout or trunk was about fifty feet long, and the sea occasionally rippled over one part, leaving other parts quite dry and uncovered. The colour of the part seen was green, with a light and dark shade, and the skin was ribbed."

Supposing this most extraordinary account to be true—and it is presumed that it would not have been admitted into a scientific journal without some authentication—the circumstances are entirely consistent with each other, and lead forcibly to the conclusion that the crew of this vessel did really witness the rare sight of some vast pelagic monster, "*natans*" in *gurgite vasto*. The object was first seen four points on the bow, and it took the vessel two hours and three quarters at eight miles an hour (equal to twenty-two miles) to change its bearing four points, and get abreast of it. Supposing the estimated size to be an approximation, the object when first seen must have been at furthest six or seven miles off, and was therefore swimming two-thirds as fast as the vessel sailed. This change of position precludes the possibility of refractive phenomena, or of the object seen having been the hull of a vessel, or a dead whale; and the absence of blowing disfavours the idea of a living cetaceous creature. The colour, the ribbed appearance, and the general form do not oppose the supposition that this monstrous being belonged to the cephalopoda, which are known to swim rapidly, the tentacula at such time being below the surface.

Something of a similar appearance is mentioned by Dr. Hibbert, as having been seen at a distance from the shore of the island of Barra. "It seemed," according to the declaration of witnesses taken on affidavit, "like the hull of a large vessel, but on approaching it nearer, they saw it was infinitely larger, and resembled the back of a monster."

It is in reading these strange accounts that the idea of a connection between the mysterious vigia of the Atlantic, and the half revealed creatures of its depths is suggested. There is a strange similarity between some of the recorded instances of supposed rocks in mid-ocean, and such stories as the above.

Thus we have the ship "*Indemnity*," in 1829, when on her way to Demerara, in lat. 43° 20' N., long. 25° 10' W., discovering a rock distant about three ship's lengths—the ship going two and a half knots an hour, with a heavy N.W. swell. With each succeeding swell the rock was entirely covered, but at intervals it showed several feet above the water, and was perfectly perpendicular. From the mast head it was seen a great depth below the water, and appeared to be in the shape of a cone.

Again, Captain Livingston says, Gough rocks were seen in lat. 40° 28' N., long. 30° W.; one of them twelve, and the other three feet above the water. The Devil's rocks, about lat. 46° 35' N., long. 13° 7' W., are recorded to have been seen several times, and are described as cone-shaped also, appearing now above and now two or three feet below the surface.

Many observant navigators dwell much on the remarkable changes in the colour of the waters of the ocean, irrespective of clouds or sky. In the deep sea, the natural colour of the water is dark blue, but occasional spots of bright green are passed over; and it has been noticed in these localities, the medusæ are remarkably large, even three to five feet in diameter, and of great variety in colour and shape.

Whether these vigia of cone-like shape just level with the surface, "unsought for, seen; when pursued never found," occasionally reported by seamen, be altogether illusions, or whether they be some amorphous monster, like Milton's,

"———— other shape,
If shape it might be called that shape had none
Distinguishable in member, joint, or limb;"

just emerging for a brief space out of the abyss, and again settling down silently to its proper habitation; or whether they be indeed perils of the sea, on which

the freighted bark, carcering before the gale, strikes and founders, leaving no other record of her fate than what is implied in the ominous and pregnant epithet, "a missing ship"—who can tell? We undertake not to decide, but certes Capt. Neill's monster is the strangest of all the strange visitants from beneath.

A DIARY IN THE DARDANELLES, *written on board the schooner Corsair, while beating through the Straits of Tenedos to Marmora.*—By W. Knight, Esq.—Hunt, St. Albans Place, Edgware Road.

"The Rear Commodore of the Royal Harwich Yacht Club" has collected a mass of practical hints relative not only to the navigation of the Classic seas of the East, but to the persons with whom the visitor has to deal, and dedicated them, as in honor bound, to the Members of his Club. These he has rendered still more valuable by adding to them nautical and other terms so necessary for colloquial intercourse. The whole forms an unpretending little volume, which will find its way into the hands of Eastern travellers, and especially those of our yachtsmen.

The following extract gives our author's style:—

The Straits are more crowded with shipping in Autumn than any other season, and when "Jack" gets ashore among the turbaned Turks, laughable are the scenes that continually occur. The difficulties, however, of marketing are easily enough to be surmounted. When the Frank has acquired even half a dozen sentences of Turkish, he will be surprised at the facility with which he and the natives understand one another. He stops, for instance, before piles of vegetables and fruits spread on the ground. The seller, for a moment moving his long pipe from his mouth, exclaims "*Neh istersen?*" "What do you want?" The purchaser points to the article he desires, and replies "*Bu nesteh,*" "this thing," or "*O nesteh,*" "that thing;" for nesteh or nesheh, answers almost to the English word "thingumbob," and is used when the proper name is not known or cannot at the moment be remembered. "*Katch grooshi?*" "How many piastres?" continues the buyer. The Turk here holds up his fingers, and deliberately counts on them the desired number. A nod of intelligence is exchanged. A handful of dollars or of Turkish coin is next held out, and the vendor takes his money; and honestly too, neither more nor less than his due. But the sentence, "*Katch groosh,*" must be sometimes changed to "*Katch para.*" "How many paras?" for vegetables, fruit, and bread. Sherrab or wine are so ridiculously cheap in those parts that, although a single groosh or piastre amounts to but twopence halfpenny English, that sum would be found too much for such articles; among others, as melons, two or three of which may, at all times, be purchased for a single piastre or forty paras. Nearly everything is sold by weight, by the oke, which is equivalent to 2½ lbs. English. I have myself bought six loaves, weighing altogether one oke, for eight paras, or one halfpenny English. A quart of wine may be had for a penny, or a little more; grapes, figs, olives, onions, apples, oranges, eggs, honey, and poultry, are also exceedingly reasonable. The word for onion is soghan. The butter and cheese of these regions will not suit the palate of the English, nor do they seem much to relish, as the Greeks and Turks certainly do, either botargo or the celebrated dry and brown caviar. But the cooling dainties, called kymak and yahort, are in high favour.

THE AUCKLAND ISLANDS; *a short account of their climate, soil, and production, and the advantages of establishing there a settlement at Port Ross, for carrying on the Southern Whale Fisheries.*—By C. Enderby, Esq., F.R.S., with a panoramic view of Port Ross, and a map of the Islands.

We have not space in our present number to deal with this interesting little history as we would, and must reserve it for another, contenting ourselves by recording the following to which it has allusion.

BRITISH SOUTHERN WHALE FISHERY.—A royal charter of incorporation having been obtained by Mr. Charles Enderby for the prosecution of the southern whale fishery, together with a grant of the Auckland Islands by the Crown, in furtherance of this object, and it being the intention of Mr. Enderby to proceed thither, a public dinner was given last night, at the London Tavern, to that gentleman, in testimony of the sense which is entertained by the British public of his laborious and persevering services in laying the foundation for the restoration to this empire of the above important branch of our maritime commerce. About 260 gentlemen sat down to dinner, amongst whom were the Earl of Colchester, Admiral Dundas, M.P., T. Baring, Esq., M.P., M. Forster, Esq. M.P., F. Hutt, Esq., Captain Mangles, Sir C. Malcolm, Colonel Thomas T. Waghorn, Esq., Alderman Sidney, M.P., F. Scott, Esq., M.P., and others. Admiral Dundas occupied the chair. After the usual loyal toasts, the chairman proposed the toast of the evening. "The greatest honour an Englishman could receive was the well deserved approbation of his fellow-citizens. They were met that evening to bid good-bye to a British merchant about to set out upon a voyage, if not of peril, at least of discovery: and he believed there was not a man in that room that did not envy the position of Mr. Enderby, based as it was upon the confidence and good opinion of his fellow-citizens—(cheers). He begged to propose "The health of Mr. Charles Enderby"—loud cheers.—Mr. Enderby, in returning thanks, said "He had as yet done nothing more than give a promissory note; but of this he could assure them, he was supported by the confidence which he felt that he would be able to carry out all that he had promised. He was gratified to find her Majesty's ministers had expressed themselves disposed to further the object he had in view. If this measure did not succeed, in what position would he return to London? How would his opinion afterwards be looked upon? He would, in such case, be ashamed to show himself amongst them—(loud cries of "no, no.") He felt bound to carry out what he had promised. He held in his hand the *Whalers' Shipping List*, dated the 20th of March, 1849, in that paper he found that the Americans had 596 whaling ships, while this country had but 14. He rejoiced at the enterprise of their transatlantic brethren, and he felt no jealousy towards them. He would meet them as fair and open competitors, for he was quite sure that there was plenty of room for all—(cheers). Mr. Enderby concluded by proposing "The health of her Majesty's ministers." Mr. Labouchere returned thanks. Several other toasts were given, and the company separated at about eleven o'clock.

RODGER'S IMPROVED ANCHOR.

We find the following in a recent number of the *Shipping Gazette*. It amply confirms the opinion we have always entertained, and frequently recorded in our Journal, as that of experienced Naval Officers on the merits of Lieut. Rodger's Small Palmed Anchor.

That Mr. Pashley's opinion that it is "the very best he ever had to ride by," should coincide with those so often recorded by us is a further testimony to the superiority of the Improved Anchor; which, from the well-known character of that gentleman as a first-rate seaman, of great experience, and a most skilful pilot, must be highly gratifying to the patentee. And

having ourselves taken a lively interest in this anchor from an early period, in consequence of our own practical experience of its merits, we now most heartily congratulate Lieut. Rodger on this valuable addition to his already numerous supporters.

(From the *Shipping Gazette of the 19th of April, 1849.*)

The following testimonial to the excellent qualities of Lieut. Rodger's Improved Anchor is so much in accordance with the opinions we have expressed, as the result of the practical tests we have witnessed, that we have much pleasure in calling attention to it. It appears that the Surveyor to Lloyd's (Mr. Courtenay,) anxious to obtain "a sound practical opinion" as to the merits of Rodger's Small Palmed Anchor, made application to a respectable Channel pilot, whose experience of the working of anchors of all kinds and in all weathers cannot be questioned. The testimony which Mr. Pashley offers to the superiority of Rodger's anchor, is no doubt well merited; and we believe that the only bar to its becoming so extensively used as it ought to be is, the additional cost of the article over that of the common anchor. This obstacle, however, may perhaps ultimately be removed, and in that case the improved Small Palmed Anchor will, in all probability, come into general use, for there does not appear to be the slightest difference of opinion as to its merits, either theoretically or practically:—

London, April, 10th, 1849, White Lion Court, Cornhill.

DEAR SIR.—Being desirous of obtaining an unquestionable opinion in regard to the alleged superiority of your improved anchor, I applied to Mr. Pashley, a gentleman of sound practical judgment, and one who has had the best opportunities of testing its properties, as he has been in the habit of piloting the American packet-ships from London to Portsmouth, most of which carry your anchors.

I enclose, with his permission, a copy of his letter to me, as it may be satisfactory to you to know what is his real opinion of the merits of your anchor.

I am, dear Sir, your obedient servant,

P. COURTENAY.

Lieut. W. Rodger, R.N.

Hyde Vale, Greenwich, Feb. 6, 1849.

DEAR SIR.—I think it only my duty to my brother sailors to offer my humble testimony to the excellent qualities of the improved Small Palmed Anchor, just patented by Lieut. Rodger, R.N.

My constant employment, for many years, in the London and New York line of packets, has convinced me of the first importance of a good anchor, and I think the new one the very best I ever had to ride by. As one proof out of very many I could name, I will mention a trial during the heavy gales last month.

The packet-ship *Margaret Evans* is supplied with one of Rodger's improved anchors, of 28 cwt., or, including the iron stock, 36 cwt. At 4 P.M. on the 22nd of January last I let go this anchor in 10 fathoms water, under Dungeness, and in order to test its holding properties (having plenty of room in case of its coming home, or of parting the chain), I gave her only 60 fathoms of cable, (the 60 fathom shackle being abaft the windlass). The ship rode safely, and without driving a foot, until the 26th, during which interval of *four days* we had a constant succession of heavy gales from S.W. to W.N.W., but had no occasion to give the ship more cable.

I consider this a strong proof of the holding powers of the anchor, in addition to which, I have invariably found it to bring the ship up with more certainty than any other anchor I ever used.

So well satisfied are all the captains in the line of packets with Rodger's anchors, that they are now supplied to nearly every ship composing it, solely in consequence of their superiority over all other anchors known.

I remain, dear Sir, your very faithful servant,

E. PASHLEY.

Captain Courtenay, Surveyor to Lloyd's.

A WELL KNOWN CHARACTER.—Died at Bridgetown, Barbadoes, on the 16th of November, 1848, at the Clarence Hotel, of which she had been proprietress for many years, Miss Eliza Howard Austin, better known perhaps, as Miss Betsy Austin. There were but few persons in the island whom she did not know, or to whom she was not known. The amusing incidents chronicled of her in the pages of Marryatt's "Peter Simple," "Tom Cringle's Log," and other naval writers, (for the "Clarence" in its palmy days, was the only resort of the gallant sons of Neptune) rendered her name familiar in various parts of the globe; and the traveller on visiting Barbadoes, would have gone from its shores wanting something, had he not visited the 'Clarence' and had a chat with its popular landlady. Her old arm chair, which she so well filled, alike with herself, will long be remembered. The fortunes of her house had for several years seriously declined, and the hall which were once graced with the presence of his Majesty William the Fourth, had of late become deserted.

H.M.S. SCOUT, Commander Johnston, in working up the river Min, struck on a rock, and shortly afterwards slipped off into 7 fathoms, where she is now lying with only a small portion of her fore-castle rail out of water. All hands saved, but every thing else gone down with the vessel. *H.M.S. Medea* arrived at Amoy on the morning of the 3rd. December, and was to tow *H.M.S. Columbine* up to the Min, on Monday last, weather permitting.—*Hong Kong Register, 29th December.*

Passage from Callao to Hong Kong.—The *Sea Witch* arrived at Hong Kong on 27th December, having made the very short passage of 50 days from Callao, from which port she ran to the Sandwich Islands in 25 days, the shortest on record.

Quarterly Naval Obituary.—Officers whose deaths have been officially reported since 20th Dec., 1848.—**Flag Officers:**—Vice Admirals—T. J. Maling, C. B. H. Ross, C.B. Rear-Admiral—T. Searle, C.B. Captains—Sir S. Roberts, C.B., C. Nelson, J. Simpson, J. Lawrence, C.B., J. N. Campbell, C.B., J. A. Blow, F. Hoffman. Commanders—J. Campbell (b), J. W. Bazalgette, T. Williams, S. Hopkinson, E. W. Gilbert, P. Wybergh, J. J. Hough, G. Lowe, R. D. Pritchard, T. B. Brown, R. Sangster, J. Moore, T. Duncan, J. B. Connolly, T. L. Prescott, W. Lugg, J. Franklin. Lieutenants—W. Purchas, H. Moore, W. Richards (b), R. Delap, W. Walker (b), T. F. Stead, E. Owen, W. W. Pennefather, E. Hennah, W. C. Gerrard, W. H. Routledge, H. Bull, E. Tyndall, R. M'K. Richardson, H. B. Gray, D. M'D. Gordon, W. C. Marshall, W. G. Herbert, P. R. Couch. **Masters**—T. M. Temple, T. Kirkby, A. Lovie, K. Knapp, A. Watson, J. Ryan, J. Pascoe, (b). **Royal Marines**—Captain R. S. Bunce. Mate W. R. Adair. **Medical Officers**—Surgeons, O. Pincoe, G. Drysdale, T. Cunningham, J. Allen, J. Grant, J. Miller (a), J. Osmand, J. Callan, J. Dundas. **Assistant Surgeons**—G. E. Freeman, W. J. Burke. **Paymasters and Pursers**—J. M'Arthur, W. Mark.

BIRTHS.

April 5, at Sheerness, the lady of Capt. G. Elliott, R.N. of H.M.S. Ocean, of a son.

13, at Donnington, Berks, the lady of Capt. Hayes, R.N., of a son.

18, at Little Strawberry hill, the lady of E. E. Turnour, Lieut.-Com. H.M.S. Shearwater, of a daughter.

MARRIAGES.

April 10, at Holmepierreport, Capt. C. B. Hamilton, R.N., to Mary daughter of the late T. Grove, Esq. of Ferne, Wiltshire.

10, at Cheltenham, Capt. G. C. Mends R.N., to Georgiana, daughter of the late Capt. Nesbit, R.N.

DEATHS.

March 24, at Woolwich, Dr. Parkin, R.N., of Cawsand, Cornwall, aged 71.

25, in Wimpole street, Catherine wife of Adm. Sir Byam Martin, G.C.B.

28, at Castletowusend, Cork, Lieut. L. F. Boileau, (1806) of the coast guard aged 68.

April 7, at Breinton, near Hereford, Elizabeth Anne, wife of Capt. James Harris, R.N.

METEOROLOGICAL REGISTER.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory From the 21st of March, to the 20th of April, 1849.

Month Day.	Week Day.	Barometer In Inches and Decimals.		In the shade				Wind. Quarter. Strength.				Weather.			
		9 A.M.	3 P.M.	9AM	3PM	Min	Max	A.M.	P.M.	A.M.	P.M.	A. M.	P. M.		
21	W.	30.30	30.29	42	50	36	52	S	S	1	1				
22	Th.	30.15	30.10	41	51	35	42	E	NE	3	4				
23	F.	30.06	30.02	41	45	38	46	NE	NE	2	2				
24	S.	29.96	29.96	38	40	33	41	NE	NE	4	5	ops 2]		qbcps [3]	
25	Su.	29.89	29.92	36	38	29	39	NE	NE	5	4	qbcps 1] [2]		ops [3	
26	M.	29.90	29.89	35	40	34	41	N	NE	3	3			og	
27	Tu.	29.58	29.52	39	44	35	45	NE	SE	1	1			o	
28	W.	29.26	29.31	40	41	34	42	E	E	2	3	or 1]		o	
29	Th.	29.39	29.35	41	44	38	46	NE	SE	2	2	or [2]		bcq 3]	
30	F.	29.28	29.36	44	49	34	50	SE	SW	2	3			bc	
31	S.	29.58	29.62	47	54	89	55	S	S	5	5			qbc	
1	Su.	29.56	29.52	47	52	42	54	S	S	2	2	or [1] [2]		bc	
2	M.	29.46	29.42	46	48	42	54	S	S	3	3			bc	bcp 3]
3	Tu.	29.55	29.62	45	49	34	50	S	SW	2	2			bc	
4	W.	29.67	29.61	44	49	33	52	SW	SE	1	4			b	ber [4
5	Th.	29.42	29.52	48	55	42	57	SE	SW	2	2	od [2		bc	
6	F.	29.62	29.60	43	57	34	58	SE	S	2	3			b	bc
7	S.	29.40	29.40	51	51	43	55	SE	S	4	2			o	b
8	Su.	29.38	29.42	49	54	41	46	SE	SW	2	3	or 1]		bcp [3	
9	M.	29.48	29.48	45	47	38	52	E	NE	2	3			ogf	op (3)
10	Tu.	29.56	29.59	43	46	41	47	NE	NE	3	3			og	ogp (3)
11	W.	29.71	29.76	44	41	37	43	NE	NE	5	4			qo	oprh (3)
12	Th.	29.83	29.76*	37	45	33	46	NW	NW	1	2			ofin	o
13	F.	29.36	29.22	45	45	39	46	SW	S	4	5	od 2]		qo 3)	
14	S.	29.32	29.42	40	52	31	53	SE	SE	2	4			bc	bc
15	Su.	29.61	29.72	40	42	35	43	NE	NE	1	2	od [2]		o	
16	M.	29.79	29.79	43	45	35	47	N	NW	4	3			o	bc
17	Tu.	29.74	29.72	37	41	22	43	N	N	5	5	qbcps 1]		qbcps 3) 4)	
18	W.	29.88	29.88	37	44	27	45	NE	SW	5	8	qbcps [1		bcs (5) 4)	
19	Th.	29.22	29.32	36	33	31	36	NE	NE	6	6	qors [1] [2]		qos (3)	
20	F.	29.58	29.67	37	44	32	36	N	NE	8	6	qbcphs [2]		qbcphs (3	

MARCH 1849—Mean height of the barometer=30.106 inches; mean temperature=42.7 degrees; depth of rain fallen=0.45 inch.

TO CORRESPONDENTS.

The remainder of ALIQUIS in our next. Several important Hydrographical Notices, with others of New Books, are unavoidably deferred for our next.

Hunt, Printer, St. Alban's Place, Edgware Road.

THE
NAUTICAL MAGAZINE

AND

Naval Chronicle.

JUNE 1849.

GIBRALTAR AND GENERAL NAVIGATION OF THE MEDITERRANEAN
TO ALEXANDRIA.

It has been stated that the current runs sometimes to the westward in this Strait, but the cases are very rare. The tide certainly has considerable influence on the central current, and of course is more felt near the edges of it: but, since the trade to the Mediterranean and Black Sea has become so extensive, a large number of ships, far too large and unhandy have gone in that trade, both for this Strait and the Dardanelles and Bosphorus, and it is not surprising that great delays occasionally occur.

Generally, even with a good easterly wind, the current is so strong that you require to run down for the back of the Rock, and keep within the stream of Europa Point, and when you have crossed the bay keep close along the European side to Tarifa Point, and then endeavour to get over to the other side at Tangier Bay. The same course must be pursued when the wind is shy; you will do nothing by crossing the Strait, and if the wind fails you upon the African side you may not fetch the bay by having to cross the current, and there are some very awkward whirls and breaks near Perigil Isle, and under Apes' Hill.

When the winds are contrary you may anchor to the eastward of the Rock, and if necessary water may be had by landing at the watch towers; but, anchoring here is hardly thought safe in the winter season, and unless it blows heavy you can hold your own under sail, by keeping within the stream of Europa Point. Quite close in here you will find a good stream of tide, and by taking it with you even with a fresh westerly wind you can soon beat round Europa Point, and get into the bay, where you may still remain under sail when the winds are much too strong to attempt the Strait.

Gibraltar and Algeciras.—Vessels from the eastern ports subject to quarantine will find it very expensive going to Gibraltar, both for the anchorage and guard-boat, and unless in want of beef, (which cannot

be had at Algeciras) or other material supplies, they would find it more reasonable to go to Algeciras where the anchorage is 7 dollars, and the guard-boat 2 dollars per day, about half of what they are at Gibraltar.

Verde Island is covered with fortifications, and the ledge of rocks extending from it form a little cove fit for small craft. The watering place is behind Verde Island, and you are allowed to land and fill your water under a guard. For permission to do this, and have the guard sent, also to pay the guard-boat, and transact all quarantine business, you go to the flat rock, nearly level with the water in front of the town, called Galera Rock, every morning.

The best anchorage is to bring the large square steeple, near the middle of the town, to bear west, and anchor between 10 and 16 fathoms; there is only a narrow belt of anchorage of one mile or one mile and a half, and ships not wishing to go to Gibraltar or Algeciras, sometimes drop their anchor for a short time anywhere along the west side of the bay.

After a long spell of westerly winds when the sky to the *westward* became *quite clear* at night, in the morning the *white-headed clouds* rose in the *eastern* horizon, and the easterly wind came down. These are considered the regular indications of the Levant winds.

I have seen a thick fog to the eastward of the rock with the first of an easterly in the morning which did not pass Europa Point, and the ships emerging from it loomed very large. There was no fog in the Strait, and the bay partially clear, as well as the top of the Rock, which showed the fog to be sweeping quickly to the S.S.E. The African side is sometimes covered in the same way, so that only the points or small portions of the darkness are visible, and in clearing off I have seen the fog out of the adjoining valley envelope the summit of Apes' Hill, and give it the appearance of a smoking volcano.

Proceeding out of the bay along the west side, detached rocks lie off Cape Carnero to some distance, and high enough to make it easily known. I could not make out Point Cabrita. Palomas or Pigeon Island is a bare blackish-looking rock, and there are detached rocks from it in a north-west direction to the shore. The Pearl Rock (which appears to be the only hidden danger) lies about a mile to the southward of Pigeon Island, and you must mind your distance from it until you are to the westward of that danger. A peaked rock off Cape Carnero in one with the double-topped hill to the eastward of the town of St. Roque is easily understood, but I could not make out the other mark. There are several eddies in the current about here, until you pass the point beyond Cala Arenas, the sandy cove marked on the Admiralty plan.

The prevalent westerly winds of the Atlantic continue up the Mediterranean to the Malta Channel, and a current to the eastward will generally be felt at least as far as Cape de Gatte, but it is frequently found to deflect from Gibraltar towards the African side. Ships bound to Almeida should close with the land about Cape Sacratif or Cape de Gatte, to other lower parts; but those to the Malta channel may pursue about a mid-channel course. Bound to the westward I prefer edging to the northward after passing Sardinia, in consequence of the heavy northerly

winds met with blowing over the Balearic Islands and the Spanish coast, and holding to the Spanish coast from Cape de Gatte; although I do not think that long stretches out of the fairway track are advisable generally in Mediterranean navigation.

Malta Channel.—Keith's reef is in the track to this channel, but the points on entering it, Cape Bon and the Island of Maritimo are high and bold. There is generally little difficulty in getting to the eastward through this channel although even with strong westerly winds on passing Cape Bon. You can seldom get through it without some change or baulk in the winds thence to Malta, as here at times the easterly and westerly winds meet, the westerly wind reaching Goza, while that from the eastward blows over Malta. Bound to the westward you can hardly ever carry a fair wind past Malta. It will frequently there turn variable and squally, with thunder, lightning and rain, succeeded by a westerly wind. But whilst that wind is blowing steady westward of Cape Bon, it appears to be much deflected in this channel, so that no particular directions can be given for beating through it. The currents also are very irregular, and at times strong. The sea in the Mediterranean generally is quite different from that in the Atlantic; it is short and grumbling, giving a ship no fair play, but striking her always. But in this channel it is still worse, probably from the irregular currents, and the very irregular bottom, particularly between Cape Bon and Sicily. It becomes in bad weather more like a great cauldron boiling than the running sea of the Atlantic.

I believe that northerly winds often prevail along the European shore of the Mediterranean, and the prevalent winds blow down the Gulf of Venice, whilst the westerly winds are blowing in the open sea.

Eastward of Malta, westerly winds are still decidedly prevalent, but are more frequently interrupted by easterly and other winds, and the currents are very irregular the whole way up to Alexandria; that setting to the southward out of the Gulf of Venice is frequently felt to a considerable distance from the shores by ships running for the Morea or Candia, and appears the most definite.

Ships bound to Alexandria make for the east end of Candia, and thence for the Arabs tower, while those to the Archipelago make for Cape Matapan, the point of the Morea, and with contrary winds it is not advisable to stretch far on either side of the fairway track, as the winds do not generally continue so long as to make any decided advantage by doing so.

Alexandria, Egypt.—Stands upon a peninsula of low land resembling the letter T, the western point called Eunostos has a high light-house upon it, and forms the old harbour. The light can be seen eight leagues in clear weather. Upon the eastern point stands the Pharos castle, and forms the new harbour; there is a light-tower upon the south end of the castle, but I do not know anything of the light. The new harbour is of very little importance.

Eunostos Point forms the old harbour into a semi-circle, and the chain of reefs from that point to Marabout Island protects it from the prevalent winds from seaward.

The ships lie safely moored with both anchors in 6 and 7 fathoms water, good holding ground, but a fresh wind from sea throws in a nasty wabble over the reefs, for which the lighters are not well adapted, being quite open, and having very little bearings. There is no rain in the summer, but smart showers at times in the winter, (when the grain is shipped) and they have no cover, so that the clause "the cargo to be brought and taken from alongside at the merchant's risk and expense" is requisite to protect you against much risk and expense in bringing off the cargo. Very little cotton or flax is shipped during the grain season, and cotton at high rates is only put into charter-parties as an inducement to accept of them.

Business is transacted in Italian, and no *commission* should be allowed to the *merchant* there, as they do nothing for it, and you have still to employ a *broker*.

Provisions.—Ships going there should be well supplied with salt provisions for the voyage, as they cannot be got there, except bread, which is of fair quality and price, but does not keep well: beef is seldom to be got, but water, with eggs, fowls, and mutton are plentiful; mutton nearly fourpence per pound, in January and February 1847, when there was 55 sail of British ships there besides other nations.

Labourage was about 1s. 6d. per day, and you could hire a man by the job to load the ship at a reasonable sum, but the large firms who are Agents for the Government could press at any time both men and lighters, into the Government service; but they would not take a lighter if the Union Jack was hoisted upon her to shew that she was hired by a British ship.

Money and Inhabitants.—The inhabitants are exceedingly mixed, being several tribes of Arabs, besides Jews, and almost every nation of Christians. The money is the same, which causes great confusion. The native money (especially the gold pieces) is much defaced and worn and leads to similar disputes to our light sovereigns; whilst foreign coins, English, French, Spanish, Sardinian, Tuscan, Austrian and Greek may be all in your hand at once, their value is pretty well understood at the banks, but some are current at rather more than their bank value, and are very confusing.

Accounts are kept in piastres and paras, 40 paras 1 piastre, and 20 piastres 1 dollar Egyptian.

It is a free port, the only charges being a dollar at the health office, and the Consulate charges.

Cargoes.—There are machines for compressing the cotton, but you should be cautious in chartering for flax, as they differ 40 per cent. in stowage. "Government flax" is the best; and next "private clean," which stows 25 per cent. worse. I do not know the name of the other, but it stows 15 per cent. worse than the "private clean," making 40 per cent. difference in stowage, whilst it is still flax. Lintils are much worse than grain or seed, and should always pay more, say 7s. per quarter for grain or beans, lintils should pay 8s. It is to be hoped that they

will improve their mode of preparing their grain, &c., as it is almost impossible to live below for insects and vermin.

Little is left of the ancient city; they are digging up the foundations for carrying on the military fortifications; the catacombs are destroyed; the mason-work foundation of Pompey's Pillar several feet above ground, and in very bad repair; but the defacement of this column and Cleopatra's Needle appears to be chiefly occasioned by the wind from the desert, as the two angles of the needle which face the sea are quite perfect, while those toward the desert are defaced to the full depth of the hieroglyphics.

Kampsein wind.—This wind blowing from the desert commences at the end of April, and blows for fifty days: it is dry and unwholesome, and bears with it much fine sand. This is very bad for the eyes; but at all times the great sameness of colour and whiteness affects the eyes very much.

The city is substantially built, but some of the streets are narrow and crooked, and either thick with mud, or suffocating with dust, or they are much crowded with passengers and asses, with which animal it is the general mode of travelling, and when you have hired one, you may take the first that you meet with if your own is not at hand, and your boy will pay for him. A rapid communication of intelligence seems to be brought to great perfection amongst them, as they all know whether you have a donkey or not, and who is the driver of it.

The habitations of the labouring Arabs are miserable hovels, thickly clustered together, small and low, so that they can scarcely be distinguished from the generally broken ground. For this reason the town of Marabout near the ancient canal into Mareotis, is not very easy to find, except as represented by the numerous cluster of windmills, and the new guard-house; and there are other clusters of those hovels about Cleopatra's canal and the government granaries, and thence to the city.

This is the only place where I have seen any foundation for the Americans' plea,—that their slaves are better off than if they were free. Here, where the population is in a state of semi-barbarism and slavery, the actual slave may be as well off as the common population. But several religious communities in America quite forgot, when they advocated slavery from the Bible, the difference in the state of society. Could slavery be abolished now in Egypt it might save the confusion which its abolition leads to in more advanced society, and they might advance quicker in acquiring a greater degree of liberty.

But whatever may be thought of Mahemet Ali's government, it is doubtful whether a milder system would have produced such effects in developing the resources of the country, with such a population, and rendering Alexandria perfectly safe by day or night. Proceedings between British subjects are carried on through the British consulate. I carried on a law suit in this way respecting another vessel, which was at length settled by the vice-consul calling in two resident British merchants as assessors to assist him in deciding the case.

The weather in summer is very hot, although much tempered by the almost constant fresh N. W. wind from seaward.

The following table will give an idea of the winds and weather during my stay there.

1847	WIND. Direction.	Ther Forc.	shade.	Average State of the Atmosphere each Day.	
Jan.			°		
4	N.N.W.	5	66	Clear.	
5	N.b.W.	5 and 6	66	Passing shower of rain.	
6	N.E. and calm.	2 " 0	66	Cloudy.	
7	Variable.	1 " 0	68	Clear.	
8	S.E.	4	67	Cloudy.	
9	S.E. to SSW.	2	68	Cloudy.	
10	S.E.	2	70	Fine.	
11	N.N.W.	3	69	Cloudy.	
12	N.N.W.	2 to 6	2	64	Changeable with smart showers.
13	W.	5 and 2	64	Passing showers of rain.	
14	N.b.W. to E.N.E.	4 to 2	65	Fine weather throughout.	
15	E.	3 and 4	66	Ditto.	
16	E.N.E.	3 and 4	65	Ditto.	
17	S.E.b.E.	4	66	Ditto.	
18	N.W.b.W. to N.	4	66	Cloudy.	
19	N.W. to N.b.E.	4 and 2	64	Dull, and some rain.	
20	S.W. to N.N.E.	3	65	Changeable.	
21	N.W.b.W.	4, 3 & 2	64	Changeable and some rain.	
22	N.W. to N.N.E.	1 and 3	64	Ditto.	
23	N.N.E.	3	64	Ditto.	
24	Variable.	1 and 0	64	Fine and clear.	
25	N.E.	1 " 4	64	Cloudy.	
26	N.E.	5 " 2	66	Cloudy and some rain.	
27	S.W.b.W.	4	68	Clear.	
28	W.S.W.†	4	66	Clear.	
29*	W.S.W. & N.	6	64	Cloudy, and latter parts thunder lightning, and rain.	
30	N.E.	4	66	Pleasant.	
31	S.E.b.E.	1 and 0	67	Ditto.	
Feb.					
1	E.N.E.	1	70	Ditto.	
2	Variable.	1 and 0	72	Ditto.	
3	N.E.	2	70	Ditto.	
4	N.E. to N.N.W.	3	69	Ditto.	
5	Variable.	2	67	Cloudy.	
6	Variable.	2	68	Fair.	
7	N.	4	74	Close and sultry.	
8†	N.N.W. and N.W.	0 and 8	70	First parts calm and thick fog: latter parts fresh gales and much rain	
9	W.S.W. & N.N.W.	5	68	Cloudy.	
10	S.W. to N.W.	3	70	Fine.	
11	S.S.W. to N.W.	3	74	Fine.	
12	S.S.W. & Variable.	3	74	Fine.	

* This thunderstorm cleared the atmosphere, and the weather was free and pleasant after it.

† The fog was very disagreeable, and is regarded as a bad omen as sickness frequently comes with these fogs; but the weather was quite fine and healthy after, and no suspicion of plague.

A modern authoress makes the following passing remarks on Alexandria and its accommodation for travellers.

“The great difficulty, on arriving at the renowned port of Alexandria, is to see it. First, a host of windmills appear, on a long, low sand-bank, the site of the ancient Necropolis. Secondly, a low fort. Thirdly, the palace and harem of the pacha; and, when you land, you see the town. The harbour has a very animated appearance, filled with ships from all parts of the world. No description could convey a just idea of the fearful noise on landing; the disturbance at Malta was faint in comparison. Hotel servants, screaming forth the comforts and advantages of their respective houses; boatmen, donkey drivers, baggage porters, quarrelling and vociferating in every living language; the most distracting war of words, occasionally rendered more emphatic by a vigorous blow skillfully administered, for the mutual edification of the belligerent powers.

“Through the dirty, narrow, crowded streets of the bazaar, the traveller is ushered into a large, open, handsome square, in which are the principal hotels, and residences of Consuls of various nations. Several of these have spiral staircases, tastefully constructed, rising above the roof, from which vessels can be distinguished at a great distance. The square is thronged with people, morning and evening. Men of business, monthly mail passengers, curiosity hunters, sight seers, new’s collectors, noble, humble, gentle, and simple; and woman-kind, in every variety of grotesque costume: generally speaking, the latter are more than ugly, hideous in the extreme. The greater number wear a silk or thread net over the bridge of the nose, fastened to each side of the head, and descending in the shape of a jelly-bag, below the knees. Some, clad in white garments from head to foot, look as if they were shrouded already for the grave. Others, of higher rank, wear graceful flowing draperies of silk: the Levantine ladies, when mounted on donkeys, ride through the streets, in a most extraordinary attitude, sitting astride, holding up their arms, almost to a level with the top of the head, to support the weighty folds of silk that fall over the head and shoulders, descending nearly to the feet. They ride with stirrups, but resign the reins to a servant.

The dragoman we engaged during our stay in Alexandria was one of Lord Byron’s favourite servants in Greece; and declared that the great poet died in his arms: he was an intelligent, good-looking Albanian, dressed in the picturesque costume of his country.

“We visited the Pacha’s palace, on the sea shore: the interior is very handsome, the rooms lofty, and decorations rich, containing beautiful specimens of Sevres porcelain, superb damask hangings and ottomans, and a magnificent mosaic table, the gift of his Holiness of the worshipful toe, with the name of Mehemet Ali on a tablet of glittering diamonds.

“On our way from ‘Pompey’s stately Pillar’ to the beautiful obelisk called Cleopatra’s Needle, we walked through an Arab village, exceeding in abject misery any powers of imagination or description. But men, women and children, with barely the fragment of a rag of clothing to

cover their nakedness, were decked out with every variety of savage ornament.

“Pompey’s Pillar is a magnificent column, situated on a little hill, the surrounding country very barren, with the exception of gardens, fertile in luxuriant date trees. An adventurous young lady is said to have written a letter from the top of the pillar, which was answered by some wag from the bottom of Joseph’s Well.

“The bazaars at Alexandria are good, and there are abundant indications of commercial prosperity.

“Among the social relaxations of the residents, plays, concerts, balls, and gaming tables bear a very prominent part.

“The naval arsenal and dockyard are described as among the most interesting sights of the city; the former, a magnificent establishment, brought to very great perfection in a short period of time. The dockyard is sufficiently spacious to admit of the erection of vessels of the largest class.

“Towards the old part are the catacombs, which are about the distance of an hour’s journey.

“No palanquins are procurable in Alexandria, but carriages may be hired at the hotels, on unreasonable terms. We visited the garden of a rich Armenian merchant, at a short distance from the town, very tastefully arranged, the date trees burtheued with fruit, and the orange and citron trees yielding the sweetest perfume.

“One of the plagues of ancient days yet prevails, myriads of flies, which during the hot season are an unspeakable torment. The natives suffer them to congregate in the corner of their eyes, where a nest is formed, and remains untouched; even children, following the evil example of their parents, are too indolent to raise a finger to remove them, and the most disgusting sores are generated. Hence blindness prevails to a fearful extent in Egypt: many of the peasants also purposely destroy an eye, or otherwise maim themselves, to escape conscription.

“The three days of our sojourn at Alexandria were passed at the British Hotel, where we had a fine suite of lofty rooms, good attendance, and excellent fare; it is situated in the square before described, and resorted to by almost all the passengers from India.”

Approaching Alexandria.—It is recommended to make the west end of Candia, and thence shape a course for the Arabs tower, the most remarkable land to the westward of Alexandria, and then proceed along shore. Pursuing this course the water becomes shallow and dark coloured as you approach Alexandria, and you will first make the highest part of the main land behind Marabout Island, the fort and flag-staff upon that island, the new guard-house and numerous clusters of windmills, (representing the town of Marabout near the ancient canal into Lake Mareotis) and Pompey’s pillar, the lighthouse upon Eunostos point, the Pharos castle and the large buildings in Alexandria will gradually rise above the horizon; these objects rising out of the water before the low land is visible have a very singular appearance.

The new guard house* is an oblong square two stories high, and flat topped, with a row of windows in the upper story, and below them a row of loop holes, and an arched gateway in the centre: the building is whitewashed, and the arched gateway of a buff or stone colour. This building bearing S.E.b.S. $\frac{1}{4}$ S., forms an excellent leading mark for the central channel (which is the one most esteemed) and has the advantage

* In connection with this, we have received the following from Captain Leighton.

SIR.—At the time when the Survey of this harbour and reefs was made, and the excellent Admiralty plan of it drawn, there was no better leading mark through the central channel (which is esteemed the best) than the "small cut in the low dark island"; this mark is altogether too small, as you must be close upon the reefs before it can be made out, and one accident occurred under my own observation on that account. And the system of pilotage is bad, as pilots do not go outside of the reefs, and indeed, although the trade was great in 1846-7 they could not be at all depended upon.

In the course of Mahomet Ali's military improvements he has erected a new guard house near the town of Marabout, about a mile inland. It is a long two story flat-topped building, and is one of the first objects descried as you approach, and can be seen all round in the offing. The old mark is to bring the 'cut in the island' to bear S.E. $\frac{1}{4}$ S., and steer that course through the channel. I found that the archway of the new guard-house bearing S.E.b.S. $\frac{1}{4}$ S., led quite as well through the channel, and has the advantage of being seen at a great distance, and also forming a double mark in place of a compass bearing, and a course by taking one of the windmills (of which there is a large number at this town of Marabout) in a line with the south-eastern angle of the building, and as you enter the channel you will also open the old mark to confirm the new one, and this will guide you safely to it.

Sailing Directions.—Keep Pharos castle open to the northward of the northernmost part of Eunostos Point, until the guard-house at the town of Marabout bears S.E.b.S. $\frac{1}{4}$ S., and steer for it upon that course. One of the windmills will be found to cover the south-eastern angle of the building, and this course will carry you safely through the channel between the reefs, and the patches in the best water, until Pompey's Pillar bears E.b.N. $\frac{1}{4}$ N. You may then haul up between the rocky bank and the shore in 10 fathoms water.

The light upon Eunostos Point can be seen in clear weather about eight leagues, the chain of reefs from Eunostos Point to Marabout Island is only broken by the narrow channels; and the rocky bank with the neck, upon which Alexandria stands, and Eunostos Point forms the harbour where the ships may moor with both anchors in 6 and 7 fathoms water, good holding ground. Supplies for present use are plentiful, but ships should be well supplied with salt provisions. The lighters are not well adapted for the wabble that comes in over the reefs, and the cargoes frequently get wet. The clause "the cargo to be brought and taken from alongside at the merchants risk and expense" should always be inserted in charters and *no commission* to the merchant there, as they do nothing for it, and you still have to employ a broker.

I should feel obliged by your inserting this letter in your valuable journal.

I am, &c.,

R. LEIGHTON.

To the Editor N.M.

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of forming a double mark, as one of the windmills (at present the eighth from the east end, but the bearings must point out the right one,) covering the north-east angle of this building, and leaving the gateway a small sail's breadth open of the wall. This mark kept on a course S.E.b.S. $\frac{1}{4}$ S., will carry you through the central channel, in the best water between the Wash reef and the Three-fathom patch, and the two inner patches.

This mark need not supersede the old one, "the cut in the low dark island," the only objection to which is, that it is too small and cannot be seen until you are close upon the reefs, particularly when the sea is breaking upon the island. The Pharos castle open to the northward of Eunostos Point is a good mark ahead; the defect was a thwart mark that could be seen from a greater distance.

The mark here given cannot be mistaken, it is the only remarkable building near the place, and can be seen upon any bearing all round in the offing for several miles. Keep Pharos castle open to the northward of the northernmost part of Eunostos Point until the new guard-house at the town of Marabout bears S.E.b.S. $\frac{1}{4}$ S., then steer for it on that course, and when you approach the reefs you will make out the windmill covering the north-east angle of the guard-house, and this mark will carry you safe through between the reefs; and at the same time will be confirmed by the cut in "the low dark island." Continue your course until Pompey's Pillar bears E.b.N. $\frac{1}{4}$ N., you may then haul up for the harbour in 10 fathoms water between the rocky bank and the shore.

I observe an error in Mr. Laurie's Directory in stating that the 'cut' was in the island immediately in front of the ancient canal into Lake Mareotis. This is not correct, but, the harbour in which the Lateen rigged craft frequently lie is situated there, and I suppose that this might have led to the error.

I am &c.,

RICHARD LEIGHTON.

To the Editor N.M.

REMARKS ON STEAM NAVIGATION OF THE PACIFIC OCEAN,* AND ON THE COMMERCE OF SOUTH AMERICA.

THE formation of an American Steam Packet Company in the Pacific, the reported arrival of some of the vessels on the scene of their labours, and lastly a paragraph in a daily paper, which says, that "the return of

[Since these remarks were received the following has appeared in the prints of the day confirming Lieut. Osborne's views on this important subject.—Ed.

*THE CALIFORNIA.—The missing steam-ship California, mentioned in our last, had reached San Francisco, having General Smith and suite on board. This steamer was detained for want of coals, and could not proceed on to Oregon. Her departure on the return voyage to Panama was delayed for the same reason, and it was doubtful when fuel could be procured.

the steamer *California* from San Francisco to Panama is likely to be retarded from the *want of coal*," has induced me to make the few following remarks on the commerce and steam navigation of the South American Continent, and the shores of the Pacific Ocean.

The English Pacific Steam Company was the first to enter the field, some six years ago: their career has been one of no great success, although supported by a grant of £20,000 from our Government for the conveyance of the mails between Panama, Peru, and Chili. They had a vast deal to contend with, but by the most rigid economy in their system, and high prices for the conveyance of passengers, contrived to pay of late moderate dividends to the shareholders. The American Line of Packets are intended to carry on the communication between Panama and San Francisco in California; they are likewise supported by their Government; yet with all the well-known go-ahead powers of our transatlantic friends I doubt much the passengers, freight of specie, and mail-traffic enabling them to keep long running large and expensive steamers on a route, where the price of coals must be so very high, and the wear and tear of vessel and machinery in so long a passage, necessarily great.

The Pacific Ocean is no doubt admirably adapted for steam navigation, but unfortunately there is a general dearth of coal there, a necessary article, without which it is impossible to compete successfully with sailing vessels in the price of freight, for cargo, or passage-money; especially as from the constancy of the winds, and fineness of weather in the Pacific Ocean, the voyage of a sailing vessel, though much longer, can always be counted on to the day with as much certainty as that of a steamer. The coal veins of Vancouver Island are talked of as if they were close to hand, the Americans in their anxiety to secure Californian gold overlooking the many difficulties that exist, viz.:—in a straight line the distance from Vancouver Island to Panama is 3,400 miles, and a sailing vessel would have to traverse nearly 5,000 miles,—that a race of miners have to be created, fleets of colliers built, the winter weather of lat. 50° north avoided, and the light winds and variables of the Mexican coast overcome before the good steamer *California* could stoke her furnaces with the said coal, which coal by-the-by is in the hands of a Company by no means remarkable for anything but selfishness, and a stolidity worthy a commercial body whose dividends depend upon keeping the country over which they are masters a desert and hunting ground.

From Vancouver Isle we must travel to Talcahuana in 36° S. lat. for the next mine of native coal, and apart from the expense of working and carrying it to the depots, it is well ascertained by oft-tried experiments that steam cannot be kept up with this Chilian coal alone, and that it can only be used in a proportion of one to three with the best English coal; and even then the economy of using it might be called in question.

The startling expense of steaming in the Pacific Ocean is best told by the fact of one of Her Majesty's steam vessels burning £1,800 of coal in a short trip from Callao to Panama and back, in the year 1847;

and this was at a time when English coal was comparatively cheap on the Pacific station, in consequence of the fleets of merchantmen bound thither for guano, carrying out coal as ballast at a nominal freight of 30s. per ton.

Taking these facts into consideration, we may, I think, foretell the end of the American Californian Packet Company. For the shareholders will soon find it folly to count on a dividend from a line where coals are ruinously dear, and no commercial activity exists. Let the elements for the same be however great, steam will do a great deal no doubt, but you can no more make coals cheap in the Pacific than you can convey to an Irishman's ideas the importance of time or economy. Any one who has visited the west side of the American Continent since 1843, will agree with me that if any Line of Packets can succeed, it ought to be in the transit of goods and passengers between Panama, Lima, and Valparaiso. The population of the States of Ecuador, Peru, and Chili have their principal towns within easy access of the sea. There is a considerable traffic between the intermediate ports, and the three steam vessels employed notwithstanding bad accommodation, bad attendance, and exorbitant charges, are well filled. Yet they do not flourish, and cannot until the expense of working them is much diminished: for they have had to create, and are creating, much of the commerce on which they are at present engaged. The Panama route in its present state can only yield passengers and specie; these alone will never support a Line of Packets. Cut a canal, or construct a railroad across the Isthmus, either through Nicaragua or Panama, then perhaps the packages and bales to fill the holds of vessels of 1,100 tons may find their way on board the American steamers, and not until then. A merchant in Valparaiso having 400 tons of Birmingham goods would prefer to ship them direct by a sailing vessel to San Francisco. The expense would be much less, and the trouble and risk of forwarding them by one packet to Panama, to be transhipped into another for California, hardly to be thought of. And even supposing a Panama transit for goods be established, let us not run away with an idea that the whole tide of commerce will set across to the Pacific by that route; for notwithstanding all the arguments that may be brought forward in favour of the safety of the navigation from Europe to Chagres, or Rio San Juan, the norths, currents, hurricanes and shoals which have caused such loss of property to the West India Mail Packet Company, although their vessels are sailed on most liberal terms, well found and well commanded, are hardly likely to be avoided when deep ladened, ill found vessels are sailing over the same seas. Nor be it forgotten that during a time of war, the dangerous proximity of foreign ports, and total want of confidence in the weak governments, and the worthless inhabitants of the whole Isthmus will make the said route hazardous in the extreme.

Let England, therefore, allow the Americans to follow up their idea of Americanizing the shores of the North Pacific, by steam boats and railroads: they will no doubt eventually succeed; but many a shareholder

will be ruined at the outset, and many an Utopian scheme fail. Let us look more to the Southern Continent as our field for steam, rail, and commerce, and though an old one when compared with the virgin fields and gold mines of California, nevertheless it is as abundant in natural resources still undeveloped by its present possessors. The Don, has mined, smoked, and slept in it for centuries, yet he never has, nor ever would develop its vast capabilities. It is for the merchant and capitalists of England to execute that great work. Already have we put life into the lethargic Peruvian, and awakened commercial activity in the more energetic inhabitant of Chili. In forty years we have increased the trade of Valparaiso from three millions to seventeen million dollars annually.

The arrival of the English packet at the various seaports between Panama and Valparaiso, is looked forward to with as much anxiety as the Indian mail at Southampton. We have brought them six weeks nearer Europe and civilization; and the change wrought in the general tone of society, and the moral and intellectual habits of the people is equally great.

Where on the globe's surface will a continent be found affording, on its whole inhabited coast line, so easy a means of access as South America? Where a land so varied in climate, yet so universally free from extremes of heat or cold, from calm and tempest? Where a country so rich and multifarious in its products? Products, by the mutual interchange of which the South Americans might be independent of the rest of the world, were they not broken into different states by the physical geography of the Continent, and barred from each other by obstacles to landward almost insurmountable, and therefore obliged to use water carriage as their principal means of communication; and on it, whether as sea or river, we, the great carriers of the world are, or ought to be, ready to undertake the office for them, either to execute the interchange of produce, supply wants, or perhaps introduce novelties from our mother country.

A little of that enterprising spirit displayed in 1850, which was so strongly displayed in 1827 towards South American speculations, would do much if judiciously directed. In 1827 the mania for mining ruined or disappointed many a man who wished to reach wealth in a day, and they, when foiled in their blind and short-sighted views abused the country and people, whilst the thrifty merchant who had found out the true mine of wealth which South America possesses in her abundant natural products, and in making the people pay cent. per cent. for the commonest luxuries and comforts, like a wise but selfish man, held his tongue. He wanted no competitors, and was well content with small risk and quick and large returns. Meanwhile the miners railed on, and South America went out of fashion, and seems likely to remain so. South American commerce, originally commenced as a smuggling transaction, fell into the hands of an inferior class of English merchants, half smuggler half, and wholly Jew, a class possessing but little of that enlightenment, and probity, the general attributes of the English merchant.

The petty republics that sprung into existence on the fall of the Spanish colonial empire, depended principally upon their custom-houses for a revenue. In England the majority of loans had been negotiated, whereby these former colonies of Spain had become Independent States, and naturally they turned to the merchants of that country as their best friends. They found the British merchant rich, proud and overbearing, making 200 per cent. profit on his goods, yet defrauding the revenue of the government under whose protection he was trading and becoming wealthy. However, *money* is worshipped in South America as well as elsewhere, and the Hornbee de Plata, was a great convenience to a needy exchequer. He was tolerated, courted, and feared. Contented with the rapid accumulation of property, the British merchant was willing to jog quietly on in his old track, holding his customers in supreme contempt, and taking little trouble to shew the natives that he was aught but a man whose ideas were bounded by dollars and Manchester cottons. But in time the Americans and Germans entered the field against him, sober, thrifty, and enterprising, and by no means scrupulous. They, aye! and even Frenchmen opened new sources of commerce, undersold him in many of the markets, with articles, if not quite as good, at any rate three times as cheap as his. They sailed a better class of vessels in the trade, respectably commanded and worked by sober and obedient seamen. The comparison was decidedly against us, and at last the Englishmen aroused by the competition, and its effects, seemed to have exerted themselves, and succeeded in carrying, after a severe struggle, with Yankees and Hambro' men, the palm for smuggling, whether of precious metals out of the country or of manufactures in.

As a nation we are respected throughout the Southern Continent, with the exception of the Brazils and Peru, where French influence has biassed their opinion, but in all, there is a general dislike to the parvenue airs and arrogance of the English merchants and shopkeepers. However, far be it from me to advise the mercantile body of my countrymen residing in the various states of that continent, to adopt any line of conduct merely for the purpose of conciliating the good opinion of the people they live amongst. No, all I would point out is, that, there is a general laxity of those high moral and social rules, which I have observed to be the pride of the British merchants in the eastern hemisphere, but which seem entirely to be forgotten by all those who have any thing to do with the Americas. The barefaced system of smuggling carried on in Mexico, the wholesale bribery of custom-house officials throughout South America, and the well-known connivance of Liverpool in the disgraceful traffic for slaves from the Brazils, are the three great heads from whence a thousand minor delinquencies spring.

Before we take into consideration the plan of a great steam communication in South America, let us look at the various products of the different states, by which alone we must expect to be paid for our manufactures, &c.

In the north we have New Granada producing mahogany, cocoa,

Peruvian bark, coffee, indigo, sugar, cotton, tobacco, vanilla, sarsaparilla, dye woods, squills, cassia, aloes, cochineal, and salt.

In Venezuela we have in addition to the above, hides and cattle.

In the Guianas, wood of every description is found; spars of 100 feet in length, others hard and durable, many adapted for ornamental furniture, whilst others again yield dyes and exude balsamic and medicinal oils. They export sugar, cotton, coffee, indigo, cayenne, rice, and fruits of all descriptions.

Brazil, yields every tropical production in the richest profusion, and exports gold dust, diamonds, sugar, cotton, coffee, rice, rum, tobacco, sarsaparilla, and Brazil wood.

Paraguay rears for exportation into the other states of South America immense herds of horses, mules, cattle, and sheep. Its other products are cattle, hides, tallow, wax, feathers, tobacco, tea, horns, &c.

La Plata and Banda Oriental, including the Southern Pampas of Patagonia yield hides (raw and tanned), sheep skins, meat (salt and jerked), goose-quills, wool (sheep and Vicuna), copper, tin, salt, and cattle.

On the western side of the continent we have the Ecuador, producing cocoa, sugar, wheat, barley, woods for building and spars, wool, cattle, sheep, fruits and vegetables of the temperate and torrid zone.

In Peru we have minerals, wools, sugar, guano, saltpetre, spirits, bark, and salt.

Bolivia, though shut out from the sea, has in the valley of Taena and Port of Arica, which it is to be hoped the good sense of Peru will grant her, a convenient outlet for her great mineral wealth, and other products of the same nature as Peru.

Lastly we come to Chili; apart from being the great depot for European goods, she carries on an active commerce in copper ore, wool, hides, wheat, hemp, coal, vegetables, and wood; and she is a proof of what all the American States might become; for to a petty population of one million and a half of souls spread over 175,000 square miles, an average of nine persons to the square mile, we have in 1846 a trade of seventeen million dollars as per annual custom-house return, that is $11\frac{1}{2}$ dollars as each person's share, a highly creditable quota in so young a country; and which, when arrived at by the rest of the South American Continent, calculated as it may be at 9,562,000 souls, would give an annual trade of nineteen millions of pounds sterling, a small portion of which would amply secure a handsome dividend to such a commercial steam company as I would suggest.

In 1849 steam communication between England and the Brazils commenced. This is a step in the right direction. Four steamers are at present keeping up a bi-monthly communication and trade along the coasts of Chili, Peru, and Ecuador, they have done a great deal it is true; but still it struck me that much has been left undone. The British merchant and British Steam Company ought to have identical interests, and having Chambers of Commerce as they have at the capitals of the different states, judicious and enlightened measures might be adopted to lead the

inland traders and farmers, to fresh markets created by us. Commercial missionaries should be instructed to travel through the districts not immediately contiguous to the coast. Let them not be employed for any selfish purpose of opening a sale for the long cloths of Messrs. P., or the muslins of Messrs. A.; let them be persons of liberal education and enlightened views; let them observe the wants and capabilities of the people and country through which they travel in a purely commercial view; let them be instructed to point out to the natives improvements of acknowledged simplicity and utility; let them tell them of where a market may be found for their superabundant produce, and the means by which it may be reached; let them induce the traders, where one individual is too poor to do so, to combine and purchase at low prices, or take on commission for sale, small quantities of cheap and good manufactures, supplied, not by private merchants, but from the Chambers of Commerce; let them be patient, and remember that it is an ignorant and lethargic race that they have to lead to habits of commercial activity; and above all let the results of this commercial agent's observations, his discoveries and failures be placed on the tables of the said Chambers of Commerce for the information and guidance of all. Indeed, to put in practice in South America a little of that high-minded generosity upon commercial points, which the free-traders of Liverpool and Manchester would have us give them credit for, would I feel certain yield them cent. per cent. of profit in a double sense,—public opinion and private gain.

It is a common complaint against the Spanish American, that he is no man of business, but I must say, this applies more to the government salaried officials, than to private ones, where their income depends upon their labour. The native merchant is not troubled with that restless activity which distinguishes the Englishman and North American abroad, for the simple reason that he has not the same anxiety they have to realise a fortune as quickly as possible, and be off home; his income probably is good; his wants are few. When too old to attend the office he will retire to his Quinta, and let his son become the Padron; and, moreover, there is something very congenial in the disposition of these two classes of merchants and the commerce in which they are each engaged. The European, all energy, activity, and speculation superintends the ocean transit of the export and import; the steam-engine, steam-ship, and railway are his servants and carriers, rapid, quick, and certain, they satisfy his hasty feelings. Not so the native trader, his is the long and tedious inland interchange. Why should he be a man of an anxious and excited temperament, quiet in thought and action, where nature has thrown insurmountable obstacles in the way of his wishes being fulfilled? The miner in Peru, sends a dreary distance of 1,200 miles over the Cordilleras, and through interminable valleys to Southern Bolivia for horses and mules; they come assuredly, but come slowly; may be four months after the order was sent. Don Jose in the Cordillera and Don Firmin in the Sierras, send a consignment of copper and wool to their agent at the port; it has been sold, and the price in

Birmingham cutlery or Yorkshire broadcloth is on its road to the interior, whilst the Arriero's long string of mules are crawling up *cuestas* or shuffling over the plains. They *will* arrive, that suffices—the South American merchant is happy. Now imagine him an irritable Englishman, fidgetting, and abusing the roads, the mules, the muleteers, and the country, and disgusting every one with his impatience and petulance. Therefore, let it be borne in mind that this apparent apathy in some portions of the American Continent arises from (*wise*) causes, over which we have no control. The transit of goods in many states must ever remain a long and tedious process, but it does not follow on that account that there should not be a great commerce. The slow mule, and the fast locomotive are equally sure in the end.

Let our merchants look to the point, that, when the produce of the interior does reach a point fit for embarkation, that means are at hand to carry it to the neighbouring state, and make the necessary exchange.

Why in the name of all that is reasonable should Brazil import American flour when the stream of the Marranon could brink down the corn and pulse of the Ecuador, where abundant crops and lack of consumers obliges the granaries to be thrown open to the public, in order that room may be made for the coming harvest.

Peru produces wine and spirits, whilst the Eastern States imports largely the most execrable compounds from Europe. Peru imports chocolate from Manila, whilst her near neighbour cannot find a market for cocoa. The forests of Guayaquil rot, and yet in Peru a tree is a curiosity, and wood high priced.

The Buenos Ayrean carefully collects dried manure for fuel, whilst coal admirably adapted for all culinary purposes abounds in Chili, and the Straits of Magellan.

(To be completed in our next.)

NOTES ON A VISIT TO CHANG-CHOW-FOO.

LEFT the ship in the gig with Capt. F. E. Johnston (waiting with me an opportunity to join H.M.S. *Scout*), and a party of thirteen at 3h. 45m. A.M. At 5 A.M. we left Amoy in two large Chinese boats, hired for the occasion, and proceeded up the Chang River to visit the city of Chang-chow-foo. At 7h. 30m. passed on our right (the proper left bank of the Chang) the village of Hychong. We had here ten feet water, the tide having commenced flood at 4 A.M. at Amoy; but apparently being about two hours later in the river. The banks of the river were covered with mangrove bushes, and the river from this to the city, a distance of about twenty-five miles runs through a rich alluvial plain, from about fifteen to eighteen miles in width.

At the base of various hills we saw the acacia, banyan, and lichee, and

at a very slight elevation the pine in considerable straggling numbers, whilst the summit of the hills and distant mountains, presented the appearance of cracked clay and dry detached boulders of black decomposed granite. The mouth of the river in which we then were is the northern one, and is about a mile wide. The villages are numerous and built of clay with tile roofs. Many tileries are on the banks of the river. The only quadruped we saw was the buffalo, which is used for many purposes. There are several fishing boats but few trading junks.

At 8h. 30m. we passed Chung-tow, left bank, no bottom 15 feet. 9h. 24m. Paukchow (left bank) river about 200 yards wide. Here we saw some boats fishing in a peculiar manner,—a number of boats, in this instance fourteen, being divided and drawn up on opposite sides of the river in two lines, they advanced to meet each other, a man standing with a casting net in the bow of each, who, when the lines nearly touched simultaneously threw their nets, and were each rewarded by a haul of fish.

At 9h. 50m. passed Laoutoill, a large and populous village; 10h. 30m. across the Delta we saw the town of Chaubai about three miles distant, off which several junks' masts were visible; 10h. 50m. we passed the place where the Chang divides to form the Delta; 11h. passed a fort on the right bank of the river, celebrated as the retreat and stronghold of the Pirate Coxinga.

11h. 40m. passed Tienton on both sides of the stream. It seems principally employed in the manufacture of tiles and bricks. Near it were several groups of trees with the bamboo in most graceful luxuriance. At noon we passed Aoopooang or rather Pecalau, the landing-place for the former village; at which a Spanish Roman Catholic Missionary of the Dominican order has established himself since 1842, and having built a chapel has converted to the Romish faith above 500 Chinese, at the lowest computation. His name is Francisco Zea. At 1h. 50m. we came in sight of the new bridge over the Chang. It consists of nineteen large stone buttresses built in the stream, which at high water is about 14 feet deep, with a rise and fall of 8 feet. They are about 28 feet apart, and joined by long flat slabs of granite, making a bridge about 580 feet long, and 14 feet wide; a small open parapet about a yard high is the only finish, but several guard-houses are built on it. About half a mile higher up is the old bridge, which we had not time to inspect. I was told it has 26 spans, the river being no wider than at the new bridge. The houses mentioned by Du Halde have been taken down owing to the weakness of the structure. On our arrival just below the new bridge, a crowd of Chinese assembled to stare at the new comers, but upon being addressed by Mr. Pohlman, (the same American emissary who accompanied M. Hedde when here with M. Lagraine,) who speaks the language with fluency, they made way for us, to land. To shew the good feeling they bore to us, I may mention, that one of the crowd expressing some surprise at a pair of gloves which I wore; I gave them to him. He put them on and held up his hands

amidst shouts of laughter from the assemblage ; he then passed them on to another, who having tried them on, with much honesty came to return them, which I declined, being aware that honesty of purpose and cleanliness of hands are not synonymous terms in Chinese. The mandarins sent a body of police to escort us lest the crowd should be troublesome, but though generally surrounded by from 600 to 1000 people, they neither were inconveniently inquisitive nor impertinently curious.

We went to the sugar factories, the staple commodity of this place, in which are twenty-five factories, producing yearly about 30,000 picul cwt. ; 35,625 sugar candy of a fine quality ; and 50,000 picul cwt. 56,875 brown sugar. Some coarse black tea of an inferior quality is exported. There is also a tobacco factory, and one for making crystals for spectacles.

We went to a high hill within the walls, and had a bird's eye view of the city, and then walked round a quarter of the wall between two gates. The wall has four gates, is about 25 feet thick, and 35 feet high, with a parapet about 7 feet high, in good repair. On the quarter round which we walked, we saw eleven pieces of ordnance in bad order.

Population by guess about 80,000, very few poor were seen, and hardly any suburb. We started for the ship about 6h. 50m. P.M. and reached her at 3h. 30m. A.M., having been absent about twenty-three hours and a half.

NOTES ON VANCOUVER ISLAND.

THE present state of the settlement at Nisqually is much the same as it was during Capt. Duntze's long visit in 1846. The only apparent effect produced by the recent Indian outrages at Waiilatpu being the preparation of a stockade defended by two bastions, which is now in the course of erection round the principal buildings. This, though long in contemplation, has been hastened by the spirit which the success of this massacre has excited in the Indian population.

Doctor Tolmi, the head of the establishment, deeming it prudent to be prepared against any similar piece of infatuation on the part of his excitable neighbours, for though the greatest confidence prevails amongst these people in the integrity and power of the Hudson Bay Company's servants, even to them, and especially to the American settlers scattered in the neighbourhood, they are apt to boast of the above exploit; and to hint at the possibility of a similar occurrence in Louis County. This is treated by Dr. Tolmi as mere Indian bravado, but in the isolated American settlers it has produced a feeling of anxiety that has driven the greater part of them back to the Columbia.

Several thriving settlers still remain within a little distance of the fort; and at a place called Newmarket, twenty or thirty miles south-

west of Nisqually, two French priests, Pere Blanchet and another, are erecting a chapel, and establishing a mission for the conversion of the Indians. A saw and grist mill has also been erected on the falls of a small river (the Tacalamish) close to, and a large extent of ground cultivated in the vicinity by five American families, whose cattle and produce only require a market for their disposal, more than sufficient for the consumption of themselves and families being raised the first year. These people all complained of the unwholesomeness of the Willamette Valley, where they were first settled, and praised the climate of Louis County as the healthiest they had met since leaving the United States. The greatest improvement in the Nisqually produce is in the breed of their sheep and cattle, the former especially, both in size and quality coming much nearer to the character of the English stock than they did two years ago.

The reports which reached me respecting the Columbia were, owing to Mr. Douglas's absence of too ill-defined a character for quotation, but from what I could collect there seemed to be a general feeling that a removal of their establishments to Vancouver Island would be ere long in contemplation. Dr. Tolmi intends to devote the summer of next year to examining the capabilities of the eastern side of that island. In the meanwhile he rigidly asserts the Company's right guaranteed in the Treaty, by warning off and insisting upon the removal of any Americans who attempt to settle within the limits they have claimed as their cattle walks. This has been always quietly complied with as yet, and the greatest cordiality exists between the American citizens and the Company's servants, on whom they are mainly dependant for most of their necessary stores and supplies.

My departure was delayed till the 25th by an accident, which nearly proved fatal to Mr. Gordon, assistant-surgeon of this ship, who got bewildered in the woods, and for three days baffled all our attempts to trace him: he was at last discovered by some of the Indians we had sent out, in a very exhausted state, having travelled more than twelve miles in a straight line without finding food or water. We arrived at Victoria about midnight on the 27th, the weather still as thick as it was when we left, but a fresh wind partially clearing the air the next day.

On the 29th we ran round to Cormorant Bay, and on the 7th commenced beating down the Straits, and arrived at Neah Bay on the night of the 9th, examining the coast as much as the unsettled state of the weather would permit. On the 10th it blew a fresh gale from the eastward, accompanied with heavy rain and thick weather, but the anchorage is well secured from such winds, though exposed to the north-west. The two following days proving fine I filled up with wood and water, and on the 13th, having completed my observations, started for San Francisco.

Previous to leaving the Straits I must give you a short account of the present state of the establishment at Victoria; though I am aware there can be little to add to the information already supplied by Capt. Courtenay, of H.M.S. *Constance*.

Since 1846 considerable additions have been made to the buildings, and the stockade now includes all the goods stores, and extends 450 feet by 330. The dairy also has been much improved, and a breed of cattle introduced, which supplied us with excellent meat during our stay. Butter in considerable quantities is salted for exportation as well as salmon; large quantities of which, as well as grain, are sent to the Sandwich Islands and Russian settlements to the northward. A good substantial wooden bridge has been thrown across the narrows above Victoria, and a road cut to a saw mill, now in the course of erection on a small stream that runs into the head of Esquimalt harbour. This road has been nearly destroyed by the extensive fires which have this year prevailed in the woods, but the increasing importance of this place, and its value as a secure harbour, will soon lead to its being re-opened.

Subjoined is a list of the Indian population in the Straits and Puget Sound according to the last census, allowing a decrease of one-fifth for the effects of the late mortality amongst them from the measles, influenza, &c., which has made great havoc this year.

The tribes of Indians that inhabit Vancouver Island, with the number of men, women, and children of each, viz.:—

1	Songes	700	inhabiting the south-east part of the island.
2	Sanetch	500	“ north-east sixty miles, north-west of Mount Douglas.
3	Kawitchin	1763	“ country north-west of Sanetch territory to the entrance of Johnson's straits.
4	Uchulta	1000	Kawitchin country in ditto.
5	Nimkis	500	Uchulta country “
6	Quaquiolt	1500	Nimkis country “
7	Newetg	500	At north-west entrance of Johnson's Straits.
8	Quacktoe	1000	Woody part north-west coast of the island.
9	Nootka	1600	Of that name on the west coast.
10	Nitinat	1200	“ “
11	Klay quoit	1100	“ “
12	Soke	100	East point of San Juan to the Songes territory.

Total 11,463

Besides the harbours of Esquimalt, Victoria, Nootkarand, St. Juan, there are four more on the east coast of the island, viz. Shuchartee, Beaver, McNeills, and Beaver Cove. At McNeills harbour the coal district lies.

Fraser River is navigable to a distance of about eighty miles from its entrance, and the depth of water varies from $2\frac{1}{2}$ to 10 fathoms.

The only river at present known, as being any way navigable on Vancouver Island is that of Nimkis which the natives ascend in their light craft to a distance of about twenty miles from the sea coast.

We have not as yet kept a correct register of the weather by thermo-

meter; its average temperature during the four seasons, cannot therefore be at present given.

The winter is generally very stormy with heavy rain in the months of November and December, the south-east wind then prevails. We have some frost and snow about the low land in the beginning of January, which is seldom of long duration, and never interrupts our agricultural operations.

Early in February vegetation begins to advance, and about the commencement of March every thing assumes the beautiful hue of spring. April and May bring in alternate warm showers of rain and sunshine, and the heat becomes extremely oppressive in the months of June and July. In August and the beginning of September vegetation dries up from the drought of summer, and is then easily ignited, which is generally done by the natives when passing along the coast in their canoes. The weather being then very foggy, still, and close, the atmosphere becomes so much darkened by the fog and smoke combined, that the sun occasionally appears to us of a deep red colour even at noonday. In the month of October the rainy season sets in, the soil being then moist and the weather not very cold, the grass grows vigorously. The pasturage for the cattle is then better than during the two preceding months.

The fur bearing animals generally hunted on the island are beaver, both black and grizzly, racoon, minks, land otter, &c., and the sea otter is hunted about Nitinat and Scotts Islands. The elk and deer are said to be abundant in the interior of the island. The fish generally taken by the natives in the vicinity are as follows, viz. halibut, flounders, skate, rock cod, sardine, salmon, trout, and several varieties of the herring species.

From the month of September to the month of April following, is a very favourable time to obtain supplies of vegetables at this place and Nisqually.

A ship of war of 500 men could always depend upon receiving supplies of flour, beef, and pork at this place and Nisqually; and during the time specified in the preceding remark upon receiving supplies of potatoes and other vegetables.

A VOICE FROM THE DEEP.—*On the Present State of the Merchant Service.—By Aliquis.*

(Concluded from page 242.)

The greatest evil of the whole, however, has yet to be treated of, viz. the discipline, or rather, *the want* of discipline in merchant ships; and this is a part of my subject which I enter upon with "fear and trembling," not knowing the effect which my laying bare the "nakedness of the land," may have upon those who I would wish to improve in their conduct by some new act, and which this very laying bare is in-

tended by some future means to obtain. I must run the risk, however, of a temporary loss, for the chance, at least, of a permanent gain; and trust that this questionable period of our existence will be of so short a duration, that but little harm may accrue.

Discipline then, or that which is so necessary to the good regulation and governing of bodies of men, is now, I may say without fear of contradiction, *almost defunct* in the merchant service; and the difficulties and vexations caused to masters and mates by which, are such as continually to harrass their very existence! Indeed, no shore-going person can form any idea of the misery entailed upon all holding responsible situations on board a ship, from the want of this most essential requisite! It has been said by some wise man (I forget who) that "a ship is too confined a space for the corking up of human malignity." Of the truth of which no one who has ever been a few weeks at sea can for one moment doubt; yet, in this small space, are the bad passions of men in the present times allowed almost their full swing, without any fear of punishment, or what may properly be termed such, so long as the *lives* of individuals are not actually endangered thereby. Anything short of this, according to the Merchant Seamen's Act, is not punishable even with restraint, so far as I can understand it; and every sailor being well acquainted with the same. Insolence, disobedience of orders, laziness, refusing to work, and disturbances of all kinds are every day occurrences on board of merchant ships, but more particularly in those which carry few officers and petty-officers; as to correct at all *now*, has become a matter of might entirely, the law (if there is any thing worthy of the name) being altogether in favour of the sailor. That such a state of things should continue I am sure no member of the legislature can possibly desire, and it can only be from the want of a sufficient knowledge of facts concerning this matter, or a proper representation of the case, that an act for the *governing of sailors* on board of merchant ships, has not been long ago passed, instead of the present one, for the purpose of *coercing masters!* But let us examine into it.

When a sailor signs the articles, he agrees to go a certain voyage, or to serve for so many years in a certain ship for a specified sum of money as wages per month; and to obey all lawful orders of the master or mates by night or by day, on board and in boats, and so forth. The whole affair appearing very serious on paper, but without any penalty whatever being attached for the non-fulfilment of the said contract. The law is supposed to be sufficient for such things on the arrival at some port; but the ship has *to get to this port*, and supposing the men to refuse to do their work at sea, a very common case with many, I ask how is she to be got there? There is no law at present, *on board of a ship* at least which can *force* men to do their work; but quite the reverse. The present Seamen's Act *allows* any man to refuse to do his duty so long as he likes to forfeit six days pay for every twenty-four hours of refusal! and suppose that a man has no pay due, which in going to America or the Cape he would not have probably till after arrival, having received so

much in advance, where is the punishment? even allowing that it *is* a punishment, which it is not. Such is this Seamen's Act, the "*blessing and boon to the sailor never to be forgotten*," according to the *worthy gentleman* who sells this same trash in his red book at the Custom-house. A *boon* it may be to the sailor if he is a lazy skulking black-guard, of which this very act has made a great deal too many; but it is anything but what it should be, and totally subversive of all discipline.

That a British senate should have tied up the hands of all masters of ships, and let loose those of their ships' companies so effectually, is truly astonishing; and shews that it must have a much worse opinion of the former, and a much better one of the latter, than is consistent with human nature, or the good regulation and safety of those on board of merchant ships. No doubt Parliament acted to the best of its judgment; but as the act has only created the greatest insubordination and consequent danger to the lives and property of all concerned in merchant ships, which can be proved by thousands of voices, it is now necessary that it should be expunged from the statute book for ever, and something substituted which may not only *coerce the master* if such is required, but *coerce also the sailor* while under command:—this would be but fair play if nothing else. All masters are answerable for their conduct to the laws of their country on arrival at a British port, and could not go wrong, even were they willing, for any great length of time; but the ship must be navigated to that port, and the master certainly ought to have the magisterial power of enforcing obedience to his orders in some way or other, without the fear of fine and imprisonment. At present he is constantly obliged both to risk this and to suffer it, for the sake of saving his ship from danger, damage, or wreck; and that ships are frequently brought into these perils by the insubordination of a band of lawless ruffians, calling themselves sailors, may be seen almost weekly in the newspapers of the day.

Hundreds of cases occur however, which never reach the papers. I shall mention that of the *Sir Edward Parry* on her voyage to America, about a year ago; having lost all three topmasts in a heavy gale of wind. Twelve men out of eighteen refused to clear the wreck under pretence of *being sick*: the masts lay kicking about alongside for three days during the continuance of the gale; and it was *three weeks* before other topmasts could be got up,—the ship drifting about almost at the mercy of the winds all that time, lost a great deal of ground, and greatly increased her expenses. Most people would say, could these men be *British sailors*? I answer they were; and when put in gaol by the master, with the permission of the Consul at the port of Baltimore, they were in a few days taken out by writ of Habeas Corpus, and brought the master and consul into court for false imprisonment, which plea was gained, and the men set at liberty; the judge at the same time informing the Consul that he had no power to imprison sailors in the United States, that there was no clause in the Treaty on the subject, and that American gaols were not built for English sailors.

Thus ended that case, which, no doubt has been represented to the proper authorities in England long ago. But, had it been a British port the result would have been the same, and the only punishment that of forfeiture of wages, which had been spent in advance before leaving England! Some magistrates indeed, have moral courage enough to punish such rascals as they deserve, well knowing the weakness and folly of the act, and running the risk of actions themselves: these men, however, are but rare. Nevertheless, I have heard more than one express themselves strongly to the above effect; although the act may not altogether oblige a magistrate on shore to follow it, as it does a master of a ship at sea. But of this I am not so sure as I am of the disturbances it so constantly creates on board of ships. The master and mates of the *Anna Robertson*, on her voyage out to China last year, had for nearly two months to keep watch, and even sleep with loaded pistols upon them night and day. The people would do nothing but what they chose, and were in a complete state of mutiny for all that time.

A master is almost afraid to take a lady passenger into his ship now, from a fear of her being disgusted with the conduct and language of the people on board, without his having the power to check it. Indeed, nothing can be worse than the conduct of sailors in most merchant ships, and as such cannot at all times be borne by their superiors—*club law*, for want of another is made use of; fighting, abuse, &c. of course follow, and the duty is carried on in a bullying boisterous style of discomfort, which to passengers is both very disagreeable and alarming. This is more particularly the case in vessels with few mates as I have before stated; those which carry a tolerable *staff* risk every thing, and put offenders in irons, on bread and water, *vi et armis*. These punishments, however, often turn out a losing concern to the master; but, what is he to do? Can he allow the ship to be taken out of his hands? If not, why is there not some law to support him, instead of that only to crush him, and risk the lives of everybody on board.

Mercy to the sailor cannot certainly be objected to. But, to give ignorant men every thing in their own hands is, to say the least of it, very dangerous, and anything but judicious, and most injurious to the shipping interest.

It is contrary to the Divine will that men should not be under control; and every one knows that we are far more comfortable when kept in a wholesome state of discipline than without it! For this reason, therefore, if for no other, let there be an act for governing sailors on ship-board. Let it in as brief a space as possible, declare what punishment the master of a ship *can* inflict—for disobedience, insolence, breaking of the peace, refusing duty, theft, and blasphemy especially. The very fact being known that such power is in his hands will, in most cases, do away with the necessity for the real infliction of the punishment.

As to the nature of these punishments, it is not for me to speak, but it must appear quite evident, from what I have written, that something very different is required from *the one single punishment for all mis-*

deeds of the present act. This will easily be decided on, after evidence shall have been taken by a Committee of Inquiry, which I hope may ere long be ordered to sit on the matter. To effect this, however, or to effect anything, I must request the particular attention of my brother chips to the whole of the above: *they alone* are the parties to move! shipowners *can insure*; but shipmasters cannot insure either their lives or their comfort. Some of the former, however, aye! many perhaps, may see it their interest also to be up and doing, and may lend their powerful aid towards bettering the condition of their fellow-men; and in doing which they will assuredly better their own. Men of common sense must perceive at a glance that even were all granted that I have asked with regard to shipbuilding, stores, men, &c. the additional expense would soon be squared by all things finding their proper level, as a natural and inevitable consequence, and the benefit would be a public one as regards safety of life and property, without affecting the pecuniary affairs of the shipping interest! This has been my particular aim in writing the above, and as most shipowners *are* men of sound common sense, and many of them who would shrink from the very idea of some of the deeds at which I have hinted, I trust that they at least will view the matter in this light and act together with their *captains* (I dare not say *masters* here,) in making a vigorous attempt to obtain the specified most necessary changes.

I would willingly take some notice of the Register Tickets, which occupy so large a space in the Seamen's Act; but I find I have already been drawn in to rather too lengthy a dissertation, and shall merely remark, in passing, that the universal opinion is, they have completely failed in their object of checking desertion; and only give a great deal of useless bother and trouble to both master and man.

Should we ever be fortunate enough to obtain a Committee of Inquiry, I trust these tickets will be particularly examined into, as also their concomitant—desertion; which is still carried on to a most vexatious extent wherever a shilling more wages is to be got.

I will conclude for the present, Mr. Editor, but you may hear again on these subjects from

ALIBUIS.

MR. RAPER'S SYSTEM OF SYMBOLS.

THE importance of abbreviations and symbols in saving time in writing is so generally felt that most persons, whose pursuits require them to write much, habitually employ certain signs, intelligible to themselves, to save the tedious repetition of the same letters and syllables.

Suitable and expressive symbols are, however, not merely a convenience to the writer, but afford, in general, the advantages of distinctness, explicitness, and economy of time to the reader, together with another of still greater

consequence, namely, certainty. This last assertion will not, perhaps, be so readily assented to as the former, by those who are unaccustomed to a systematic method of symbols; but the truth of it is easily established. For example, a seaman in any particular part of the world opens a book to learn where he may find a good anchorage. His eye naturally looks for the word "anchorage" or "anchor," as it would for a sign or symbol. Having found the word, he is then obliged to read the entire sentence which contains it, in order thoroughly to comprehend the meaning; since, without a clear understanding of all that is said about anchorage, it is not safe to act. Now this sentence, though it relates, as we suppose, in some way to anchorage, may not contain at all the information that the reader requires; it may, for example, allude to some ship having partially and unsuccessfully searched for an anchorage, or it may merely intimate that no good anchorage has been found between some place in the neighbourhood and another more distant; and, moreover, it is often difficult, from the arrangement of the matter, to know the precise point the account refers to, without reading back. If, on the contrary, the reader's eye catches the symbol †, or this symbol so modified as to express with clearness, "anchorage," or "no anchorage," or "good anchorage," or "bad anchorage," or "anchorage at times only," or "confined to a small space," and so forth, his work is done at once; he seizes in an instant the information that is given, and his mind is altogether unembarrassed by the circumstances of narration, the consideration of suppositions, inferences, and conditions, which contribute to the obscurity of language in full development,—an obscurity which often amounts to a formidable evil when one has to make the effort to extract the meaning of a paragraph of even moderate length under circumstances of anxiety, confusion, or haste.

There are numerous other matters which, on like grounds, demand conspicuous indication for the convenience of reference, instead of being left to the lengthy, involved, and indiscriminate process of language written at length; such as the dimensions of islands and shoals; the leading particulars of dangers; the character and appearance of land, for the purpose of distinguishing one place from another; channels; landing-places; as also notice of water, refreshments, and fuel.

But besides the mere notice or indication, it is no less necessary, on many occasions, to denote the *quality*, or character, as good or bad; thus, it is necessary the seaman should know whether the inhabitants of a place he may propose to visit are likely to assist his wants or to massacre his crew; that is, whether the character of the people is friendly or hostile.

The consideration of *quantity* also has a powerful influence in the indications of language. One place has some trees upon it; another is well wooded; another densely wooded. It is entirely by increase of quantity that we pass from *trees to wood*, and from *wood to forest*. In like manner it is no less the abundance than the superior quality of the water, refreshments, &c., that determine the selection of the place at which to obtain supplies.

After what has been said, there is no doubt that symbols, properly adapted to the purposes of seamen, would be of great advantage in consulting books and tables relating to Maritime Geography, and also Charts; and we shall now enter upon the construction of a system of which the first steps occurred to me while preparing the second edition of the "Practice of Navigation" in 1841.

Nothing would be easier than to apply some arbitrary and simple mark to each word in the dictionary, but no one could recollect such marks when applied. In order to recollect any new thing, it must be associated in the mind, in some way or other, with something with which we are already

familiar; and, therefore, symbols, to be easily learned, and recovered when the recollection of their application has become weakened through disuse, must be resolvable into obvious or fundamental ideas; and their construction, out of lines, dots, or other materials, must be such as to lend itself readily to such analysis whenever it is required. The construction of a set of such symbols is, accordingly, an excessively difficult task; and the difficulty is greatly enhanced when the symbols are to form a *system*; that is, when certain principles laid down at the outset are never to be departed from, and are to be, in every individual case, the sole grounds of interpretation. In fact, the task here exemplified in a special subject, of a restricted nature, and which has much of a geometrical cast about it, would, on the general scale, be nothing less than the creation of an entirely new form of language. We shall say nothing further here upon the subject in general than to observe that a system of symbols represents either *words* (each symbol representing one word), or *ideas*, independently of words. The plan proposed is the latter; the ideas being decomposed or separated, the subordinate elements are denoted by subsidiary marks attached to the primary symbol, which stands for the original or primary idea.

Thus *w*, the primary symbol, stands for *water*; *w'* denotes *good water*, by the *superior* trait or character; *w*, denotes *bad water*, by means of the *inferior* trait; the *quality* being denoted by a subsidiary sign. So *w* denotes *water in plenty*, where quantity, like quality, is a secondary idea to the same primary one. The method thus freed from the prolixity and repetitions of verbal language (which are the necessary results of bringing the several portions of the whole idea, one by one, *in succession*, to the ear), exhibits a remarkable energy of expression; thus *w'* denotes "water in abundance, and of good quality:" that is, seven words in the space of one letter and a half. These words, with necessary spaces, employ thirty-eight letters; but they are themselves an abbreviation, since ordinary language would require a verb, as "is procured" or "may be obtained," &c. In many cases the symbols occupy but three per cent of the room required for ordinary type. This economy of space, however, is but one of the advantages afforded; the idea is presented in the most positive and unmistakable manner, and under a form which, after the notation has been learned, demands the smallest possible amount of intellectual effort to seize the given idea and the two particulars attached to it.

To express the non-existence of any thing,* a zero is placed at the right foot of the symbol: thus, *w_o*, no water; *r_o*, no refreshment; *‡_o*, no anchorage.

This leads at once to the expression "at times:" thus, *ww_o*, *water and no water*, represents evidently "water at times;" *ll_o*, landing (the boathook, hook down) at times; *rr_o*, refreshments procured occasionally.

A symbol inverted has its meaning reversed: thus *]* denotes embarking, the reverse of landing. Those symbols only are capable of inversion which represent some action.

A hollow letter denotes temporary, in opposition to permanent: † thus *F* after a light denotes fixed; *F* denotes that the fixed light appears occasionally only, as at certain times of the tide.

This sense is provided for otherwise (as in *ww_o*), but all symbols do not conveniently take the hollow form; and it is, besides, often a convenience to have more indications than one.

Much of the power of the proposed system consists in the employment of *component signs*.

Thus — denotes the horizontal line or level of the sea or land. The distinction between what is above and what is below the surface of the sea being most important

* It is as necessary to express the absence or non-existence of any thing as its presence: to leave out the symbol is merely to omit information on the point.

† The hint is taken from those Hebrew grammars in which the servile letters are exhibited in the hollow form.

to seamen, the simplest notation is employed to express it; hence we have \overline{rk} , a rock always below the water; \underline{rf} , a reef always above the water; \overline{rk} , a rock *awash*, or between two levels of water; \overline{w} , water under the surface, obtained by digging.

The line | denotes vertical; hence \perp denotes steep, *bluff* or precipitous, above the water, as a cliff; \top denotes *bold to* (below the water).

The cross with a number denoting the point is the compass-symbol, as $\text{—}^{\text{—}}$ denotes ENE; $\text{—}_{\text{—}}$ denotes *lying NNW and SSE*. This symbol exhibits to the eye at once, or without mental effort, the *quarter* or *quarters* in which the point or direction in question lies.

A square or an oblong expresses *enclosure*, partial or total; hence \square , enclosed anchorage, a *harbour for large vessels* (above 18ft. draught); \square , ditto, *for small vessels* (under 18ft.); \square , fuel enclosed, a coal depôt, (b denotes *burn, bruler, brennen, brulare, &c.*)

Brackets [] denote *within limits*: hence $[\text{—}]$, anchorage confined to a small space; $[\text{—}]$, trees ditto, a *clump*; $[\text{—}]$, a clump of cocoa-nut trees; 3 $[\text{—}]$, three clumps of trees; $[2c.]$, two cables length in extent; $[4m.]$, four miles in extent; $[\text{—}]$, a shoal *patch* of 3 fathoms (or 3 fms. in narrow limits).

The subsidiary signs denote (as already remarked) *quantity* and *quality*. The sign denoting quantity in *augmentation* is a dot under the symbol, as \overline{w} , *abundant* water. The sign denoting *diminution* is a comma over the symbol, as \acute{w} , water *scarce*.

One dot implies much or many; two dots, still more; and three, the extreme degree for which language has a term; and the like, in the contrary sense, holds of the commas. We do not use all these signs, as so much variety is not required.

The dot is adopted in the sense of aggravation, as employed in the *weather symbols* used in the Navy; the comma is selected from its function in such abbreviations as *can't*, where it is naturally associated with the idea of diminution or contraction. The dot and comma take opposite positions, in order to avoid ambiguity in case of partial obliteration.

The only quality or variety sign we use at present is to denote good (') and bad (,); one, two, or three such marks denote good, very good, excellent; or bad, very bad, excessively bad.

Enough has been said to shew the nature of the system which will appear under the name of *Description Symbols*, in the Table of Maritime Positions, where it enables a large mass of important information to be inserted, with scarcely any increase in the extent of the table. The system is also convenient for taking notes and memoranda of hydrographical descriptions, as it is independent (with the exception of a very few words) of any particular language.

The following examples exhibit the method as it appears in practice:—

Ex. 1. Island, $\frac{1}{4}^{\text{—}}$ 7m., A, Ψ_{\circ} , $\parallel_{\circ}E$, $\text{—}^{\text{—}}$ SW $\overline{\text{—}}$, \acute{w} r., P.

Island *lying* NE and SW, extending 7 miles; *high*; *no trees*; *no passage* (\parallel) to the eastward; a *good anchorage* on the SW side in 8 fathoms; where *water, scarce*, but *good*, is to be found, but *no other refreshments*; the *people* of *bad* character.

Ex. 2. Paddeway Bay, \square [5m.], $\overline{\text{—}}$, r, δ_{\circ} .

A *harbour for large vessels*, extending 5 miles, having 10 fathoms water; *refreshments* to be had; *no dangers* (δ).

Ex. 3. Shoal, $\frac{1}{8}$ 4m., \overline{rk} at NW end, \sim_{\circ} , \top , \perp_{\circ} .

Shoal, *lying WNW and ESE* 4 miles; a *rock always above water* at the NW end, the *occasional resort of birds* (\sim), *bold to*, and *no landing* on it.

H. RAPER.

inland traders and farmers, to fresh markets created by us. Commercial missionaries should be instructed to travel through the districts not immediately contiguous to the coast. Let them not be employed for any selfish purpose of opening a sale for the long cloths of Messrs. P., or the muslins of Messrs. A.; let them be persons of liberal education and enlightened views; let them observe the wants and capabilities of the people and country through which they travel in a purely commercial view; let them be instructed to point out to the natives improvements of acknowledged simplicity and utility; let them tell them of where a market may be found for their superabundant produce, and the means by which it may be reached; let them induce the traders, where one individual is too poor to do so, to combine and purchase at low prices, or take on commission for sale, small quantities of cheap and good manufactures, supplied, not by private merchants, but from the Chambers of Commerce; let them be patient, and remember that it is an ignorant and lethargic race that they have to lead to habits of commercial activity; and above all let the results of this commercial agent's observations, his discoveries and failures be placed on the tables of the said Chambers of Commerce for the information and guidance of all. Indeed, to put in practice in South America a little of that high-minded generosity upon commercial points, which the free-traders of Liverpool and Manchester would have us give them credit for, would I feel certain yield them cent. per cent. of profit in a double sense,—public opinion and private gain.

It is a common complaint against the Spanish American, that he is no man of business, but I must say, this applies more to the government salaried officials, than to private ones, where their income depends upon their labour. The native merchant is not troubled with that restless activity which distinguishes the Englishman and North American abroad, for the simple reason that he has not the same anxiety they have to realise a fortune as quickly as possible, and be off home; his income probably is good; his wants are few. When too old to attend the office he will retire to his Quinta, and let his son become the Padron; and, moreover, there is something very congenial in the disposition of these two classes of merchants and the commerce in which they are each engaged. The European, all energy, activity, and speculation superintends the ocean transit of the export and import; the steam-engine, steam-ship, and railway are his servants and carriers, rapid, quick, and certain, they satisfy his hasty feelings. Not so the native trader, his is the long and tedious inland interchange. Why should he be a man of an anxious and excited temperament, quiet in thought and action, where nature has thrown insurmountable obstacles in the way of his wishes being fulfilled? The miner in Peru, sends a dreary distance of 1,200 miles over the Cordilleras, and through interminable valleys to Southern Bolivia for horses and mules; they come assuredly, but come slowly; may be four months after the order was sent. Don Jose in the Cordillera and Don Firmin in the Sierras, send a consignment of copper and wool to their agent at the port; it has been sold, and the price in

Birmingham cutlery or Yorkshire broadcloth is on its road to the interior, whilst the Arriero's long string of mules are crawling up *cuestas* or shuffling over the plains. They *will* arrive, that suffices—the South American merchant is happy. Now imagine him an irritable Englishman, fidgetting, and abusing the roads, the mules, the muleteers, and the country, and disgusting every one with his impatience and petulance. Therefore, let it be borne in mind that this apparent apathy in some portions of the American Continent arises from (*wise*) causes, over which we have no control. The transit of goods in many states must ever remain a long and tedious process, but it does not follow on that account that there should not be a great commerce. The slow mule, and the fast locomotive are equally sure in the end.

Let our merchants look to the point, that, when the produce of the interior does reach a point fit for embarkation, that means are at hand to carry it to the neighbouring state, and make the necessary exchange.

Why in the name of all that is reasonable should Brazil import American flour when the stream of the Marranon could brink down the corn and pulse of the Ecuador, where abundant crops and lack of consumers obliges the granaries to be thrown open to the public, in order that room may be made for the coming harvest.

Peru produces wine and spirits, whilst the Eastern States imports largely the most execrable compounds from Europe. Peru imports chocolate from Manila, whilst her near neighbour cannot find a market for cocoa. The forests of Guayaquil rot, and yet in Peru a tree is a curiosity, and wood high priced.

The Buenos Ayrean carefully collects dried manure for fuel, whilst coal admirably adapted for all culinary purposes abounds in Chili, and the Straits of Magellan.

(*To be completed in our next.*)

NOTES ON A VISIT TO CHANG-CHOW-FOO.

LEFT the ship in the gig with Capt. F. E. Johnston (waiting with me an opportunity to join H.M.S. *Scout*.) and a party of thirteen at 3h. 45m. A.M. At 5 A.M. we left Amoy in two large Chinese boats, hired for the occasion, and proceeded up the Chang River to visit the city of Chang-chow-foo. At 7h. 30m. passed on our right (the proper left bank of the Chang) the village of Hychong. We had here ten feet water, the tide having commenced flood at 4 A.M. at Amoy; but apparently being about two hours later in the river. The banks of the river were covered with mangrove bushes, and the river from this to the city, a distance of about twenty-five miles runs through a rich alluvial plain, from about fifteen to eighteen miles in width.

At the base of various hills we saw the acacia, banyan, and lichee, and

at a very slight elevation the pine in considerable straggling numbers, whilst the summit of the hills and distant mountains, presented the appearance of cracked clay and dry detached boulders of black decomposed granite. The mouth of the river in which we then were is the northern one, and is about a mile wide. The villages are numerous and built of clay with tile roofs. Many tileries are on the banks of the river. The only quadruped we saw was the buffalo, which is used for many purposes. There are several fishing boats but few trading junks.

At 8h. 30m. we passed Chung-tow, left bank, no bottom 15 feet. 9h. 24m. Paukchow (left bank) river about 200 yards wide. Here we saw some boats fishing in a peculiar manner,—a number of boats, in this instance fourteen, being divided and drawn up on opposite sides of the river in two lines, they advanced to meet each other, a man standing with a casting net in the bow of each, who, when the lines nearly touched simultaneously threw their nets, and were each rewarded by a haul of fish.

At 9h. 50m. passed Laoutoill, a large and populous village; 10h. 30m. across the Delta we saw the town of Chaubai about three miles distant, off which several junks' masts were visible; 10h. 50m. we passed the place where the Chang divides to form the Delta; 11h. passed a fort on the right bank of the river, celebrated as the retreat and stronghold of the Pirate Coxinga.

11h. 40m. passed Tienton on both sides of the stream. It seems principally employed in the manufacture of tiles and bricks. Near it were several groups of trees with the bamboo in most graceful luxuriance. At noon we passed Aopooang or rather Pecalau, the landing-place for the former village; at which a Spanish Roman Catholic Missionary of the Dominican order has established himself since 1842, and having built a chapel has converted to the Romish faith above 500 Chinese, at the lowest computation. His name is Francisco Zea. At 1h. 50m. we came in sight of the new bridge over the Chang. It consists of nineteen large stone buttresses built in the stream, which at high water is about 14 feet deep, with a rise and fall of 8 feet. They are about 28 feet apart, and joined by long flat slabs of granite, making a bridge about 580 feet long, and 14 feet wide; a small open parapet about a yard high is the only finish, but several guard-houses are built on it. About half a mile higher up is the old bridge, which we had not time to inspect. I was told it has 26 spans, the river being no wider than at the new bridge. The houses mentioned by Du Halde have been taken down owing to the weakness of the structure. On our arrival just below the new bridge, a crowd of Chinese assembled to stare at the new comers, but upon being addressed by Mr. Pohlman, (the same American emissary who accompanied M. Hedde when here with M. Lagraine,) who speaks the language with fluency, they made way for us, to land. To shew the good feeling they bore to us, I may mention, that one of the crowd expressing some surprise at a pair of gloves which I wore; I gave them to him. He put them on and held up his hands

amidst shouts of laughter from the assemblage ; he then passed them on to another, who having tried them on, with much honesty came to return them, which I declined, being aware that honesty of purpose and cleanliness of hands are not synonymous terms in Chinese. The mandarins sent a body of police to escort us lest the crowd should be troublesome, but though generally surrounded by from 600 to 1000 people, they neither were inconveniently inquisitive nor impertinently curious.

We went to the sugar factories, the staple commodity of this place, in which are twenty-five factories, producing yearly about 30,000 picul cwt. ; 35,625 sugar candy of a fine quality ; and 50,000 picul cwt. 56,875 brown sugar. Some coarse black tea of an inferior quality is exported. There is also a tobacco factory, and one for making crystals for spectacles.

We went to a high hill within the walls, and had a bird's eye view of the city, and then walked round a quarter of the wall between two gates. The wall has four gates, is about 25 feet thick, and 35 feet high, with a parapet about 7 feet high, in good repair. On the quarter round which we walked, we saw eleven pieces of ordnance in bad order.

Population by guess about 80,000, very few poor were seen, and hardly any suburb. We started for the ship about 6h. 50m. P.M. and reached her at 3h. 30m. A.M., having been absent about twenty-three hours and a half.

NOTES ON VANCOUVER ISLAND.

THE present state of the settlement at Nisqually is much the same as it was during Capt. Duntze's long visit in 1846. The only apparent effect produced by the recent Indian outrages at Waiilatpu being the preparation of a stockade defended by two bastions, which is now in the course of erection round the principal buildings. This, though long in contemplation, has been hastened by the spirit which the success of this massacre has excited in the Indian population.

Doctor Tolmi, the head of the establishment, deeming it prudent to be prepared against any similar piece of infatuation on the part of his excitable neighbours, for though the greatest confidence prevails amongst these people in the integrity and power of the Hudson Bay Company's servants, even to them, and especially to the American settlers scattered in the neighbourhood, they are apt to boast of the above exploit; and to hint at the possibility of a similar occurrence in Louis County. This is treated by Dr. Tolmi as mere Indian bravado, but in the isolated American settlers it has produced a feeling of anxiety that has driven the greater part of them back to the Columbia.

Several thriving settlers still remain within a little distance of the fort; and at a place called Newmarket, twenty or thirty miles south-

west of Nisqually, two French priests, Pere Blanchet and another, are erecting a chapel, and establishing a mission for the conversion of the Indians. A saw and grist mill has also been erected on the falls of a small river (the Tacalamish) close to, and a large extent of ground cultivated in the vicinity by five American families, whose cattle and produce only require a market for their disposal, more than sufficient for the consumption of themselves and families being raised the first year. These people all complained of the unwholesomeness of the Willamette Valley, where they were first settled, and praised the climate of Louis County as the healthiest they had met since leaving the United States. The greatest improvement in the Nisqually produce is in the breed of their sheep and cattle, the former especially, both in size and quality coming much nearer to the character of the English stock than they did two years ago.

The reports which reached me respecting the Columbia were, owing to Mr. Douglas's absence of too ill-defined a character for quotation, but from what I could collect there seemed to be a general feeling that a removal of their establishments to Vancouver Island would be ere long in contemplation. Dr. Tolmi intends to devote the summer of next year to examining the capabilities of the eastern side of that island. In the meanwhile he rigidly asserts the Company's right guaranteed in the Treaty, by warning off and insisting upon the removal of any Americans who attempt to settle within the limits they have claimed as their cattle walks. This has been always quietly complied with as yet, and the greatest cordiality exists between the American citizens and the Company's servants, on whom they are mainly dependant for most of their necessary stores and supplies.

My departure was delayed till the 25th by an accident, which nearly proved fatal to Mr. Gordon, assistant-surgeon of this ship, who got bewildered in the woods, and for three days baffled all our attempts to trace him: he was at last discovered by some of the Indians we had sent out, in a very exhausted state, having travelled more than twelve miles in a straight line without finding food or water. We arrived at Victoria about midnight on the 27th, the weather still as thick as it was when we left, but a fresh wind partially clearing the air the next day.

On the 29th we ran round to Cormorant Bay, and on the 7th commenced beating down the Straits, and arrived at Neah Bay on the night of the 9th, examining the coast as much as the unsettled state of the weather would permit. On the 10th it blew a fresh gale from the eastward, accompanied with heavy rain and thick weather, but the anchorage is well secured from such winds, though exposed to the north-west. The two following days proving fine I filled up with wood and water, and on the 13th, having completed my observations, started for San Francisco.

Previous to leaving the Straits I must give you a short account of the present state of the establishment at Victoria; though I am aware there can be little to add to the information already supplied by Capt. Courtenay, of H.M.S. *Constance*.

Since 1846 considerable additions have been made to the buildings, and the stockade now includes all the goods stores, and extends 450 feet by 330. The dairy also has been much improved, and a breed of cattle introduced, which supplied us with excellent meat during our stay. Butter in considerable quantities is salted for exportation as well as salmon; large quantities of which, as well as grain, are sent to the Sandwich Islands and Russian settlements to the northward. A good substantial wooden bridge has been thrown across the narrows above Victoria, and a road cut to a saw mill, now in the course of erection on a small stream that runs into the head of Esquimalt harbour. This road has been nearly destroyed by the extensive fires which have this year prevailed in the woods, but the increasing importance of this place, and its value as a secure harbour, will soon lead to its being re-opened.

Subjoined is a list of the Indian population in the Straits and Puget Sound according to the last census, allowing a decrease of one-fifth for the effects of the late mortality amongst them from the measles, influenza, &c., which has made great havoc this year.

The tribes of Indians that inhabit Vancouver Island, with the number of men, women, and children of each, viz. :—

1	Songes	700	inhabiting the south-east part of the island.
2	Sanetch	500	“ north-east sixty miles, north-west of Mount Douglas.
3	Kawitchin 1763	“	country north-west of Sanetch territory to the entrance of Johnson's straits.
4	Uchulta	1000	Kawitchin country in ditto.
5	Nimkis	500	Uchulta country “
6	Quaquiolts	1500	Nimkis country “
7	Neweetg	500	At north-west entrance of Johnson's Straits.
8	Quacktoe	1000	Woody part north-west coast of the island.
9	Nootka	1600	Of that name on the west coast.
10	Nitinat	1200	“ “
11	Klay quoit	1100	“ “
12	Soke	100	East point of San Juan to the Songes territory.

Total 11,463

Besides the harbours of Esquimalt, Victoria, Nootkarand, St. Juan, there are four more on the east coast of the island, viz. Shuchartee, Beaver, McNeills, and Beaver Cove. At McNeills harbour the coal district lies.

Fraser River is navigable to a distance of about eighty miles from its entrance, and the depth of water varies from $2\frac{1}{2}$ to 10 fathoms.

The only river at present known, as being any way navigable on Vancouver Island is that of Nimkis which the natives ascend in their light craft to a distance of about twenty miles from the sea coast.

We have not as yet kept a correct register of the weather by thermo-

meter; its average temperature during the four seasons, cannot therefore be at present given.

The winter is generally very stormy with heavy rain in the months of November and December, the south-east wind then prevails. We have some frost and snow about the low land in the beginning of January, which is seldom of long duration, and never interrupts our agricultural operations.

Early in February vegetation begins to advance, and about the commencement of March every thing assumes the beautiful hue of spring. April and May bring in alternate warm showers of rain and sunshine, and the heat becomes extremely oppressive in the months of June and July. In August and the beginning of September vegetation dries up from the drought of summer, and is then easily ignited, which is generally done by the natives when passing along the coast in their canoes. The weather being then very foggy, still, and close, the atmosphere becomes so much darkened by the fog and smoke combined, that the sun occasionally appears to us of a deep red colour even at noonday. In the month of October the rainy season sets in, the soil being then moist and the weather not very cold, the grass grows vigorously. The pasturage for the cattle is then better than during the two preceding months.

The fur bearing animals generally hunted on the island are beaver, both black and grizzly, racoon, minks, land otter, &c., and the sea otter is hunted about Nitinat and Scotts Islands. The elk and deer are said to be abundant in the interior of the island. The fish generally taken by the natives in the vicinity are as follows, viz. halibut, flounders, skate, rock cod, sardine, salmon, trout, and several varieties of the herring species.

From the month of September to the month of April following, is a very favourable time to obtain supplies of vegetables at this place and Nisqually.

A ship of war of 500 men could always depend upon receiving supplies of flour, beef, and pork at this place and Nisqually; and during the time specified in the preceding remark upon receiving supplies of potatoes and other vegetables.

A VOICE FROM THE DEEP.—*On the Present State of the Merchant Service.—By Aliquis.*

(Concluded from page 242.)

The greatest evil of the whole, however, has yet to be treated of, viz. the discipline, or rather, *the want* of discipline in merchant ships; and this is a part of my subject which I enter upon with "fear and trembling," not knowing the effect which my laying bare the "nakedness of the land," may have upon those who I would wish to improve in their conduct by some new act, and which this very laying bare is in-

tended by some future means to obtain. I must run the risk, however, of a temporary loss, for the chance, at least, of a permanent gain; and trust that this questionable period of our existence will be of so short a duration, that but little harm may accrue.

Discipline then, or that which is so necessary to the good regulation and governing of bodies of men, is now, I may say without fear of contradiction, *almost defunct* in the merchant service; and the difficulties and vexations caused to masters and mates by which, are such as continually to harass their very existence! Indeed, no shore-going person can form any idea of the misery entailed upon all holding responsible situations on board a ship, from the want of this most essential requisite! It has been said by some wise man (I forget who) that "a ship is too confined a space for the corking up of human malignity." Of the truth of which no one who has ever been a few weeks at sea can for one moment doubt; yet, in this small space, are the bad passions of men in the present times allowed almost their full swing, without any fear of punishment, or what may properly be termed such, so long as the *lives* of individuals are not actually endangered thereby. Anything short of this, according to the Merchant Seamen's Act, is not punishable even with restraint, so far as I can understand it; and every sailor being well acquainted with the same. Insolence, disobedience of orders, laziness, refusing to work, and disturbances of all kinds are every day occurrences on board of merchant ships, but more particularly in those which carry few officers and petty-officers; as to correct at all *now*, has become a matter of might entirely, the law (if there is any thing worthy of the name) being altogether in favour of the sailor. That such a state of things should continue I am sure no member of the legislature can possibly desire, and it can only be from the want of a sufficient knowledge of facts concerning this matter, or a proper representation of the case, that an act for the *governing of sailors* on board of merchant ships, has not been long ago passed, instead of the present one, for the purpose of *coercing masters!* But let us examine into it.

When a sailor signs the articles, he agrees to go a certain voyage, or to serve for so many years in a certain ship for a specified sum of money as wages per month; and to obey all lawful orders of the master or mates by night or by day, on board and in boats, and so forth. The whole affair appearing very serious on paper, but without any penalty whatever being attached for the non-fulfilment of the said contract. The law is supposed to be sufficient for such things on the arrival at some port; but the ship has to *get to this port*, and supposing the men to refuse to do their work at sea, a very common case with many, I ask how is she to be got there? There is no law at present, *on board of a ship* at least which can *force* men to do their work; but quite the reverse. The present Seamen's Act *allows* any man to refuse to do his duty so long as he likes to forfeit six days pay for every twenty-four hours of refusal! and suppose that a man has no pay due, which in going to America or the Cape he would not have probably till after arrival, having received so

much in advance, where is the punishment? even allowing that it *is* a punishment, which it is not. Such is this Seamen's Act, the "*blessing and boon to the sailor never to be forgotten*," according to the *worthy gentleman* who sells this same trash in his red book at the Custom-house. A *boon* it may be to the sailor if he is a lazy skulking black-guard, of which this very act has made a great deal too many; but it is anything but what it should be, and totally subversive of all discipline.

That a British senate should have tied up the hands of all masters of ships, and let loose those of their ships' companies so effectually, is truly astonishing; and shews that it must have a much worse opinion of the former, and a much better one of the latter, than is consistent with human nature, or the good regulation and safety of those on board of merchant ships. No doubt Parliament acted to the best of its judgment; but as the act has only created the greatest insubordination and consequent danger to the lives and property of all concerned in merchant ships, which can be proved by thousands of voices, it is now necessary that it should be expunged from the statute book for ever, and something substituted which may not only *coerce the master* if such is required, but *coerce also the sailor* while under command:—this would be but fair play if nothing else. All masters are answerable for their conduct to the laws of their country on arrival at a British port, and could not go wrong, even were they willing, for any great length of time; but the ship must be navigated to that port, and the master certainly ought to have the magisterial power of enforcing obedience to his orders in some way or other, without the fear of fine and imprisonment. At present he is constantly obliged both to risk this and to suffer it, for the sake of saving his ship from danger, damage, or wreck; and that ships are frequently brought into these perils by the insubordination of a band of lawless ruffians, calling themselves sailors, may be seen almost weekly in the newspapers of the day.

Hundreds of cases occur however, which never reach the papers. I shall mention that of the *Sir Edward Parry* on her voyage to America, about a year ago; having lost all three topmasts in a heavy gale of wind. Twelve men out of eighteen refused to clear the wreck under pretence of *being sick*: the masts lay kicking about alongside for three days during the continuance of the gale; and it was *three weeks* before other topmasts could be got up,—the ship drifting about almost at the mercy of the winds all that time, lost a great deal of ground, and greatly increased her expenses. Most people would say, could these men be *British sailors*? I answer they were; and when put in gaol by the master, with the permission of the Consul at the port of Baltimore, they were in a few days taken out by writ of Habeas Corpus, and brought the master and consul into court for false imprisonment, which plea was gained, and the men set at liberty; the judge at the same time informing the Consul that he had no power to imprison sailors in the United States, that there was no clause in the Treaty on the subject, and that American gaols were not built for English sailors.

Thus ended that case, which, no doubt has been represented to the proper authorities in England long ago. But, had it been a British port the result would have been the same, and the only punishment that of forfeiture of wages, which had been spent in advance before leaving England! Some magistrates indeed, have moral courage enough to punish such rascals as they deserve, well knowing the weakness and folly of the act, and running the risk of actions themselves: these men, however, are but rare. Nevertheless, I have heard more than one express themselves strongly to the above effect; although the act may not altogether oblige a magistrate on shore to follow it, as it does a master of a ship at sea. But of this I am not so sure as I am of the disturbances it so constantly creates on board of ships. The master and mates of the *Anna Robertson*, on her voyage out to China last year, had for nearly two months to keep watch, and even sleep with loaded pistols upon them night and day. The people would do nothing but what they chose, and were in a complete state of mutiny for all that time.

A master is almost afraid to take a lady passenger into his ship now, from a fear of her being disgusted with the conduct and language of the people on board, without his having the power to check it. Indeed, nothing can be worse than the conduct of sailors in most merchant ships, and as such cannot at all times be borne by their superiors—*club law*, for want of another is made use of; fighting, abuse, &c. of course follow, and the duty is carried on in a bullying boisterous style of discomfort, which to passengers is both very disagreeable and alarming. This is more particularly the case in vessels with few mates as I have before stated; those which carry a tolerable *staff* risk every thing, and put offenders in irons, on bread and water, *vi et armis*. These punishments, however, often turn out a losing concern to the master; but, what is he to do? Can he allow the ship to be taken out of his hands? If not, why is there not some law to support him, instead of that only to crush him, and risk the lives of everybody on board.

Mercy to the sailor cannot certainly be objected to. But, to give ignorant men every thing in their own hands is, to say the least of it, very dangerous, and anything but judicious, and most injurious to the shipping interest.

It is contrary to the Divine will that men should not be under control; and every one knows that we are far more comfortable when kept in a wholesome state of discipline than without it! For this reason, therefore, if for no other, let there be an act for governing sailors on ship-board. Let it in as brief a space as possible, declare what punishment the master of a ship *can* inflict—for disobedience, insolence, breaking of the peace, refusing duty, theft, and blasphemy especially. The very fact being known that such power is in his hands will, in most cases, do away with the necessity for the real infliction of the punishment.

As to the nature of these punishments, it is not for me to speak, but it must appear quite evident, from what I have written, that something very different is required from *the one single punishment for all mis-*

deeds of the present act. This will easily be decided on, after evidence shall have been taken by a Committee of Inquiry, which I hope may 'ere long be ordered to sit on the matter. To effect this, however, or to effect anything, I must request the particular attention of my brother chips to the whole of the above: *they* alone are the parties to move! shipowners *can insure*; but shipmasters cannot insure either their lives or their comfort. Some of the former, however, aye! many perhaps, may see it their interest also to be up and doing, and may lend their powerful aid towards bettering the condition of their fellow-men; and in doing which they will assuredly better their own. Men of common sense must perceive at a glance that even were all granted that I have asked with regard to shipbuilding, stores, men, &c. the additional expense would soon be squared by all things finding their proper level, as a natural and inevitable consequence, and the benefit would be a public one as regards safety of life and property, without affecting the pecuniary affairs of the shipping interest! This has been my particular aim in writing the above, and as most shipowners *are* men of sound common sense, and many of them who would shrink from the very idea of some of the deeds at which I have hinted, I trust that they at least will view the matter in this light and act together with their *captains* (I dare not say *masters* here,) in making a vigorous attempt to obtain the specified most necessary changes.

I would willingly take some notice of the Register Tickets, which occupy so large a space in the Seamen's Act; but I find I have already been drawn in to rather too lengthy a dissertation, and shall merely remark, in passing, that the universal opinion is, they have completely failed in their object of checking desertion; and only give a great deal of useless bother and trouble to both master and man.

Should we ever be fortunate enough to obtain a Committee of Inquiry, I trust these tickets will be particularly examined into, as also their concomitant—desertion; which is still carried on to a most vexatious extent wherever a shilling more wages is to be got.

I will conclude for the present, Mr. Editor, but you may hear again on these subjects from

ALIQUIS.

MR. RAPER'S SYSTEM OF SYMBOLS.

THE importance of abbreviations and symbols in saving time in writing is so generally felt that most persons, whose pursuits require them to write much, habitually employ certain signs, intelligible to themselves, to save the tedious repetition of the same letters and syllables.

Suitable and expressive symbols are, however, not merely a convenience to the writer, but afford, in general, the advantages of distinctness, explicitness, and economy of time to the reader, together with another of still greater

consequence, namely, certainty. This last assertion will not, perhaps, be so readily assented to as the former, by those who are unaccustomed to a systematic method of symbols; but the truth of it is easily established. For example, a seaman in any particular part of the world opens a book to learn where he may find a good anchorage. His eye naturally looks for the word "anchorage" or "anchor," as it would for a sign or symbol. Having found the word, he is then obliged to read the entire sentence which contains it, in order thoroughly to comprehend the meaning; since, without a clear understanding of all that is said about anchorage, it is not safe to act. Now this sentence, though it relates, as we suppose, in some way to anchorage, may not contain at all the information that the reader requires; it may, for example, allude to some ship having partially and unsuccessfully searched for an anchorage, or it may merely intimate that no good anchorage has been found between some place in the neighbourhood and another more distant; and, moreover, it is often difficult, from the arrangement of the matter, to know the precise point the account refers to, without reading back. If, on the contrary, the reader's eye catches the symbol ⌘ , or this symbol so modified as to express with clearness, "anchorage," or "no anchorage," or "good anchorage," or "bad anchorage," or "anchorage at times only," or "confined to a small space," and so forth, his work is done at once; he seizes in an instant the information that is given, and his mind is altogether unembarrassed by the circumstances of narration, the consideration of suppositions, inferences, and conditions, which contribute to the obscurity of language in full development,—an obscurity which often amounts to a formidable evil when one has to make the effort to extract the meaning of a paragraph of even moderate length under circumstances of anxiety, confusion, or haste.

There are numerous other matters which, on like grounds, demand conspicuous indication for the convenience of reference, instead of being left to the lengthy, involved, and indiscriminate process of language written at length; such as the dimensions of islands and shoals; the leading particulars of dangers; the character and appearance of land, for the purpose of distinguishing one place from another; channels; landing-places; as also notice of water, refreshments, and fuel.

But besides the mere notice or indication, it is no less necessary, on many occasions, to denote the *quality*, or character, as good or bad; thus, it is necessary the seaman should know whether the inhabitants of a place he may propose to visit are likely to assist his wants or to massacre his crew; that is, whether the character of the people is friendly or hostile.

The consideration of *quantity* also has a powerful influence in the indications of language. One place has some trees upon it; another is well wooded; another densely wooded. It is entirely by increase of quantity that we pass from *trees to wood*, and from *wood to forest*. In like manner it is no less the abundance than the superior quality of the water, refreshments, &c., that determine the selection of the place at which to obtain supplies.

After what has been said, there is no doubt that symbols, properly adapted to the purposes of seamen, would be of great advantage in consulting books and tables relating to Maritime Geography, and also Charts; and we shall now enter upon the construction of a system of which the first steps occurred to me while preparing the second edition of the "Practice of Navigation" in 1841.

Nothing would be easier than to apply some arbitrary and simple mark to each word in the dictionary, but no one could recollect such marks when applied. In order to recollect any new thing, it must be associated in the mind, in some way or other, with something with which we are already

familiar; and, therefore, symbols, to be easily learned, and recovered when the recollection of their application has become weakened through disuse, must be resolvable into obvious or fundamental ideas; and their construction, out of lines, dots, or other materials, must be such as to lend itself readily to such analysis whenever it is required. The construction of a set of such symbols is, accordingly, an excessively difficult task; and the difficulty is greatly enhanced when the symbols are to form a *system*; that is, when certain principles laid down at the outset are never to be departed from, and are to be, in every individual case, the sole grounds of interpretation. In fact, the task here exemplified in a special subject, of a restricted nature, and which has much of a geometrical cast about it, would, on the general scale, be nothing less than the creation of an entirely new form of language. We shall say nothing further here upon the subject in general than to observe that a system of symbols represents either *words* (each symbol representing one word), or *ideas*, independently of words. The plan proposed is the latter; the ideas being decomposed or separated, the subordinate elements are denoted by subsidiary marks attached to the primary symbol, which stands for the original or primary idea.

Thus *w*, the primary symbol, stands for *water*; *w'* denotes *good water*, by the *superior* trait or character; *w*, denotes *bad water*, by means of the *inferior* trait; the *quality* being denoted by a subsidiary sign. So *w* denotes *water in plenty*, where quantity, like quality, is a secondary idea to the same primary one. The method thus freed from the prolixity and repetitions of verbal language (which are the necessary results of bringing the several portions of the whole idea, one by one, *in succession*, to the ear), exhibits a remarkable energy of expression; thus *w'* denotes "water in abundance, and of good quality:" that is, seven words in the space of one letter and a half. These words, with necessary spaces, employ thirty-eight letters; but they are themselves an abbreviation, since ordinary language would require a verb, as "is procured" or "may be obtained," &c. In many cases the symbols occupy but three per cent of the room required for ordinary type. This economy of space, however, is but one of the advantages afforded; the idea is presented in the most positive and unmistakable manner, and under a form which, after the notation has been learned, demands the smallest possible amount of intellectual effort to seize the given idea and the two particulars attached to it.

To express the non-existence of any thing,* a zero is placed at the right foot of the symbol: thus, *w_o*, no water; *r_o*, no refreshment; *‡_o*, no anchorage.

This leads at once to the expression "at times:" thus, *ww_o*, *water and no water*, represents evidently "water at times;" *||_o*, landing (the boathook, hook down) at times; *rr_o*, refreshments procured occasionally.

A symbol inverted has its meaning reversed: thus *]* denotes embarking, the reverse of landing. Those symbols only are capable of inversion which represent some action.

A hollow letter denotes temporary, in opposition to permanent: † thus *F* after a light denotes fixed; *F* denotes that the fixed light appears occasionally only, as at certain times of the tide.

This sense is provided for otherwise (as in *ww_o*), but all symbols do not conveniently take the hollow form; and it is, besides, often a convenience to have more indications than one.

Much of the power of the proposed system consists in the employment of *component signs*.

Thus — denotes the horizontal line or level of the sea or land. The distinction between what is above and what is below the surface of the sea being most important

* It is as necessary to express the absence or non-existence of any thing as its presence: to leave out the symbol is merely to omit information on the point.

† The hint is taken from those Hebrew grammars in which the servile letters are exhibited in the hollow form.

to seamen, the simplest notation is employed to express it; hence we have \overline{rk} , a rock always below the water; \underline{rf} , a reef always above the water; \overline{rk} , a rock *awash*, or between two levels of water; \overline{w} , water under the surface, obtained by digging.

The line | denotes vertical; hence \perp denotes steep, *bluff* or precipitous, above the water, as a cliff; \top denotes *bold to* (below the water).

The cross with a number denoting the point is the compass-symbol, as $\frac{f}{4}$ denotes ENE; $\frac{2}{4}$ denotes *lying NNW and SSE*. This symbol exhibits to the eye at once, or without mental effort, the *quarter or quarters* in which the point or direction in question lies.

A square or an oblong expresses *enclosure*, partial or total; hence \square , enclosed anchorage, a *harbour for large vessels* (above 18ft. draught); \square , ditto, *for small vessels* (under 18ft.); \square , fuel enclosed, a coal *dépôt*, (b denotes *burn, bruler, brennen, brulare, &c.*)

Brackets [] denote *within limits*: hence $[\Phi]$, anchorage confined to a small space; $[\Psi]$, trees ditto, a *clump*; $[\text{f}]$, a clump of cocoa-nut trees; 3 $[\Psi]$, three clumps of trees; $[2c.]$, two cables length in extent; $[4m.]$, four miles in extent; $[\text{f}]$, a shoal patch of 3 fathoms (or 3 fms. in narrow limits).

The subsidiary signs denote (as already remarked) *quantity and quality*. The sign denoting quantity in *augmentation* is a dot under the symbol, as \underline{w} , *abundant* water. The sign denoting *diminution* is a comma over the symbol, as $\overset{,}{w}$, water *scarce*.

One dot implies much or many; two dots, still more; and three, the extreme degree for which language has a term; and the like, in the contrary sense, holds of the commas. We do not use all these signs, as so much variety is not required.

The dot is chosen in the sense of aggravation, as employed in the *weather symbols* used in the Navy; the comma is selected from its function in such abbreviations as *can't*, where it is naturally associated with the idea of diminution or contraction. The dot and comma take opposite positions, in order to avoid ambiguity in case of partial obliteration.

The only quality or variety sign we use at present is to denote good (') and bad (,); one, two, or three such marks denote good, very good, excellent; or bad, very bad, excessively bad.

Enough has been said to shew the nature of the system which will appear under the name of *Description Symbols*, in the Table of Maritime Positions, where it enables a large mass of important information to be inserted, with scarcely any increase in the extent of the table. The system is also convenient for taking notes and memoranda of hydrographical descriptions, as it is independent (with the exception of a very few words) of any particular language.

The following examples exhibit the method as it appears in practice:—

Ex. 1. Island, $\frac{1}{2}$ 7m., λ , Ψ , \parallel E, f SW $\bar{\text{w}}$, $\overset{,}{w}$ r, P.

Island lying NE and SW, extending 7 miles; *high; no trees; no passage* (\parallel) to the eastward; a *good anchorage* on the SW side in 8 fathoms; where *water, scarce*, but *good*, is to be found, but *no other refreshments*; the *people of bad* character.

Ex. 2. Paddeway Bay, \square [5m.], $\bar{\text{w}}$, r, f .

A *harbour for large vessels*, extending 5 miles, having 10 fathoms water; *refreshments* to be had; *no dangers* (f).

Ex. 3. Shoal, $\frac{2}{4}$ 4m., \overline{rk} , at NW end, \sim $\overset{,}{\text{w}}$, \top , \perp .

Shoal, lying WNW and ESE 4 miles; a *rock always above water* at the NW end, the *occasional resort of birds* (\sim), *bold to*, and *no landing* on it.

H. RAPER.

SITKA.

OUR passage (from Woahoo) to Sitka was performed in twenty-two days, the weather was uniformly fine, and the wind always fair.

The Sound of Sitka is formed by Mount Cape Edgumbe to the north, and Point Wodehouse to the south, fourteen miles apart; the former landmark is easily distinguished, being a dome-shaped mountain, evidently an old volcano capped with snow, which lines its red sides in stripes from its apex down to its centre.

The settlement of New Archangel is about fourteen miles up the Sound in a north-easterly direction, and cannot be approached closer than within six to eight miles by a stranger, who should hoist his ensign and fire two guns. This we were aware of, and fired eight before the pilot came out; he was very welcome, however, when he did come; informing us that the Captain Klenkoffstrein would be alongside in a quarter of an hour with a steamer to tow us in. Accordingly at two o'clock on the twenty-second day we were safely moored in the harbour of New Archangel.

This is formed by a cluster of small islands immediately in front of the settlement, and has two entrances, one north, the other south. Once inside it is as smooth as a pond, no port can be safer, and it is impregnable, owing chiefly to its natural defences, though the Russians have taken good care to erect batteries which command it at every point. The town or settlement is built on a flat strip of land jutting out here as if on purpose, form the high belt of mountains which form the extremity of the Sound. The governor's-house is perched on a rock, about 80 feet in height, and is 140 feet long by 70 wide; of two good stories, roofed with sheet iron, painted red, and capped by a lighthouse, which can be distinguished by vessels at sea. The whole is defended by a battery, which commands every point of the harbour, and encircles one-half of the house to the south-east. The north-west end is approached by a flight of steps. Half way up sentinels are placed day and night, and here also are posted brass guns on light field carriages. The upper story is divided into one grand saloon in the centre, flanked by a drawing-room and billiard-room at one end, and a drawing-room at the other; all are well proportioned, painted, not papered, and the walls adorned with good engravings of *British Victories* by sea and land. In the saloon is a magnificent full-length painting of Nicholas. The lower story contains (so to speak) a dining-room, drawing-room, study, and the domestic establishment of the governor and his lady. The dining-room is hung with prints of English towns, principally on the seaboard: the drawing-room with views in Switzerland and Germany. The whole is plainly and substantially furnished, and heated with stoves of the continental custom. This, as well as all other houses is built of wood, immense logs, dovetailed into each other, squared and painted.

The arsenal is the next object which arrests the attention of a stranger, from the number of men employed either building new or repairing old

vessels. At this moment they are building a new steamer, destined I think, for Mr. Leidesdorff of California. The workmanship appears good and solid, every thing for her is made on the spot, for which purpose they have casting-houses, boiler-makers, coopers, turners, and all the other *ers* requisite for such an undertaking. The boiler is almost completed and is of *copper*. They have also their tool-makers, workers in tin and brass, chart engravers, sawyers, and saw mills, for all which occupations suitable establishments have been erected.

The climate is moist, out of fourteen days we had only two upon which nautical observations could be made, these two were as fine and as warm as I ever experienced in any country.

NAUTICAL REMARKS ON THE BAY OF HONDURAS.

Sea and Surf upon the Coast.

A LONG swell from seaward, is the worst cause of the heavy surfs, and this is more felt in winter than in summer; but, even then I have frequently seen the surf heavy, when the cause was scarcely felt at the ship, and we never had the wind that caused this long swell; whilst at other times you experience a short grumbling sea at the ship when there is very little surf upon the bar.

Settlements, Commerce, &c.

There is a Mosquito settlement at Plantain River; two Englishmen with Mosquitoan wives at Black River, the remains of the last attempt of a company, which I believe like its predecessors failed through ignorance and mismanagement; a Caribe settlement at Cape River, and also at Great and Little Rocks. The "Alarm" frigate claimed for the Mosquitoans as far as Cape Honduras. The Mosquito territories are under British protection, and the Americans have admitted mahogany from them as British produce, and the merchants are free from the *fettlers* put upon commerce by the Central American Government. Most of the Belize merchants send their ships to Ruatan Island to await orders in place of Truxillo. There are only two places where ships can lie upon the coast in the Norths, these are Omoa and Truxillo, or rather the north-eastern part of the bay called "Ring Cove." You would imagine that the Spanish or Central Americans were determined not to have the resources of their country developed by their commercial policy. The trade little as it is with Truxillo, is carried on most corruptly. Smuggling is vulgar, and it can be done much better under a sort of legal cloak; report *a part*, and land the *whole*,—a few dollars or the same thing in another shape to certain parties, comes in as a matter of course; but oil is better than vinegar, and "tight lacing" is not calculated to the meridian of Hon-

duras, but the Ruatan Islanders for legislation. Some of the new republics might do well to send out deputations to that island, and as they have no public press to diffuse the blessings of their enlightened policy, their only chance is that an "Observer" or "Spectator" may find its way to the Belize paper. A few specimens may be given of their proceedings. The public meeting is composed of black and white members elected by universal suffrage, and no property qualification. The clerk of courts, who is also the whole machinery of their custom-house, is their secretary; president they have none, and in their hurry to proceed to business, they forget to appoint a chairman, and then vote that a cargo landed for transhipment to the mahogany works upon the coast should be attached &c.; and the five per cent. import duty imposed upon goods landed for consumption, should be paid on those goods in transit, and the agent (one of their members) rises to explain, &c. But it was voted that he should not be allowed to speak, or he would argue them out of it; and they afterwards repealed the five per cent. import duty upon goods, &c., from Central America and retained it upon British goods, &c. What say the Free traders to that? They voted that ships calling there for orders were no benefit to the island, as they did not carry away their plantains; and that the ships of one merchant should pay double port charges, as nobody but the agent derived any benefit from them: adjourned, and resumed. Then before *forming a quorum* they *discussed and agreed* to an important measure, they never referred to it when a quorum was formed. But their master-piece was maintaining the election of a public treasurer who could neither *read* nor *write*; others could do it for him, and one "a Domine Samson," voted in the majority.

We have many proofs in our colonies of a retrograde movement in civilization, and by the proceedings of some of the public functionaries and other parties in Belize, and their "star chamber" modes of administering justice, it would not be difficult to place them in a particular niche of last century, in point of civilization in England. I have now two cases pending with them, a dispute in the exchange of at least £26 upon the disbursements, which I found by their own acknowledgements was a designed fraud, because the *rate of exchange* by the circumstances of their trade is against. They would make me pay for it under a cloak, and with the police magistrate who fined me nine dollars for applying the word "improper" to a memorandum written by the public surgeon; but he was an M.D., and also an assistant judge; and in his wrath he instigated a coroner's inquest to be held upon my dead seaman, where the coroner and jury gave me fair play, and I disproved every charge that he brought against me, except what he called "insolence and contempt," which he had no evidence to substantiate; and my own witness convicted me of using that awful word "improper," which the magistrate, in polite moral Belize considered might have led to a breach of the peace, by exciting the said public surgeon and judge to have knocked me down. And for this remote far-fetched risk of breaking the peace, not causing another to break it, I

must indemnify the public, by paying nine dollars, or go to their pestilent gaol and get bitten by scorpions, and when I complained to H.M.S. superintendent, this injustice was backed by false statements, and the executive declined to interfere. I then requested the correspondence to be sent home, that I might seek redress in England by appealing to the secretary for the colonies.

The great number of Spaniards driven into Belize from Baccalar may probably lead to their making settlements at some of the rivers to the southward. At present the settlements there are chiefly Caribs; Belize, and all the places in the British settlements extending to Sarston river are quite safe for ships loading at, and the timber is taken in through the ports.

Bank Blink or White Water.

There does not appear to be sufficient importance attached to this indication of danger; it is found in those parts that banks are with few exceptions either deep sunk, or very shallow, extensive bands almost perpendicular, giving no warning to the lead, with very little water upon them, fringed with coral reefs and dotted over with reefs and small cays scarcely above water. If the water becomes light coloured you may be sure that danger is near. It is no figure to say that you are never safe, except in "blue water." In the Bay "Blue water" signifies deep water, and "white water" the reverse. If you ask a Bayman what water there is in such a channel, it is a great chance but he says "O, blue water." I believe that is a good general rule for the West Indies and Bahama generally.

The new light-house, and good light recently placed upon Half-moon cay, may modify the preference that might be given to Mr. Dunsterville's track over that of Mr. Johnston Capes. No dependence can be placed upon Manger cay light.

BRITISH SHIPS AT BELIZE, HONDURAS.

At Sea, December 9th, 1848.

SIR.—Much sympathy has of late been bestowed upon "Poor Jack." All seem to agree that his habits are irregular, and frequently immoral when on shore, but due weight is generously given to the circumstances of his life, want of education, &c. I am far from raising any objection to this sympathy, but whilst unbounded generosity is shown to the seamen, I think it only fair that at least fair play should be shewn to shipmasters, But few of them come in at the cabin windows, in general they have only succeeded in raising their heads above their fellows by a hard struggle, and it is only reasonable to suppose that some of the rough impati-

ence of their former life will still cling to them. Their situation is anything but agreeable, and notwithstanding all that has been said and written upon their treatment of their crews, I am fully persuaded that ladies and gentlemen on shore are quite as *exacting* with their *domestics* as shipmasters with their crews; and the "*Times*," would teem with long-winded complaints, were they to receive such marked instances of ingratitude and disobedience from them as shipmasters frequently do from their crews. It must be allowed at sea, as well as on shore, that "bad servants make bad masters," and I think the number of Johnstons, &c., will be found to form but a small per centage of the 33,000 shipmasters.

It has been attempted very largely by our Consuls and other officials, to asperse the moral character of shipmasters, and to attribute to them the blame of the occasional disturbances on board of their ships whilst in port, or the irregularities of their crews on shore. Is this at all reasonable? Might we not with equal justice blame the Lord Mayor and Aldermen for all the street rows and cases which come before our petty courts? or, make a large manufacturer liable for the conduct of his men beyond working hours. Crimps, and lodging-house keepers too often go "Scot free," whilst the shipmaster has to bear the taunt.

I was very recently told by a gentleman "Its a pity that you should give them any liberty at all," simply because a sailor got drunk. The same gentleman might that day have seen a very unusual act of *prudence* in four seamen; the fifth was quarrelsome, and some proposed "pitching into him;" but this was very *prudently* overruled, and one took him by each wrist and walked him off to the police, and gave him in charge. But, Jack is generally his own master on shore, whilst it is very different with the shipmaster. The business part of his duties then devolve upon him, and here he is generally in a *false position*, having that most important business to learn after he becomes a master; and he is frequently unable to cope with those whom he has to deal with; men that have been schooled to cool business habits in a broker's or merchant's office; and who too often take unfair advantage of this superiority. And, whilst the master is endeavouring to protect the interest of his owner, (in some instances against designed fraud,) never mind what provocation, only let the rough impatience of the tar break out, and he is "a troublesome blackguard;" and, as a matter of course a drunkard, *written home so to his owners!*

I have lately been at a place remarkable for this kind of work, Belize, Honduras, and was four months in the Bay before I was ordered to Belize, and this detention chiefly occasioned by my merchant trying to take undue advantage of me, wishing to lead me to sacrifice the interests of my owners, that I might load in one of the best places, (within the scope of my charter,) when by a comparison with the ships upon his hands, I knew that it was *his interest* to load mine there, and that he could not send me to the worst without burning his own fingers. However, upon my arrival at Belize I found the treatment at first tolerable,

but had occasion to intimate, that their mode of calculating the exchange was such as I could not comply with. They were not alarmed, and all went on well, but I soon felt the effects of their inattention and neglect; still I could not divine the cause of the marked change in their conduct towards me, until I remembered standing in the verandah when one of the masters was pointed out, and *emphatically* styled "my friend," because I had been seen in his company.

My ship was at the Bogue, seven miles to windward, and when I came down, not being very well at the time, I would not attempt to *beat* up to the ship at night, and every master in Belize that I met with invited me to make his ship my home, which was thankfully accepted, as there was only one place dignified with the name of "hotel," and there you must give due notice if you want a dinner; but "my friend," was not upon good terms with them. I did not quarrel with them for designating him "my friend," his abilities and upright character were well known, and he was a thorough-going friend. I let that rest as I had enough to do to take care of my enemies.

This is rather a hard penalty to pay for a friend in Belize, where (notwithstanding lavish promises of advice and assistance in the letter accompanying my charter,) I found that here it was *everybody's* business to advise strangers; and consequently *nobody's* business. "Man is a sociable animal," but masters must not associate in Belize, as we had proofs that the gentlemen write home about "their colleaguings together and drinking, and neglecting their business, &c.;" and the charterer desires the owner to "lecture the master upon this head." Whilst the same parties introduce and refer to me for advice the very party *intended* to have been lectured, and as a grateful return he intended to compliment them upon their introduction, and save £20 by it.

Now, it should be known that, in Belize, the residence of those aspersers of the moral characters of shipmasters, that gentlemen do not marry for Falstaff's reasons, and that *marriage* is common *after* ten or twelve years of *adultery*.

However they may urge *circumstances* in palliation, it is not moral; neither is it *moral* or *honorable* to rob shipowners, through their masters, by giving them four English shillings for a dollar, and by the magical figures of 3, 5, and 7, derived I believe from the ancient system of Pythagoras, to convert them into 4s. 9d. and 1-7th, at (as they call it) the "par exchange". The logic by which they support this fraud is, "You are not wiser than all the people that have been here for eighty years. If it was not right your owners would not pass it; they are well aware of it." "We'll stop your ship, captain." The latter too often rings in our ears; but, I pointed out where I had sent her to, and that, in this instance, "Stop your ship, captain," would be *piracy*, and ultimately gave them a receipt for the number of dollars, leaving their value at the "par exchange" to be settled in England, by a higher

authority than "Stop your ship, captain," although I had been laughed at for making the attempt.

I beg that you will give insertion to this in your valuable journal.

I am, &c.,

RICHARD LEIGHTON,
Ship Adelaide.

To the Editor N.M.

REPORT ON THE FISHERIES OF THE GULF OF ST. LAWRENCE.

New Brunswick Legislature, April, 1849.

(Laid before the House of Assembly by command of his Excellency the Lieut-Governor.)

There is probably no part of the world in which such extensive and valuable fisheries are to be found as within the Gulf of St. Lawrence. Nature has bountifully provided within its waters the utmost abundance of those fishes which are of the greatest importance to man, as affording not only nutritious and wholesome food, but also the means of profitable employment.

These fisheries may be prosecuted as well in the open waters of the Gulf as within every bay, harbour, creek, cove, and inlet in connection with it. Whether on the bleak and sterile coast of Labrador, or on the western coasts of Newfoundland and Cape Breton, or along the eastern shores of Nova Scotia and New Brunswick, or within the Bay of Chaleur, or around Prince Edward Island, Anticosti, or the Magdalen Islands, the fishermen may pursue his labours with nearly equal chances of success, and the full prospect of securing an ample reward for his toil.

With such valuable and unlimited fisheries in close proximity to these colonies, and as it may be said at the very doors of the inhabitants, it is no less strange than true, that they are prosecuted to the greatest extent, and with most profit, by citizens of France and the United States.

The French exercise an almost exclusive right of fishing upon the western coast of Newfoundland, the fertility and great mineral wealth of which have only recently become known, and are not yet fully appreciated.

From seven hundred to eight hundred sail of American fishing vessels enter the Gulf of St. Lawrence annually; and scattered over the whole of its wide extent, with little heed of the limits to which they are restricted by treaty, pursue their business unmolested, and but rarely leave their stations without full and valuable cargoes.

The Jersey merchants also prosecute these fisheries with great zeal and assiduity, and, as it is believed, with much profit. They have a permanent establishment and fishing station in Gaspé, Labrador, and Newfoundland, and two or more establishments in New Brunswick; but they by no means confine themselves to any particular locality. They employ upwards of one hundred vessels almost exclusively in carrying the rich products of the deep to various foreign markets, besides the smaller craft required upon the coast. Two of the leading Jersey firms, Messieurs Robin & Co., and Nicolle Brothers, are supposed respectively to afford employment, directly or indirectly, to nearly one thousand persons.

The inhabitants of those shores of Cape Breton and Nova Scotia which

are within the Gulf, pursue the fisheries in their immediate neighbourhood to a moderate extent; and a few of their vessels visit the Magdalen Islands and the Labrador coast during the season. The people of Prince Edward Island, who are favourably placed for securing a goodly portion of the riches of the sea make still more limited efforts; but their efforts can scarcely be described as more limited or more feeble than those of the people of New Brunswick who dwell upon its shores from Bay Verte to the western extremity of the Bay Chaleur—those shores commanding as great an extent and variety of fishing ground, and as abundant supplies of valuable fish of every description, as can be found in any other part of the unrivalled Gulf of St. Lawrence, while they possess equal and perhaps superior facilities for prosecuting its fisheries both extensively and profitably.

The most valuable fisheries of the Gulf are those for herring, cod, and mackarel. But before entering upon the question of their encouragement and extension, by increased facilities of communication, it will be proper to give some description of each. With this view they will be taken up in the order of the fishing season; after which, the secondary fisheries of the Gulf will be briefly noticed.

[The report then goes into a detail of the herring fishery, and furnishes much valuable information with respect to it and to the mode of curing the fish. The number of barrels of herrings exported from the several ports in the counties of Restigouche, Gloucester, Northumberland, and Kent, during the last eight years, is stated to be 9,939—the export of 1848, being only 353 barrels. “The herring fisheries of the Gulf,” it is added, “would be more benefited than any other by the construction of railways, and the increased facilities of communication which they would afford. No other description of fish would probably furnish so large an amount of railway traffic, as, if once properly established, this fishery, which can now be scarcely said to exist, might be prosecuted to an almost unlimited extent.”]

The cod fishery is next noticed, and then the mackarel, and salmon, the whale, and the seal fisheries. Under these several heads a vast amount of valuable information is furnished, which want of space alone prevents us from placing before our readers in detail.

Under the head of shell-fish are enumerated lobsters, oysters, clams, mussels, wilks, razor-fish, crabs, and shrimps, all of which are found in the Gulf in great abundance and of excellent quality. Indeed so plentiful are lobsters to be found upon the coast, that at Shippegan and Caraquet, carts are sometimes driven down to the beaches at low water and filled with them, and the fields are strewn with lobster shells, each potato hill being furnished with two and perhaps three lobsters.

The river fisheries are last noticed. The principal, in addition to salmon, are gaspereaux, shad, basse, and trout. A variety of small fish are also found in abundance.

The report concludes as follows:—

That the varied, extensive, and most abundant fisheries of the Gulf of St. Lawrence would be greatly influenced by the construction of a railway along the eastern coast of New Brunswick there cannot be a reasonable doubt; but in all probability the proposed line of railway from Shediac to the harbour of Saint John would affect those fisheries in an equal, if not a greater degree.

The hardy and enterprising fishermen of the Bay of Fundy dread the long and dangerous voyage around the whole peninsula of Nova Scotia to the fishing-grounds of the Gulf, a voyage which frequently lasts three weeks, and

is deemed by underwriters equally hazardous with a voyage to Europe. But it is not alone the danger of the voyage, which deters them from the prosecution of the fisheries; it is the great loss of time they occasion, and the expense they create, as these render the adventure too often far from profitable.

A railway from Shediac to the port of St. John, which is open at all seasons of the year, would enable the various products of the fisheries to reach a port of shipment in four hours, and the necessity for the long voyage around Nova Scotia would be obviated. The fishing vessels could winter at any of the ports on the Gulf shore which they found most convenient; their stores and outfits could be sent up by railway, and they would, in such case, enjoy the advantage of being on the fishing-grounds at the earliest moment in spring, and the fisherman could protract his labours until the winter again had fairly set in.

The fresh salmon packed in ice which were sent last season from St. John to Boston by the steamers, owing to the facilities of transport in the United States, in two days after they left St. John, appeared at table, in prime condition, at Albany, Buffalo, Niagara Falls, New York, and Philadelphia. If the salmon of the northern rivers could be transported by railway to St. John they would find a ready market in the numerous towns and villages of the United States, and the salmon fishery alone would prove a perfect mine of wealth to the northern part of the province.

The immense products which might be obtained by a vigorous prosecution of the fisheries for herring, cod, and mackarel would not only furnish a fruitful source of a profit to a railway, but they would afford such an amount of remunerative employment to all the productive classes as almost to defy calculation. They would enable the province to open up and prosecute a successful trade with several foreign countries, with which at present the merchants of New Brunswick have no connexion whatever. The farmer also would be greatly benefited by the extension of the fisheries in connection with the railway, because he would not only find a more ready market for his surplus produce, but he would be furnished with wholesome and nutritious food, at all seasons of the year, on the most reasonable terms.

Aided by railways the fisheries of the Gulf of St. Lawrence, now of so little importance and such limited value, would take rank as one of the highest privileges of New Brunswick—its unfailing source of wealth for ever hereafter. And while the efforts of the people were successfully directed towards securing those bounties of Providence, lavished with such unsparing hand, they would rejoice in the goodness of an all-wise Creator, and offer up humble but earnest thanks to Almighty God for his exceeding goodness and mercy towards his erring and sinful creatures.

ON THE COMBINED VAPOUR ENGINE OF M. DE TREMBLY.—*By Com.
L. G. Heath, R.N.*

34, *Montague Place, April 17th, 1849.*

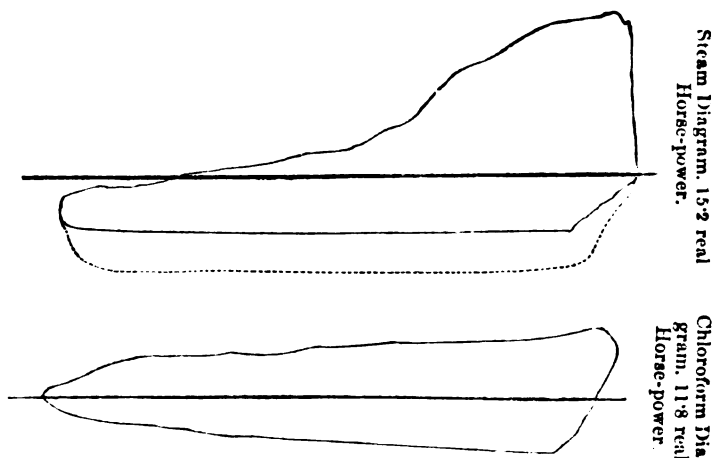
SIR.—A method of increasing the power without proportionally increasing the expenditure of fuel is the greatest problem to be solved by the steam navigation engineers of the present day.

Mons. de Trembly professes to have made a great step in this direction by the invention of the "combined vapour engine;" and the committee appointed by the French Government to report on its performance fully bear him out in his professions.

The engine is thus described, "The apparatus consists of two engines of ten horse-power each, placed side by side, and coupled by an axle after the manner of marine engines: steam is furnished for one of the engines from a ten horse-power boiler; which, after exerting its force in the cylinder, passes into a condenser, in which a large number of thin copper tubes are ranged vertically. These tubes are charged with perchloride of formyle in a liquid state, which robs the steam of its caloric, and condensing it becomes itself vaporised. The perchloride vapor passes into a second cylinder of the same dimensions as the former, and, after having acted upon the piston escapes into a condenser similar to the preceding one, flowing into the copper tubes around which a pump continually supplies cold water. The perchloride is then returned in a liquid state by means of a pump to the condenser vaporiser, where it is again vaporised. This operation is kept up, and thus the perchloride produces a double action; being employed at one time in a state of liquid as a condenser, and at another in a state of vapour as a motive power."

The commissioners made eight experiments, from which they drew up the accompanying table; each experiment had its corresponding pair of diagrams, but as they are all much alike in general form, I think it hardly worth while to take up your space by copying more than one. The engine worked one hour, and required about 4,200 gallons of water at a temperature of 71° Fahrenheit for condensing the perchloride.

No. Experiment.	No. of strokes per minute.		Pressure in the Vaporiser of the Perchloride.	Vacuum in the Condenser of the Steam.	Vacuum in the Condenser of the Perchloride.	Weight at the Break.	Effective force produced at the Break.	Calculation of the force by the Diagrams.		Total.	Ratio.
	No.	lbs.						Steam.	Perchol.		
1	2	3	4	5	6	7	8	9	10	11	12
	No.	lbs.	lbs.	Inches of Mercury	Mercury	lbs.	Horses.	Horses.	Horses.	Horses.	
1	32	22.5	16.5	18.0	17.3	418	25.47	16.93	12.72	29.65	0.75
2	32	24.0	16.5	15.7	16.5	440	26.81	16.86	14.28	31.14	0.85
3	36	22.5	15.0	14.9	16.5	418	27.06	...	...	...	...
4	36	21.0	13.5	15.7	16.5	418	27.06	...	...	...	...
5	30	15.0	10.5	18.0	17.3	330	18.85	9.95	10.63	20.58	1.07
6	30	9.0	6.0	19.6	18.8	195	11.31	7.02	7.64	14.55	1.05
7	29	6.0	6.0	23.5	18.8	195	10.93	5.98	6.30	12.28	1.05
8	28	3.0	3.0	23.5	19.6	195	10.55	5.68	7.28	12.96	1.28



Scale 24lbs. to an inch; revolutions 32; diameter of cylinder, 15.72 inches; stroke 2.95.

On working out the diagrams I find that the numbers in the 9th, 10th and 11th columns should all be smaller than those in the table: it may be that the French and English definitions of horse-power are different. In the accompanying diagram I have taken my own figures, but I have left the French table unaltered.

I will now point out what appear to me the relative advantages and disadvantages (deducible from the above diagrams) of the new invention as compared with the common condensing engine.

The advantage gained is represented by the area of the perchloride diagram, or by the 10th column in the table.

The disadvantages (which are not mentioned at all by the French commissioners) are *First*, Loss of power by imperfect condensation of steam. *Secondly*, Waste of power in pumping out condensing water. *Thirdly*, Increased cost, weight, and space. I will consider these three heads separately.

First.—If the steam were condensed in the usual manner, the vacuum line of the diagram would be about where I have placed the dotted line, viz. at a pressure of 3lb per square inch. This amended diagram will give a horse-power of 20, shewing a loss under this head of 4.8 horses.

Secondly.—Suppose the condensing water has to be pumped up 20feet; we have $\frac{42000 \times 20}{33000 \times 60} = .4$ for the horse-power required to do it.

Thirdly.—The two engines used in the experiments were exactly alike; the first cost therefore of the new engine will be more than double that of the common one, because of the expense of the numerous copper tubes in the vaporiser. Neither the expense nor the expenditure of the perchloride are mentioned by the commissioners.

Summary.—With the proposed plan we have double the engine-room space, double the weight, and rather more than double the cost of the old engine, (the boiler and expenditure of fuel remaining unaltered.)

We gain by perchloride 11·8 horse-power.

We lose by bad condensation 4·8 }
 " extra pumping... 4 } 5·2

Total gain 6·6 horse-power on an engine

whose real horse-power is 20.

Hoping the above may prove interesting to some of your readers,

I have, &c.,

To the Editor N.M.

L. G. HEATH, Com. R.N.

(Continued from page 263.)

THE SEA'S STORM OF FEB., 1847.—From Liverpool to New York.

H.	K.	F.	Courses.	Winds.	Bar.	Remarks, &c., Sunday 21st.
1	1	4	} up N.W. b.N. } off N.b.W.	W. b S.	29·42	A.M. Hard gales, but moderating a little, and rather less sea on; ship under close reefed fore and main topsail.
2	1	4		and		
3	1	4		W.S.W.	29·47	At 3 1/2. set mizen topsail, and single reefed fore course; 6h. let the close reef out of the fore and main topsails, set reefed main course and reefed spanker.
4	1	4	N.W.			
5	2			S.W.	29·47	8h. light winds and thick hazy weather, with rain; heavy sea on from the westward; let the second reefs out of the topsails, reef out of courses and spanker; set jib and top-gallant sails.
6	2					
7	2			to	29·47	10h. 30m. furled jib, close reefed main topsail; 11h. 30m. in fore and mizen top-gallant sails; noon, strong breeze and thick weather with rain, and heavy westerly sea on. Lat. acct. 52° 18' N., long. 30° 33' W.
8	2					
9	2		W.N.W.	S.E.	29·30	P.M. Strong gale and thick weather with rain, close reefed the fore and main topsails, furled the mainsails, in first reef of the foresail and furled it; 2h. 33m. blowing a hard gale from S.E.
10	2		W.b.N.	E.S.E.		
11	5				29·17	
12	6				28·93	
1	8		W.		28·75	
2	8				S.E.	28·60
3	8	4		S.S.E.	28·55	
4	8	4		S.b.E.	28·47	
5	6				28·35	
6	6				28·18	
7	4	4	W.N.W.		28·18	
8	4	4	N.	W.	28·20	
9	3	4			28·50	
10	3	4			28·71	
11	2		N.b.W.		28·75	
12	2					

furled the main topsail; 4h. hard gale and thick weather with continual heavy rain, the westerly sea nearly all knocked down, and the southerly sea making fast; 6h. more moderate, heavy sea from S.E. and raining very heavy; 7h. 30m. I kept off W.N.W., the wind being now quite moderate and the sea very dangerous, she went along beautifully, but though she shipped no sea she would roll her weather rail nearly under at times.

At 7h. 50m. it had cleared off and ceased raining; and I observed it began to lift up quite bright to the westward, clewed the fore topsail up at once, but before the men got aloft it had burst out not a gale, but a young hurricane, and they could not furl the sail. It was well we had leech lines round the sail else we should have lost it all altogether. The main yards were not braced up sharper than about eight points, but I durst not start any thing now; I expected the yards would go every minute though they were well secured with preventer braces. The sea appeared to be knocked down greatly, and all in a sheet of foam. I endeavoured to look to windward, but I could not see; the howling of

the wind was terrible; at 9h. the barometer had risen a little; at 11h. the fury of the storm was spent, and we got the fore topsail made fast. Midnight, violent storm and high sea.

H.	K.	F.	Courses.	Winds.	Bar.	Remarks, &c. Monday 22nd.
1	2		up N.W. off N.b.W.	S.W.b.W.	28-80	A.M. Violent gale and sea running very heavy, but the ship rides nobly, I am surprised at the wind hauling to the
2	2					
3	2					
4	2		up NWbW off N.N.W.	W.S.W.	29-00	S.W., again. I expected it would have gone to W.N.W., or N.W., and I am glad now I had not time to wear ship. At 4h. it had moderated greatly, and
5	1	4				
6	1	4				
7	1	4	up WNW off NWbW	S.W.b.S.	29-10	there was much less sea. At 8h. quite moderate, but the weather looks very unsettled, and the barometer keeps low, set close reefed fore
8	1	4				
9	1	4				
10	1	4	N.W.b.W.	S.W.	29-14	and mizen topsail, single reefed fore sail, and reefed spanker, inspected the main yards and found them all right, tried the pumps, but find the ship has not made
11	1	4				
12	1	4				
1	1	4	N.W.b.N.	W.	29-10	a spell of water the twenty-four hours. Noon, moderate breeze and cloudy weather, and sickly haze over the sun. Latitude observed 52° 23' N. Long.
2	1	4				
3	2					
4	2		N.b.W.	to	29-05	chron. 32° 08' W., lat. acct. 52° 26' N., long. acct. 31° 43' W.
5	2					
6	2					
7	2	4	N.½W.	W.N.W.	29-03	P.M. Light winds and cloudy weather, the sun covered with a thick dirty
8	2	4				
9	3					
10	2		N.N.E.		28-95	haze; 1h. let the close reef out fore and aft; set reefed main sail and jib; 3h. the clouds began to gather very heavy in the westward, and strong flaws would strike us frequently; in jib and main sail, and close reefed the topsails.
11	2					
12	2					

At 6h. moderate breeze and clear weather to the westward, but thick heavy clouds in the S.E., quarter, much less sea on. Through the first watch moderate winds and clear weather for the most part, at times it looked very threatening, the Aurora Borealis shining beautifully.

THE MARMION'S STORM OF DEC. 1848.—From Liverpool to New York.

H.	K.	F.	Courses.	Winds.	Bar.	Remarks &c., Saturday, 16th.
1	5		S.	W.b.N. to S.W.b.W.	29-38	A.M. from 1h. to 4h. strong gales and squally, the wind veering three or four points very often in the squalls, with
2	6					
3	6		S.½E		29-36	hail and snow. At 5h. blowing strong and very angry aspect to the westward.
4	6					
5	5		S.b.E.½E. S.S.E.	Baffling	29-32	Close reefed the topsails, reefed the courses, and furled the mainsail, and
6	5					
7	4		N.W. N.b.W.	W. and W.b.S.	29-32	at 6h. 30m. wore ship to the N.W., and set the fore course and main-trysail and main top-staysail, but we had not
8	5					
9	4		N.b.W.½W.		29-30	been round long before the wind headed us off to N.b.W. At 8h. strong gales, and the wind very unsteady. Through
10	4					
11	4					
12	4					

the forenoon watch strong winds and squally unsettled weather with much hail and snow, but it does not blow near as hard as it did before daylight. Lat. 54° 40' N., lon. 20° 00' W.

1	3	N.b.E.			P.M. From noon to 4h. it was quite moderate and very baffling; sometimes it would head the ship off to N.E., twice
2	3				I prepared to wear ship and she came up to north again. Ship under close reefed topsails, and reefed courses and spanker. At 4h. let the reef out of the courses and set the jib. I do not like to be under this short sail for there is not much wind now, but the barometer has been ranging between 29.40 to 28.53 the last four days, and I feel confident we shall have it blow heavy yet. Last February it was just the same for five days, and blew violently at last though we had not much wind to speak of all the time previous, only for a few hours. At 8h. moderate wind and fine weather, the stars all shining bright and beautiful. Let the close reef out of the main and mizen topsail, but kept the close reef in the fore-topsail, for I felt well aware we should have a storm soon. At 8h. 30m. the wind began to haul to the S.W., the weather too became damp and hazy, and the barometer a little falling. Midnight—Blowing a common gale and increasing rapidly, raining a little, heavy swell from the S.W., ship pitching hard.
3	3	N.N.E.½E.		29.33	
4	3				
5	4	N.N.E.			
6	5				
7	5	N.½W.	W.b.N.	29.35	
8	5		to	29.35	
9	5	N.W.	S.W.b.W.		
10	5		and	29.29	
11	6	W.N.W.	S.W.b.S.	29.22	
12	8		S.	29.11	

H.	K.	P.	Courses	Wind.	Bar.	Time.	Remarks, &c., Sunday 17th.
1	8		N.W.b.W.	S.S.E.	29.04	1 0	A.M. Blowing heavy. Inspanker and main topmast-staysail,
2	9		N.N.W.		28.89	2 0	and hauled the mainsail up, kept
3	9		N.W.b.N.	S.	28.69	3 0	her off to get the jib in, and kept
4	9		N.W.		28.50	4 0	her running off until we got the
5	8				28.40	4 45	courses furled, and close reefed
6	8				28.20	6 15	the main-topsail and furled the
7	8				28.11	6 45	mizen-topsail.
8	7				28.03	7 45	
9	5				27.90	9 0	At 2h. it was blowing very
10	5				27.75	10 0	hard, hauled to the south, and
11	4		N.b.W.	S.b.W.	27.70	11 45	the sea running heavy from the
12	1		S., off SbE.	W.b.S.	27.70	12 0	southward now. Ship under close reefed fore and main-topsail and fore-topmast staysail. Rove the back spilling lines on the fore and main-topsail. From 4 to 8 it blew very heavy, and then it moderated very much, I took advantage of this, took in the fore-topsail and furled it snug. From 8½ to 10½ it blew hard, the sea running tremendous heavy and several seas broke aboard but did no damage. At 10h. 30. it began to break away and the ship to cant to the S.W., called all hands and wore ship immediately, and the wind hauled so briskly that by the time we had the yards trimmed she headed up south. Set the main-trysail, but did not haul the head more than three-quarters out. Ship jerking violently now she is right head up to this tremendous sea, broke one of the hooks of the relieving-tackle blocks, and took full charge of the wheel herself for a minute, till we secured her. At noon it was quite moderate, and a beautiful clear blue sky, and the sun shining beautifully, but this is the treacherous centre. Lat. observed 55° 32' N., long. deduced from chronometer 22° 35' W.

1	1	4 up SbW $\frac{1}{2}$ W	W.	27-70	1	0 P.M. From meridian to about
2	1	4 to		27-75	2	0 0h. 40m. it remained quite mo-
3	1	4 to		27-95	2	50 derate and clear, but not cloud-
4	1	4 off S. $\frac{1}{2}$ W.		28-70	4	0 less, the sun shining through the
5	1	4 up S.S.W.		28-20	5	0 clouds as they passed along. At
6	1	4 to		28-38	6	0 0h. 40m. there rose up a thick im-
7	1	4 to				pervious cloud or haze, and it
8	1	4 off S.		28-50	8	0 became quite dark, comparative-
9	1	4 up S.S.W.		28-55	9	0 ly speaking, though there was no
10	1	4 off S.		28-60	10	0 black cloud, and in a very few
11	1	4 off S.		28-64	11	0 minutes we were involved in a
12	1	4 off S.		28-68	12	0, terrific storm. I wished now that

the main top-sail was in, but to start it now I dare not. The fore-topmast-staysail sheet parted, and split the sail very much; the yards were well secured with a preventer brace on the topsail yard, and a good jumper under the weather side of the main yard but they buckled and twisted like a tree in the forest. About 2h. 30m. one of the blocks on the bumpkin drew out of the iron strap on the weather side and came whizzing past my head within a hand's breadth they say, and I thought now my yards were sold. Not so however, the lee main top-sail-sheet parted and then the weather one; the main topsail yard was bound to the topmast-head if it could have got there, but I had taken my usual precaution to have the reef tackles made fast. The lee clewlines got unhooked from the sail, the lee bunt line and leech line parted, but all the weather gear held on, and we got the sail partially secured, and kept the yard well braced in, so that we saved the sail—very little hurt—a new sail in Liverpool. Hauled the head of the main topsail down as low as we could, for the gaff cut a high caper. I found since the main topsail is off she fell off considerably, so that she lay very much exposed to the sea, which was running exceeding heavy, and I cut off a piece of the topmast-studding sail, and got it in the weather mizen rigging, and then she lay very well. But the ship lay down sheer plank in all the time, and sometimes put her lee rail under, and the masts shook about at such a rate I expected some of them would go. About 8h. I thought it eased a little, and at 10h. we got a fore topmast staysail hoisted up with the throat halliards of the spanker. Midnight, heavy gales and tremendous sea.

h.	k.	f.	Courses.	Wind.	Bar.	Remarks, Monday December 18.
1	1		up S.S.W.	W.	28-72	A.M. From midnight to 4h. it blew
2	1				28-80	heavy, and the sea ran very heavy, but
3	1					it was moderating perceptibly all the
4	1		off S.		28-84	time: seven men laid up. At 7h. set the
5	1					main topmast staysail and whole span-
6	1		up S.S.W.		28-90	ker, and unbent the fore topmast stay-
7	1					sail. From 8h. to 12h. moderate wind
8	1		off S.		28-95	and squalls at times; at intervals it was
9	1		up S.S.W			nearly calm with some smart showers
10	1		off S. $\frac{1}{2}$ E.		29-00	of hail and rain and black heavy clouds,
11	1		up S.W.			the sea keeps up very heavy, the main
11	1		off S.S.W.	W.N.W.		rigging and backstays have stretched
11	1		up W.S.W.	to		off very much, and the ship being la-
12	1		off SW.bW.	N.W.bW.	29-00	boursome, the masts slap about horribly

At 10h. the wind veered to the N.W., but there was not much of it. Unbent the main topsail, only one cloth is injured where the lee sheet struck it,

when it parted and split it from the close reef down to the foot, about the breadth of ten inches. At noon lat. acct $56^{\circ} 03' N.$, long. acct. $21^{\circ} 27' West$.

N.B.—I have allowed her four points leeway, and 36 miles for the heave of the sea, N. $53^{\circ} E.$ the variation is three points W.

1	1	up W.S.W.			P.M. Fresh breezes and cloudy wea-
2	1			29-10	ther with hail showers, and the sea run-
3	1				ning heavy from N.W. now, but we
4	1	off S.W.		29-10	have not had any wind from that point,
5	1 4	W.S.W.		29-13	bending another main topsail, 5h. set
6	2				the close reefed main topsail; 5h. 30m.
7	2	SW bW $\frac{1}{2}$ W.	N.W. and	29-19	set the fore topsail close reefed; 6h.
8	2		N.W.b.N.	29-24	sharp hail squalls; cormorants at each
9	3			29-29	top-gallant-mast-head and yard-arm;
10	3 4			29-35	7h. set the reefed foresail; 8h. fresh
11	3 4	S.W.	N.W.b.W.		breezes and fine clear night, the stars
12	4	S.W. $\frac{1}{2}$ S.		29-35	shining beautifully; 9h. set the reefed

mainsail, and close reefed mizen topsail. midnight, strong breeze and the sea as heavy as it was at noon.

H.	K.	F.	Courses.	Wind.	Bar.	Remarks, Tuesday 19th.
1	4		S.W.	N.W.b.W.	29-35	A.M. Through the middle watch fresh
2	4				29-37	breeze and very high seas on, a good
3	3 4		S.S.W.	W.b.N.		deal of haze about the moon thick,
4	3 4					cloudy weather for the most part; 5h.
5	4		S.	to		30m. wore ship to the W.N.W.
6	4				29-34	At 1h. the wind began to increase
7	5		W.b.N. $\frac{1}{2}$ N.	S.W.b.S.		fast; 9h. in mainsail, mizen topsail,
8	5					and main topmast-staysail; 10h. in
9	5		W.b.N.	S.S.W.	29-28	foresail and fore topsail. Through the
10	4		W.	S.b.W.	29-24	latter part of the forenoon employed
11	2		up W.		29-15	swiftering the main rigging and back
12	2		off W.N.W.	S.S.W.	29-09	stays in until we got an opportunity to
1	1		up W.N.W.		29-10	set them up. At noon, hard gale and
2	1		off N.W.	S.W.	29-12	heavy rain, and high sea on.
3	1		up S.S.E.			Lat. acct. $55^{\circ} 19' N.$, long. $21^{\circ} 27' W.$
4	1		off S.E.			P.M. 1h. 30m. wore ship to the SSE.
5	1 4					4h. strong wind and quite bright and
6	1 4				29-12	clear in the N.W., except at the horizon,
7	2		up S.b.E			and there was a heavy bank of
8	2		off S.E.b.S.			clouds rising; 6h. it was blowing a
9	2		up S.b.W.		29-12	strong gale and a high sea running.
10	2		off S.b.E.		29-18	Midnight ends the same.
11	1 4				29-24	
12	1 4				29-29	

On the 23rd I had a very severe gale from south, the barometer fell from 29-50 to 28-64, and then I wore round on the starboard tack and the wind must have followed me round almost as fast as I paid off. I had been heading W.b.S. and laid right head up to a tremendous sea when I got round heading south. As a general rule I would always when on this side of the storm ware round on the starboard tack the first moment it lulls when it has been blowing hard from south or S.W. Too sharp a lookout cannot be kept in the winter time especially in the North Atlantic for the shift.

NAUTICAL NOTICES.

PASSAGES:—MADEIRA TO RIO JANEIRO.—Ships should pass to the westward of the Cape Verd Islands, then steer a course to cross the equator in about 26° W.; keeping so far to the eastward to allow for a westerly set which they will probably experience within a few degrees of the line, and which gets stronger as it approaches the coast of Brazil.

From Rio Janeiro to Valparaiso.

On leaving Rio, ships should keep well in shore, as they are likely to find, off the mouth of the River Plate, and to the southward of it, strong westerly winds; for which reason also it is advisable to pass to the westward of the Falkland Islands.

When approaching Cape Horn, allowance should be made for a northerly set towards the straits of Le Maire.

After passing the longitude of Cape Horn, ships should not attempt to go to the northward till they have gone as far to the westward as 80° W.; they will then probably carry a fair wind all the way to Valparaiso; but if they begin to go to the northward before they get well to the westward, they will very likely find themselves on a lee shore, and make a long passage.

On approaching Valparaiso, the land should be made about 20 miles to the southward, as there is generally a strong northerly current along the coast.

From Valparaiso to Callao.

Allowance should be made for a northerly current of 20 miles a day throughout this passage.

From Payta to Valparaiso.

In making this passage, ships should stand off on the port tack with the fore-top mast studding sail set, and go as far south as 30° S., before they begin to return to the eastward: as they approach the coast with a southerly wind, they may expect to find a northerly current of 20 miles a day.

On the N.W., coast of Chile, the Barometer may always be depended on, it rises for a southerly wind, generally the day before; the faster it rises, the stronger will be the wind, it always falls for a northerly wind and rain, falling slowly and steadily sometimes for two days before change comes.

 THE AUCKLAND ROCK.

Every one who has had to search for a sunken rock, knows well the difficulty of finding it. We do not allude to those apocryphal dangers which exist only in the inventive imagination of certain expert seamen, such as that which was reported to the northward of the Matanilla reef lately, or even that reported to the Lords Commissioners of the Admiralty, on the coast of Chili, or that near Bonavista, and a great many others recorded in our pages too

numerous to mention. But what we do mean as most difficult to find is a *bona fide* rock, standing firmly and insidiously on a comparatively diminutive base, defying the attempts of the scientific seamen to discover and determine its real position, but ever and anon awakening the unwary navigator to a sense of his danger, from its reality, by exposing itself in the foam of the sea, or suddenly arresting the progress of his vessel, and consigning her with all her crew to its own unfathomable abyss, never to be heard of more. Of this class is the Auckland Rock, some account of which appeared in our last number, the existence of which had long been doubted, and yet not disproved, and which has happily obtained fresh notoriety by having been struck by the *Auckland*, a fine screw steam-vessel of iron, belonging to the General Screw Steam Shipping Company. We say "happily" because this is actually proved to have taken place without any other loss than an injury to the vessel at the cost of about one hundred pounds. The *Auckland* on her arrival at Malta, was repaired and an account of the transaction reported to the Commander-in-Chief, and Capt. Graves in command of the *Volage*, directed to search for it. The *Auckland* on her arrival at the port of London has been inspected by Capt. Milne, one of the Lords of the Admiralty, as well as the Surveyor of the Navy, who have unhesitatingly pronounced the damage done to the *Auckland* to have been occasioned by a rock. The managing director of the Company, to which the *Auckland* belongs, has also reported the circumstance to Sir Francis Beaufort, the Hydrographer to the Admiralty, in the following letter.

*General Screw Steam Shipping Company,
2, Royal Exchange Buildings, London, 5th May, 1849.*

DEAR SIR.—I waited on you on the 12th April, stating the Screw Steamer "*Earl of Auckland*," had struck on a sunken rock, 85 miles, bearing by compass E.b.S. $\frac{1}{2}$ S., from the island of Malta, and had by the concussion torn an iron plate from the stem, which caused the ship to fill with water to the first iron water tight bulkhead, in which position she reached Malta, where the ship was docked and temporarily repaired.

The *Earl of Auckland* has since arrived in the Thames, and has been surveyed in Messrs. Wigram's dock at Blackwall. The attention of the Lords of the Admiralty has been attracted by the event, and Sir Baldwin Walker, Surveyor to the navy, and Capt. Milne, one of the Lords of the Admiralty, have closely inspected the damage. These gentlemen find that the concussion against the rock was so severe as to throw the lower part of the stem out of the perpendicular line, to tear an iron plate from the stem and to break it off about four inches inside of the same, thus leaving an open space for the admission of water.

I am authorized to say it is the opinion of the above official gentlemen, from the Board of Admiralty, that the ship must have struck a heavy glancing blow on a rock. This is also the testimony of the Merchants' Surveyors, who have examined the damage on account of the underwriters.

Immediately the ship struck the rock, the engines were stopped and the lead was hove with 180 fathoms line—no bottom. The course steered was W.b.N. $\frac{1}{2}$ N., the distance run by Massey's log was 85 miles to the east end of Malta.

I trust, Sir, that, this data will enable this dangerous and hitherto doubtful shoal to be accurately surveyed and laid down on the Admiralty charts,

and if possible to have placed a monster buoy upon it for the future guidance of mariners.

I remain, Sir, &c.,

JAMES LAMING, *Managing Director.*

Sir. F. Beaufort, Hydrographer, Admiralty.

In our last number the position of the Auckland Rock was given as "about 90 miles east of Malta." From the foregoing letter confirmed by communication with Mr. Laming himself, it appears to be 85 miles E.B.S. $\frac{1}{2}$ S., by compass from the east end of Malta, and therefore *true* east at that distance. Until therefore we receive Capt. Graves's account of the results of his examination, or until it is found by sweeping with two or three ships, we must remain content with this as the best and most authentic account of this danger.—The following appeared in a Malta paper:—

The *Volage* surveying vessel will put to sea on Tuesday next, for the purpose of renewing the surveys in the waters of Cyprus.

The Earl of Auckland steam vessel has left Malta for London, having been taken into dock and repaired. There was no appearance of rock or stone in the damaged part of the vessel, nor any indication by which to infer that she had struck a rock. Several persons are said to have seen it, and in the time of Sir P. Malcolm especially its existence was insisted on, but not discovered.

The following information is published in the *Malta Mail*, of the 5th inst., taken from the "Notes from the Official Correspondence between the late Greek Consul and Sir P. Malcolm":—

"1. We have heard of the 'danger', being seen as long ago as 1802 by a Ragusan, Captain Bratic, who describes it as being in lat. $35^{\circ} 42'$ N., and long. $22^{\circ} 30'$ E., of the meridian of Cadiz, and distant 95 to 100 miles due east of Malta.

"2. In 1813, Captain Borg, of the brig *Vincatore*, discovered the *Secca di Malta* (by which the rock is also known) on his passage from Alexandria to Malta, and at the distance of 95 miles due east of the island. It was calm, and he saw a ripple like that produced by a current, and sent his boat to examine it. On reaching the spot his men found $1\frac{1}{2}$ feet of water. They landed, and he saw them wade over it. The 'danger' is reported from north to south, about the length of a galley, and from east to west a little less.

"3. In 1826, March 19th, Emanuel Ervance, of the Greek brig *Aristocles*, left Malta for Spezia. On the following day at 11h. P.M., having run 9 knots an hour from the time of sailing, and smooth water, he observed a heavy lopping sea, and found his ship going down by the head, and thought she would have capsized—a sea broke on board, and filled her decks, and nearly swamped her. At this time the rudder was lifted, but on getting into smooth water fell into its place. On looking at his chart he ascertained the distance he had run was 95 miles from Malta. The rock, too, had been seen by Ervance's father, living at Spezia, and by him described to be in two pieces, one large and one small, with water between them for a boat to pass.

"It is as well to observe that many of those who are said to have seen the rock, on being closely pressed, have wavered, and only reported from what they had heard from others who had seen it.

"A man also named Carlo, pilot of her Majesty's ship *Malabar*, is also said to have seen it, and on the 2nd of January, 1839, the captain of the Austrian brig *Cyro* is said to have seen it 95 miles east of Malta.

"In 1838, Mr. Millar was sent to look for the rock in the *Meteor* steamer, but owing to the unfavourable state of the weather he did not fall in with it."

No. 7. Abstract of the passage made by H.M. steam ship *Terrible*, from Spithead to Oporto and Lisbon in 1847.

Date.	Distance		No. of days and hrs. steam.	Average		Sail set.	Course.	Wind. Direction.	Strength.	State of the sea.	Boilers.		Pressure—steam.	Draught.		Immersion of raddle wheels.	Coal Expended.			Expended.					
	By the Pa- tent Log.	By obser- vation.		h. m.	Knots.						Rev. pr m.	No. in use.		Step of cam.	Mean.		By stern.	Quantity.	Hourly.	Daily.	Dist. run with ton	Oil.	Tallow.		
June 6	71	...	8 0	8.9	9½	Fre try s & innr jb	W.b.S.	NE.	2	s	2	6th	6	18 9½	177	1½	14	61	13	1 9½	40	0 5	34		
6...7	214	...	24 20	8.8	9½	Sqre sls 12 hours.	W.b.S. SWbW.	E.	2	s	2	do	6	18 6½	...	6 10½	43	11	1 16	1 543	1 14	85			
7...8	...	227	24 9	9.4	9½	do.	SW½W.	ESE.	3.4	1. Ely swel	2	do	6	18 4½	...	6 8½	43	12	1 16	1 943	12 5	17		27 20 200	
8...9	86	...	9 0	9.5	10½	Sqre sls	SW½W. S½W.	ENE.	4.5	do.	2	do	6	18 3½	...	6 7½	18	2	1 16	0 043	4 5	28			
9...10	180	...	19 0	9.5	10	Fre & aft	SWbW. S.	N.	7.6	Nly swel	2	do	6	18 1	...	6 5	42	7	1 17	2 645	1 ½	5 06			
Totals	778		d. h. 3 12½														161	18						27 20 200	
Average		9.19	9½																1 16	1 3 43	10 ½	5 08		

†† 1. swel. little swel.—s. smooth.—Coal used:—Good.—In this passage 86 miles were made under sail only in 12½ hours.

NEW BOOKS.

AN ESSAY ON THE CREDIBILITY OF THE KRAKEN, *Sea Serpent, and other Monsters, with Illustrations*:—London, TEGG, and Co, (Second Notice.)

WE see all nature filled with life; and in describing what we see, we use certain terms of magnitude, but in the hands of the Infinite, there need be no scale of dimension, any more than there can be a scale of eternity, or of illimitable space. Within the boundary of the planet we inhabit, a series of propositions has of course become established, which can be applied to all its denizens. The medium term of this scale is familiar to us; but who shall disclose the beginning or the end of it? We know not the extreme of diminutiveness to which organic life has reached. We *do* know what hitherto has been the limit of our observation, even when aided by the microscope; but so far from these discoveries enabling us to declare that we have attained to the first of the series of beings, we rather find indications of the existence of still minuter forms, expatiating in a world beyond our exploration.*

What might be found within 7000 miles constituting the earth's diameter, we shall probably never know. As far as man has travelled on that line no indication of any living being has been met with. The objects of our inquiry are to be sought for beneath the waters.

Here we have "ample room and verge enough" for the expansion of animal life. Unexplored and unexplorable in its depths, as probably it must ever be, we know this to be the primeval element, in which the creative energies were first developed in animal organization,† we know that it brought forth abundantly, and we speak of it still as one of the types of prolificness. Are we then to rest satisfied with the belief that the tribes which inhabit the shallows of the ocean, or occupy its upper strata, are the sole tenants of the boundless deep? As well may the naturalist, after

* The elaborate examinations that have been made regarding infusory animalcules, have brought vast accessions to our knowledge of animated nature. Of these atomic germs of vitality, until lately, little had been discovered beyond the fact of their existence; and indeed many species, on account of their extreme minuteness, had not been observed at all. But the mind becomes overwhelmed and confounded, whilst we read (as Mr. Fritchard, in his *Natural History of Animalcules*, has enabled us to do) of the organization or vital properties of a living atom, so inconceivably minute, that 500 million of them in a mass would present little more than a sensible point to the unassisted eye. Until the introduction of vegetable colouring matter into the fluid which supplies them with food, these creatures were commonly supposed to be entirely devoid of internal organization, and to be nourished by the simple process of cuticular absorption. This erroneous notion is now set at rest, and an internal structure is discerned in some, equal to, if not surpassing, that of many of the larger invertebrated animals; and comprising a muscular, nervous, and in all probability vascular, system, all wonderfully contrived for the performance of their respective offices.—*Abridged for the Popular Encyclopædia*.—Article *Microscope*.

† "And God said, let the waters bring forth abundantly the moving [or creeping, in the margin] creature that hath life, and fowl that may fly above the earth in the open firmament of Heaven.

"And God created great whales, and every living creature that moveth, which the waters brought forth abundantly."—GENESIS i. 20, 21.

a transient search along the edge of an American forest, undertake to enumerate its inhabitants—or the botanist presume to publish the Flora of the great western prairie without penetrating beyond its border—as the inquirer into the wonders of the deep, satisfy himself with the discoveries that he is enabled to make on the outskirts of the oceanic world.

Covering nearly three-quarters of the globe's surface with a mean depth, as calculated by La Place, 1000 yards, the ocean has its mountains and valleys—the depth of some of the latter probably equals the height of the highest mountains of the land. It has been frequently sounded to 1000 and 1200 fathoms, and in a few instances, to the depth of two and two and a-half miles and more, without reaching the bottom. Can we come to the conclusion that the immense area of an element so suitable for the maintenance of animal life, is only a desert? Is such a conclusion in harmony with the recognised dispensations of the Great Creator, or even with facts, as far as facts can be brought to bear on the question? At whatever depths man has been enabled to gather knowledge, there he has found evidence of organic existences; wherever the sea can be sounded, fragments of shells come up with the armed lead. The spermaceti whale finds his pastures, as Beale supposes, hundreds of fathoms deep down, and he is carnivorous. Darwin, in his *Zoology of the Beagle's Voyages, 1832 and 1836*, not only expressed his astonishment at the abundance of living creatures, both fish and fowl, great and small, in the upper strata and on the surface of the Pacific Ocean, thousands of miles from land, but describes with wonder, the vast submarine forests off the coast of Terra del Fuego, swarming, at considerable depths, with animals of the crustacea, nereids, holutheria, &c. For the profusion of life, he likens them to the intertropical forests on the land. Then there is the Sargasso* Sea, or sea of weeds, occupying the very centre of the Atlantic, and showing by the gnawed and broken stems of its fuci, that the whole grows at the bottom of *that probably deepest part* of the ocean. Where is vegetable life, there also may be animal life; and indeed we have ample proof in the corallines, madrepores, and various tribes of the mollusca, that the lower forms of organization abound in the depths of the sea.

It may be objected, that the pressure of the water is so great, even at a thousand fathoms, as to preclude the probability of the habitual existence of locomotive animals at the bottom. This is not proved; Scoresby gives an instance of a stricken and frightened whale sounding (as it is termed) 1000 fathoms deep, and breaking the crown of its skull against the bottom. Surely when one of the mammalia, formed for living at or near the surface could so easily by its muscular power overcome the supposed pressure of the element, it is conceivable that Infinite Wisdom could so endow his creatures

* The part of the Atlantic Ocean bearing this name is that central portion distinguished by the weed called "Fucus natans." The name was given by the early Portuguese navigators, who call it Sargaçao or Sargasso, from the form of the seedpods or fruit of the plant which have been called tropical grapes. The fucus natans occupies a tract between 18° and 37° N. lat., and 33° and 43° W. long., more than 1200 miles long and 400 or 500 miles wide. This space is commonly studded over, like an inundated meadow, with the bunches which are in some places very abundant, and in others more dispersed. If we could imagine the surface of a wide extended moor, covered with water, the furze and heath bushes would appear something like the clusters of fucus scattered over the thickest part of the sea.

with a structure and functions as to enable them to sustain or evade the pressure of the superincumbent waters * Some writers have, indeed, professed to calculate the exact depth at which owing to the increasing density of the element, bodies cease to sink; yet experiment shows that the deep sea lead goes on descending as long as line is given, and it does not stop even at 4000 fathoms, nearly five miles.†

Another objection may be taken in respect of temperature. Our experience hitherto has shown that organic life cannot exist and be propagated, except within certain limits of temperature. What may be the exact point of heat incompatible with the existence of life we need not discuss. In respect of cold, the point at which water becomes ice, as far as we know, suspended the functions of all animal and vegetable life enclosed therein. Now, the data we possess of the temperature of the ocean, are far too scanty to enable us to form any very decided conclusion, especially in respect of the extreme depths, although soundings of 4000 fathoms have been in some rare instances obtained, we have not been able to find any experiments on the temperature beyond about half that depth (two miles). Up to this point the temperature has been found to decrease rapidly at first, more slowly afterwards, until, if the results of the experiments at the greatest depths are to be trusted, it has become stationary, or even shows some trace of *increasing* again. The absolute temperature at the surface, and throughout such depths as have been tried, varies somewhat with the latitude and the state of the atmosphere: but the general results point towards some common temperature at the greatest depths.

A RESIDENCE AT SIERRA LEONE; described from a Journal kept on the spot, and from Letters written to Friends at Home.—By a Lady.—Edited by the Hon. Mrs. Norton.—Murray, Albemarle Street.

Another volume of Mr. Murray's Home and Colonial Library appears with the above title. The subject affords ample matter of interest to readers at home or abroad, on land or on the wave. All the peculiarities of the tropical climate; the different kinds of local visitors and their ravages, inflicted periodically on the residents; the disheartening effects of the climate, form some of the principal materials of this Journal, which will prove a highly entertaining and instructive companion to those who have any curiosity in this celebrated grave of Europeans. We shall return for an extract from these very interesting pages in an early number.

TABLES FOR FACILITATING THE DETERMINATION OF THE LATITUDE AT SEA, by the Simultaneous Altitudes of Two Stars.—By C. F. A. Shadwell, Esq., F.R.A.S., Commander R.N., &c.—London: Bate, Poultry.

Commander Shadwell's object is to direct attention to this old established problem for determining the latitude, very properly designating it by the term

* Darwin, the naturalist, gives one or two most astonishing instances, under what unexpected conditions animal life is found. "In the mud of the Salinas (salt lakes) of South America, though thoroughly saturated with brine, and containing crystals of sulphate of soda and lime, hardened into a solid layer of salt in summer, numbers of some kind of worm or anellidous animals are found. A species of *Oncaer* described in vol. ii. page 205, of Linnæan Transactions, is found in the brine pits at Symington, and in the salt lakes of Siberia.—*Zoology of Beagle's Voyage*, page 77.

† Several instances will be fresh in the memory of the readers of the *Nautical*.

simultaneous," to distinguish it from the "double" altitude, a term which properly belongs to it. His treatment is neat and concise, and his deduction of the result by no means tedious. He has pointed out its advantages and added two tables for facilitating the computation.

PHYSICAL GEOGRAPHY.—By *Mary Somerville*.—Two Vols.—Murray.

Two handy little pocket volumes well stored with the main facts and features of Physical Geography, from the familiarly instructive pen of Mrs. Somerville, are a welcome contribution to the list of New Books.

KING DOBBS; *Sketches in Ultra-Marine*.—Darling, Brothers.

Full of adventure this little story continues its course in monthly numbers, of which the fifth is before us.

WRECK OF THE "CLAUDINE."

The following important letter from the Astronomer-Royal, containing a useful caution to mariners, appeared in the *Commercial Advertiser* of Wednesday:—

Royal Observatory, 4th March, 1849.

To the Editor: Dear Sir.—From what I have been able to gather respecting the position of the wreck of the *Claudine*, it appears that she struck in the small bay east of Struys Point, about 14 miles east of the Agulhas Point, and somewhere about the spot where the *Arneston* was wrecked many years ago. From this bay there would be as little chance of seeing the Agulhas Light, as there would be of seeing the Roman Rock light from Table Bay; owing to the intervening sand hills of Struys Point, and the land near Northumberland Point.

Struys Point is very dangerous, particularly to vessels from the eastward, and has been referred to in the sailing instructions connected with the establishment of the Agulhas Light.

Your's truly,

THOS. MACLEAR.

We have been favoured by Captain Harrington, of the steamer *Phoenix*, with the following extract from the log of his last trip, containing some highly valuable observations. Captain Harrington, on Monday last, when on his way from Mossel Bay to our port, kept in shore near Struys Bay, in order to observe the situation of the wreck. He failed in this object, no doubt from the scene of the disaster being some miles further to the eastward than he, in common with the public generally, had been led to suppose. He remarks as follows:—

"The Light-house was plainly seen from the deck when we were abreast of the reef off Struys Point, which is a good guide for the shipping. When you shut in the Light-house with Northumberland Point, you will be in danger; therefore, a vessel coming from the eastward should keep the light well open on the starboard bow. Vessels further to the eastward than Struys Point can see the light, if they are within seeing distance. No vessel should keep so close in shore in coming up along the coast, as the coast forms a crescent, and should it be night, the vessel would run on shore; therefore, I think the Light-house is placed in a good position."—*Cape Paper*.

GENERAL INSTRUCTIONS FOR THE MASTERS OF VESSELS.

Newcastle-on-Tyne, May 22nd, 1849

SIR.—I have been a subscriber to your valuable periodical for some years, and have often noticed your wish to promote the improvement of the British Master Mariner in his profession, by inserting any occurrences or observations that might tend to that most desirable end, and being myself largely interested in shipping, I am perfectly aware that its prosperity is dependent in a great measure on the conduct and ability of the masters. In order that I might add my mite to forward this object, I now send you herewith a set of rules which have been drawn up by some most eminent shipowners for the use of their own masters, but have as yet not been made public; and if you think with myself that the insertion of them in your widely read Magazine, will tend to forward the advancement of the British Shipmaster in the knowledge of his calling, *in the slightest degree*, I shall be gratified by seeing them in an early number.

I am, Sir, &c.,

NAUTICUS.

[“Nauticus” may be assured of our desire to improve the station of our merchant captain, for which reason we always give him the preference in inserting his nautical remarks in our journal, and are always ready to make known his grievances whenever he will forward them to us. Our pages bear ample proof of the excellency of some of these remarks, and our last few numbers shew that we speak in earnest. Let “Nauticus” or any one else follow up the subject he has begun, we promise him all attention.—ED.]

General Instructions, &c., Before Sailing.

- 1.—Provide a book of Accounts for the voyage, in which accounts against the crew, and advances made them during the voyage, are to be entered.
- 2.—Supply yourself in good time with the following books:—Log Book, Expenditure of Provisions Book, Precautions against Collision.
- 3.—Such of the provisions as are sold by weight (except those out of bond) to be weighed as they come on board the ship, and the weight sent to the office.
- 4.—All Tradesmen's bills to be examined, signed and delivered at the office before sailing, when it can be done without detaining the ship.

General Management.

- 5.—The whole ship to be at all times kept in the highest order in hull, rigging, and sails, and well victualled and equipped before leaving port.
- 6.—The forecastle to be kept clean and well ventilated, the decks paid or coated; the coal-hole to be cleaned out as often as possible; the ship kept well aired fore and aft; and the hull, above and below kept light.
- 7.—The sails to be kept well aired and dry, and great attention paid to rigging and sails to prevent chafing or damage at sea.
- 8.—A good look out to be always kept; chronometers and ship's reckoning carefully worked; and on approaching the land, the lead to be strictly attended to, as well as the compasses and barometer at all times. All possible precaution to be taken against collision with other ships.

Crew.

- 9.—The Merchant Seamen's Act to be carefully studied and attended to; lime-juice, sugar, and vinegar to be served out as it requires; and the Medicine chest to be kept well filled.
- 10.—Whenever goods subject to salt water damage are on board, note a Protest on your arrival at a port, and if found damaged, have a survey before the goods are removed from the hold. The dunnage is to be particularly attended to.

11.—The crew to have one afternoon in each week to wash and mend clothes, the weather permitting.

12.—The use of intoxicating liquors to be discouraged as much as possible, both in port and at sea.

13.—When men absent themselves from duty, or are sick, let their names and the circumstances be recorded in the Log-book, attested by the signatures of the master and mate; and when they desert send their names to the owners as early as possible.

Apprentices.

14.—Apprentices are especially under your care, and you are required to instruct them by precept and example, and to keep them from going into bad company. They must always live and sleep aft, and must never be sent forward to make room for stores or goods of any kind.

Accidents.

15.—In case of accident, see that the protests, surveys, and other papers are in proper order, and forward them to the owners by the earliest mail. Be cautious in your dealings with persons coming to your assistance when in difficulty, exorbitant claims for salvage being of frequent occurrence. The causes of every accident will be strictly inquired into.

16.—Lorimer's "Letters to a Master Mariner," will be found of great use in questions relating to averages and wrecks. The Merchant Seamen's Bill will enable you to act with regard to disabled seamen, or distressed British seamen in foreign ports.

17.—It is to be hoped you will seldom have occasion to seek an intermediate port, which can only be justified by circumstances of extreme necessity.

Foreign Ports.

18.—The master, officers, and crew must conform to the laws of any country they may be at.

19.—The mate must remain on board when you are absent from the ship; and every exertion must be used to prevent desertion.

20.—You will write to the owners by every mail, with full information as to your proceedings. Send duplicates of important letters.

21.—The owners expect all practicable economy to be used, both in the use of stores and expenditure of money; and no bills or accounts must be contracted abroad, except in cases of necessity.

22.—The disbursement account must be examined, signed, and sent to the office, the day before sailing, when it can be done without retarding the sailing of the vessel. No bills of lading must be signed until the goods are on board, nor for weight or contents unless you have personal knowledge that such weight or contents are correct.

23.—Log book, while in port, to contain the number of labourers on board, specifying the work they are employed on.

Arrival Home.

24.—The owners require the following accounts immediately on arrival home:—Vouchers for the voyage, Account Book, with accounts against crew, Account Current with the owners, and List of Stores on board.

Your owners expect that these Instructions will be strictly adhered to.

THE ARCTIC EXPEDITIONS.—H.M.S. *North Star*, under the command of Mr. J. Saunders, left the Nore on the 19th of May, in company with the *Stromboli*, Capt. Lord W. Bentinck, for Baffins Bay, with provisions for the supply of the

absent Polar ships. We understand that the *Stromboli* will accompany the *North Star* to the edge of the ice, or as far as her coals will enable her. The ship's were at Stromness on the 21st inst.

The *Daily News* states that the American Government had determined to send two ships in search of Sir John Franklin's Expedition, one to go round east by Labrador and Davis Straits, the other west by Bhering Straits.

NOTICE TO CAPTAINS, &c.—A Vessel fitted with Tanks, Force Pumps, Hose, &c. and capable of carrying upwards of 30 tons of water, has been established in Table Bay, for the purpose of conveying water to the Shipping, which does away with the necessity of landing casks. A second vessel, but of larger dimensions, is nearly ready.

The water issuing from the springs of Table Mountain has always been held in high estimation for its purity and sweetness. It is a fact, which may not be generally known, that in the flourishing days of the Danish East India Company the men-of-war, of that nation, which frequently put into Table Bay, were required to bring home a few pipes filled with the Cape water, for the use of the Royal Family.

NEW CHARTS.

Published by the Admiralty, and Sold by Bate, 21, Poultry.

QUIBO ISLAND, (<i>Central America</i> ,),	Lieut. James Wood, R.N.,	1848,	price 2s. 6d.
BAHIA HONDA, Ditto,	Capt. Sir E. Belcher, R.N., C.B.	1839,	price 1s. 6d.
NICOYA GULF, Ditto,	Ditto,	1838,	" 2s. 6d.
CULEBRA PORT, Ditto,	Ditto,	1838,	" 1s. 6d.
REALEJO PORT, Ditto,	Ditto,	1838,	" 2s. 0d.
GUATULCO PORT AND MORRO AYUCA,	Ditto,	1838,	" 1s. 6d.
MAGDALENA BAY, Ditto,	Ditto,	1838,	" 2s. 6d.
PLAYA MARIA BAY, &c.	Ditto,	1839 & 47,	" 1s. 0d.
FRASER RIVER, (<i>Gulf of Georgia N.W. Coast of America</i> ,)		1827,	" 1s. 6d.
ARCHIPELAGO, Sheet 4, Commanders Copeland & Graves,		1833 to '44,	" 2s. 0d.
BULL ROAD, (<i>East Falkland Island</i> ,) Capt. B. Sullivan, R.N.		1845,	" 0s. 6d.

BIRTHS, MARRIAGES, AND DEATHS.

BIRTHS.

May 2, at Roland's Castle, Hants, the lady of Capt. O'Callaghan, R.N., of a daughter.

At Chatham, the lady of Capt. S. Browne, R.M., of a son.

At Bishop's Teignmouth, Devon, the lady of Capt. A. G. West, R.N., of a son.

At Rottingdean, the lady of Com. G. S. Reynolds, R.N., of a daughter.

At Canterbury, the lady of Lieut. A. J. Burton, R.N., of a son.

MARRIAGES.

May 1, at Rankeithour House, Capt. P. Somerville, R.N., to Mary Stewart, daughter of D. M. Crichton, Esq. D.L.

At St. Pancras Church, Lieut. S. Pritchard, R.N., to Helen, daughter of Mrs. Bramley, of Gloucester-crescent, Regent's park.

DEATHS.

May 10, at Bridge Allan, Stirlingshire, E. Johnston, Esq. R.N.

At sea, W. H. Goddard, midshipman.

THE
NAUTICAL MAGAZINE

AND

Nabal Chronicle.

JULY, 1849.

**A CRUIZE THROUGH THE MOZAMBIQUE CHANNEL, in H.M.S. Geysler.
By J. Richards, Master, R.N.**

AUGUST 25th, 1841, at 1 P.M. left Port Louis, steered clear of the land, then disconnected the wheels and made sail for Cape Amber with a steady breeze from the south-east, and fine weather.

Sunday 27th, at noon in lat. $18^{\circ} 58' S.$, long., $56^{\circ} 19' E.$, barometer 30.06 thermometer 73° , variation $13^{\circ} 49' W.$, head N.N.W. $\frac{1}{2} W.$ We have made 106 miles since yesterday.—No current.

28th at noon in lat. $17^{\circ} 27' S.$, long. $54^{\circ} 36' E.$, barometer steady at 30.06, thermometer 73° , variation $12^{\circ} 40' W.$ Made good 134 miles, current W.b.N., 17 miles.

29th, noon in lat. $16^{\circ} 1' S.$, long. $53^{\circ} 6' E.$, barometer 30.00, thermometer 73° . Made good N.W. 122 miles, current N.W. 6 miles. Fine clear weather and a steady breeze.

30th, noon in lat. $14^{\circ} 13' S.$, long. $51^{\circ} 21' E.$ Made good 150 miles; of which there has been only 7 miles current with us. In the evening as we drew in with the land the breeze freshened; at midnight we were going $8\frac{1}{2}$ knots without studding-sails and one reef in the topsails. By the stars I found that the current was setting us fast to the northward ($2\frac{1}{2}$ knots).

31st, at daylight, hauled up for Cape Amber under double-reefed topsails and reefed foresail; wind south 7 to 8 c.g. Very threatening to the westward; a short dangerous sea breaking on board occasionally, and striking us heavily. At noon Cape Amber S. $25^{\circ} W.$, 9 miles; our run during the last twenty-four hours has been 184 miles, of which 34 miles has been current.

In the afternoon we were in smooth water, and as the wind was dying away very fast we connected the wheels and proceeded under steam.

Expecting a strong north-easterly set we steamed down to Woody Island, to have the advantage of taking a departure from a known point at sun-set, and thus make sure of avoiding the shoals to the north-westward. From Woody Island we shaped our course so as to pass over the north end of the Leven Bank, on which we sounded at midnight in 25 fathoms, and again at 1 o'clock in 50 fathoms. We now proceeded full speed, hoping to be well past the meridian of the Bisson Shoal before sun-set on the morrow. Barometer 29·90, thermometer 74°; fine calm weather.

September 1st.—Whilst observing for the noon latitude, shoal water was reported ahead and on both bows, we immediately stopped, and sounded in 20 fathoms, sand. As the only shoal of which I had any account lies 25 miles to the northward of us, and the weather remarkably fine, we stood on the same course till noon, sounding occasionally in 20 fathoms fine white sand, and very even bottom.

At noon we were in latitude 12° 23' 45" S., longitude 46° 31' 24" E. in 20 fathoms, fine white sand; north end of the shoal N.b.E. 3 miles, south extreme S.S.E. 3½ or 4 miles, some sand patches near the centre of the reef W. ½ S. about 1½ miles. Not seeing any appearance of shoal water to the N.E., we steered in that direction till 1h. 5m. P.M., when we suddenly came into 6 fathoms, and observed from the mast-head a barrier of shoal water extending from the north end of the reef far to the eastward and southward of us. Considering it dangerous to cross this from the rugged uneven appearance of the bottom, we backed off again into 15 fathoms, and following the outline of the shoal water went out nearly about the place we entered. When well clear of the shoal I observed again in longitude 46° 40' E., which allowing for the run from A.M. sights agrees within half a mile: from the P.M. position we steered S.E.b.E. 4 miles, N.E. 3 miles, N. 4 miles, and N.W. 16 miles, when we steered direct for Johanna, sounding every half hour throughout the night with 100 fathoms, no bottom.

At Boyanna Bay we obtained the following notice of the above described shoal from an Arab, who carried a letter about his person which I copied.

Remarks on the loss of the ship "Shannon," of Liverpool, 758 tons, on the 7th of October, 1842, at 5 a.m., laden with coals for Aden.

The ship *Shannon** was wrecked on a dangerous reef, nearly in a parallel where the Rover shoal is laid down in the English charts; but further to the southward, and extending much further to the eastward. It is a most dangerous reef, extending full thirty miles E.S.E. and W.N.W. per compass; most of the rocks dry at low water, many visible at half ebb, with sand banks perfectly dry, but between them several

Note.—We did not feel the current until we got within 30 miles of the land.

* An account of this wreck appeared in our volume for 1842, p. 257.

swathways, and apparently deep water between the reefs. So steep is this reef to the southward that in the *Shannon* we sounded in 46 fathoms (sand), and in less than five minutes the ship struck, a little before daylight.

The current had ran for three days previous strong to the eastward, say 64 miles per day; but during the night of the 7th of October had shifted to the southward and westward, while on the wreck the set of the current was N. $\frac{3}{4}$ W., full $2\frac{1}{2}$ knots per hour, the water at the time falling fast.

Over the bow of the *Shannon* we had $4\frac{1}{2}$ fathoms, over the taffrail quarter less five, whilst amidships under the main chains we had but 15 feet. The ship being thus cradled between the pinnacles of two rocks, and heavily laden, broke up as the water fell.

These reefs ought to be most cautiously avoided, especially in light variable winds, for the sudden change of currents, combined with the inaccurate position and uncertain extent of the reef, render it peculiarly dangerous.

The position of this reef in the English charts is very inaccurate, and even in the French charts (that I have inspected) there is but a vague account, although the latter gives *shoals* to the extent of 80 miles E.S.E. and W.N.W. not *reefs*. Their charts give soundings from 9 feet to 70 fathoms, whereas at three-quarters ebb we had some difficulty in weathering the rocks in the boats, there being at the time, seventeen rocks, large and small, above water; the largest appearing like boats under sail.

I trust that the loss of the *Shannon*, will be the means of a more accurate survey of these dangerous rocks being made, as I am satisfied that many of our missing ships have been wrecked here, for there apparently bedded in the sand between the reefs, remnants of wreck, apparently floors and futtocks of ships.

We the crew of the *Shannon* left the wreck on the 7th at 10 A.M., having remained by her until we got clear with difficulty, owing to the surf increasing as the tide fell.

The rise and fall of the tide must be from 15 to 17 feet, full and change, which I presume will be at 3 A.M.

We landed on an island in Passandava Bay to seek fresh water and dry our clothes, where we fortunately were discerned by the boat of the French ship of war "La Fortune," and kindly taken on board on the 13th inst., at 2 P.M., (in all thirty-three in number) after being in the boats six days and nights, a long boat and small gig.

I have to request that those who peruse this will give it publicity for general information, and oblige &c.,

HENRY SUCKETT,

Late Master of the ship "Shannon".

Nosh Beh 31st October, 1842.

N.B.—When the ship struck there was not the least appearance of surf or breakers, the water at the time being as smooth as a mirror.

Latitude observed in the boats $12^{\circ} 24' S.$, longitude by mean of three chronometers of the day before $46^{\circ} 32' E.$

This without doubt is the same shoal seen and examined by us, and the only reason why its position has remained so long doubtful, and its extent unknown, may be, because those who have fallen in with it, have been too much occupied with getting their vessels clear, to think of examining its extent. I feel certain that this would have been our case had not steam given us an opportunity of doing so with safety. May not all the shoals, called "Bisson", "Rover", "Borneo", &c., have their origin in this one "Reef and Shoal" therefore?

From vessels being set out of their reckoning by the ever varying currents and meeting with different parts of it;—thus at high water on a fine day a vessel approaching from the westward would only see the sand banks, she tacks about and reports having seen a sand bank only, whilst a vessel from the eastward might strike on some of the shoal patches on the eastern part of the reef without seeing the main reef at all!

We arrived at Johanna on the 2nd September, where we found two American whalers, who had put in for refreshments, and five or six native dows, vessels of about fifty tons.

We were all much pleased with the appearance of the island from the anchorage, the land towering to a great height, is covered with bright green grass, and relieved occasionally with clumps of cocoa-nut and other stately trees. The darkly wooded ravines also being very steep and precipitous at this part of the island, and abounding in water, give that variety of shade and colour, deep gloom and bright sunshine, to the landscape so pleasing to the eye. We were soon visited by the natives who to the number of near 200 came off in their canoes, and were rather clamorous for admittance, about thirty of the most respectably dressed came on board, and introduced themselves to us by their native names. Among them we had the King's son (a great scamp), Seyd Dramen (one of His Majesty's Ministers), and Abdalla Abbas, one of the principal chiefs of the island. Another introduced himself as King's pilot. As nothing can be more simple than the approach to this anchorage, I was rather surprised at the impudence of this fellow's demand for five dollars under the head of "Pilotage", especially as he did not come on board until after we had anchored. I found out nevertheless, that it was customary to pay this sum, (half of which goes to the King), but as we thought it a very bad custom, we did not comply with it.

We enquired for Lord Rodney, Nelson, and other well known characters, but they told us such names had gone out of fashion.

As soon as the first compliments and questions were over, our visitors enquired with some anxiety whether we had any gold lace for sale or barter. They would scarcely take no for an answer, but went prying into every corner of the ship and bidding for everything they saw. We soon found out that they had a pretty good knowledge of the prices of articles, or at least they were always on the right side, never offering

more than half the value for anything that took their fancy. At sunset they all left the ship, much to our satisfaction, for although they were generally very polite, their anxiety to traffic rendered them troublesome.

The town of Johanna presents a sombre appearance from the anchorage, it is surrounded by a high wall, over the broken and irregular top of which appears the ragged parapets and unsightly thatch of the houses. The mosque (situated near the centre of the town,) towering above all, gives it an air of ancient respectability, which is further increased by the Hill Fort at the back of and immediately overlooking it. Nothing can be more gloomy than the inside of the town, for every house is cut off from its neighbour by very high, thick walls, and as these are all joined together, excepting only a few very narrow and crooked passages to serve as streets, it has altogether the appearance of a large labyrinth in which a stranger may easily lose himself. The outer wall is protected by towers crenelled for musketry. It might soon be breached with cannon, but the peculiar construction of the houses inside would render it of no avail, for the attacking party would find that they had only gained admittance to one house. In fact every house may be considered a separate fort, and with resolute defenders would cost a storming party dear, unless it were bombarded. The natives told us of a French ship anchoring before the town and cannonading it for two hours, without killing one of the inhabitants, then without waiting to ascertain the extent of mischief done, sailed away.

In their internal wars the Hill Fort has always been considered the key to the town, and when it was taken by an opposite party, the town surrendered as a matter of course.

The Johannese, however do not bear a high character for courage, their slaves generally bearing the brunt of the battle.

The beauty and freshness of the morning after our arrival tempted me to land and explore the place. I was surprised to hear so much English spoken, almost every one I met wished me a "good morning", and wished to shake hands with me. Passing under a boat shed, I stopped to examine a dow, which some native carpenters were building for the King, and whilst thus occupied His Majesty himself made his appearance, and after wishing me a "good morning" and shaking hands, looked complacently on, as if the superior workmanship were a matter for congratulation. If he really thought so I cannot tell, but I must conscientiously say that I never saw worse workmanship, or tools handled in a more lubberly manner by any people pretending to be acquainted with their use. The timbers had been assorted as near the form of a boat as possible, but there was no attempt at neatness in fitting them; the outside planks were in some places three inches apart and very irregular. On pointing out these defects to the master shipwright, he smiled and said, of course they would all be filled up with small pieces of wood and cotton. From this specimen of

their vessels, it cannot be wondered at if they are frequently lost at sea, which I am told is the case whenever they meet with a strong breeze.

In the course of my stroll I met with several people who politely invited me to dine with them in the afternoon. They generally backed their request by producing a certificate from "John Snooks", "Bill Stumps", or "Sam Slick", and other worthies, certifying that the bearer had given them a good dinner on a certain day: this impressed me with an idea of extreme liberality, which, although I did not avail myself of, I was weighing with several little things that had occurred of an opposite nature, and proceeding to draw a balance in their favour, when the mystery was cleared up in the afternoon, by a party of officers and our interpreter receiving a similar invitation from the Governor of Johanna. As they had just returned from a long walk at the time, it may be easily imagined that they did ample justice to the fare set before them, and on rising to go two shillings each was demanded as the price of what they had eaten, as this allowed the worthy Governor a handsome profit. I must now consider such invitations in the same light as those we receive from the old ladies of Park Street, Greenwich, on a Sunday afternoon.

Before going off to breakfast, I called at the house of an Englishman by the name of Sunley, who with his brother and another gentleman by the name of Martindale, have taken up their abode here, to endeavour to develope some of the many commercial advantages of this fine island. As his house is of Arab (or rather) Johannesean construction, and one of the best in the town, it may be as well to describe it.

Ascending it by a flight of stone steps, and passing through a narrow passage, you open out into a large room with closets or sleeping apartments at each end; the walls have rows of niches built in them, giving it the appearance of an empty Dispensary or Apothecary's shop. The building is dimly lighted by two small windows about eight feet from the floor. The floor is covered with a substance made from a combination of clay and lime, and the whole of the interior is well white-washed. On the outside the houses are nearly all ornamented by having the head and stern of a dow projecting from the back and front of them, in line with the upper story; as mentioned in Captain Basil Hall's work, being peculiar to the dwelling of the King. The Johannese houses altogether present a most comfortless appearance, but they answer well their taste for seclusion. The only European establishment besides Sunley's is owned by a Dutch trader (now on a trading voyage to the north-west coast of Madagascar,) and as it happened to be the corner house in the town to the south-westward, I at once fixed on it for my observatory. The only drawback to this place was the continual shaking of the ground by the curious multitude; this I remedied by asking the attendance of Mr. Sunley's servant, a good humoured strapping native of Mosambique, six feet two inches in height, aptly named "Goliath", and giving him a good stick initiated him by signs in his duty. This he

performed with great zeal and tact, cracking heads and cutting jokes in such capital humour, that he kept a large ring, amidst shouts of laughter from the assembled crowd.

In the forenoon we saluted the king with 21 guns which was returned from the hill fort, (in rather a curious manner to be sure,) first firing three and four guns together, and the others by ones and twos, with an occasional interval of six to ten minutes, altogether they took an hour and a half to get through it.

We hoped that after the first day the natives would have been satisfied with what they had seen, and only visit us when they wished to trade, but here we were mistaken, for they still swarmed on board, both on deck and below, even at meal times they would not leave us, until they had been repeatedly pressed to take a slice of pork or glass of rum, two things abominable to the Johannese, who pride themselves on being strict followers of Mahomet.

On the 5th the king visited the ship accompanied by the principal men of the place, most of whom had been on board before. They were all dressed very fine, after the Arab fashion with a profusion of showy ornaments amongst which swords and daggers were conspicuous. He went round the decks and engine-room, when everything worthy of notice was pointed out. On the chief engineer being introduced to him, he suddenly recollected his watch was out of repair, and fancying that any one who could manage the complicated machinery of the engine-room must of course understand all about a watch. he expressed his intention of sending it on board to be examined. This job our engineer undertook and accomplished (I believe much to his own astonishment) and to the king's satisfaction. His Majesty was so well pleased with the repair of the watch that he sent a rusty pair of pistols with worn-out locks, to be repaired, and after that an old quadrant; and who knows what would have come had we stayed long enough. But to return to his Majesty's visit, nothing appeared to please him so much as the rapidity with which our 10in. pivot-gun was worked, and the great distance a shell could be thrown from it. After a collation in the cabin he left very much gratified with what he had seen.

6th. To day the French schooner of war "*Eagle*" came in, and connected with her a little story came out which did not set the king's character in a very amiable light.

It appears that about 12 months ago a French merchant of Mayotte being in want of labourers for his estate, sent to the king of Johanna to negotiate with him for some of his subjects for that purpose. On the receipt of a sum of money from the Frenchman the king seized upon as many of his own subjects as were at hand and sent them. Shortly after their arrival at Mayotte an opportunity offering to escape they seized two dows, and embarking in the night, arrived safely at Johanna; but not willing to trust themselves to the tender mercy of the king they landed at the back of the island out of the reach of his authority. The commander of the French schooner now brought a formal demand from the

Governor of Mayotte that these people should at once be given up, and as he is not a man to be trifled with the old king was in great tribulation about it. In addition to this his Johannese Majesty had put a large embargo on a French ship that had put into this port for refreshments, and part of the Frenchman's mission was to arrange a treaty to secure others from like impositions.

He was busily engaged with the Frenchman defending his right, as the king of the place, to charge what he pleased, when Captain Brown entered, to whom he eagerly referred the case, doubtless expecting to be supported from a feeling of rivalry; but when Captain Brown decided that an understanding on this head was very just and proper, his visage fell, and he conceded the point though with evident reluctance. Mr. Bateman, our purser, and Mr. Sunley, resident merchant, having now arrived, it was determined to have a written agreement of port-charges regularly drawn up. Pens, ink, and paper being sent for, the first named gentleman immediately drew up a document, of which the following is a copy:—

“For the information of masters of merchant vessels arriving at the Island of Johanna, it is hereby made known that king Selim has fixed the following charges upon vessels of all nations.

“1st.—All merchant vessels with the exception of } Ten Dollars.
whalers, touching at this port. }

“2nd.—Whalers arriving at this island for recruiting } Fifteen Dollars.
and watering, as often as they please during the voy- }
age. }

“Dated at Johanna, 8th day of September, 1848.

“Signed F. J. BROWN,

Commander of H.M.S. Geysler, and Senior Officer present.

Witnesses. { E. LECLAIRE, *Le Com. de Lacotlette L'egle.*
W. H. BATEMAN, *Paymaster & Purser of the Geysler.*
W. SUNLEY, *Resident Merchant.*”

Several copies of the above were made, one of which was stuck on the king's door, so that masters of vessels putting in here for refreshments will in future be relieved from the nuisance of being pestered with all sorts of charges.

THE MERCHANT SERVICE OF GREAT BRITAIN.

My attention has been drawn lately to the above subject by some remarks in an article of the Weekly Dispatch, touching the effects to be expected from the passing of the Navigation Laws Bill, in which it is very wisely observed, if ships are well commanded, we may defy the opposition of the world! Certainly, a very great deal depends upon the ability and good conduct of the Master of a Merchant Ship; but as

“ Aliquis,” in your last number has shewn, there are sundry other most essential requisites for the thoroughly safe, and consequent profitable management of Merchant Ships. I shall, however, at present only look into the matter of Masters, seeing that they have at least called forth the good opinion of Lord Brougham, which may have considerable weight with the public, either for good or for evil.

To insure good and efficient men offering their services in any profession, I believe it will hardly be disputed that comparatively good pay must be given. But the difficulty in regard to Masters of Ships is, to define what are the necessary qualifications for their [station! and, although to men of sound common sense, there can be really little difficulty in deciding on such matters,—yet, so diversified is the nature, morality, and opinions of shipowners, on this, to them, most important subject, that a just and proper conclusion never can be come to by them.

Cheapness, however, has a very preponderating effect with most owners, which is a satisfactory reason for nine-tenths of the Masters being far from what they should be. And while the present penurious and low minded ideas shall continue to exist, it is not likely that any improvement will take place in the general character of shipmasters. Those most preferred are the men who have been brought up before the mast, and there is more than one reason for this, although the aforesaid cheapness has great weight. It is sometimes convenient for an owner to have a man in command who shall not be more scrupulous in morality than may be necessary, and who may be equal to a bribe occasionally to cheat the insurance; and such men are more likely to be met with amongst the uneducated or ill educated: besides, men with the feelings of gentlemen are little likely to put up either with the pay or general treatment of shipowners; and parents of respectability will not send their sons to sea to be brought up under men who can scarcely sign their own names, and who can only teach the low vulgar habits of merchant sailors. But, I am happy to say, that there are some owners of enlightened minds, who not only pay their masters properly, but treat them so; and I am in hope that ere long it will be seen by the majority, that such after all is their best policy, and they will join in the now prevalent idea that masters of ships must be something more than mere sailors; that not only a good education is requisite, but a most unblemished character also, and an examination into all nautical qualifications to be passed, all of which combined shall insure the respectability of the party, and safety to the public by whom he shall be employed.

The examination, as at present regulated by Government, might be altered considerably for the better, and as a first and most necessary step, I would make it binding upon *all masters* whatever, to pass for certain sized ships, coasters included, producing at the same time such certificate of character and education as may be thought necessary; and in the event of its ever being proved that a ship was lost from drunkenness or decided carelessness, that that man should be prevented ever being allowed to command again under a severe penalty. Mates also to

be under similar regulations; and such examinations to be imperative only on those who have never served as master or mate, or who have only served five years as such. The present system of obliging all masters of ships hired by Government to pass an examination, is, in many instances, very hurtful to the feelings of old and able officers, who have commanded for many years with credit to themselves and advantage to the public, and many also who have perhaps years ago passed for a Commander in the East India Company's service, or Lieutenant or Mate in the Navy. Such might with propriety be allowed, even at present, to have their feelings spared from coming in contact with boys fresh from school; but, particularly if they have commanded for five years or upwards with credit.

In fine, let shipowners treat men as they ought to do, and not as purse-proud little-minded individuals of short-lived authority, and pay them also in such a manner as shall be consistent with keeping up the respectability of their station, and a new class of masters will soon spring up, as superior in birth and education to the generality of the present, as such are at this moment most urgently required for the Merchant Service throughout.

A. B.

BAYS ON THE COAST OF SPAIN OPEN TO THE LEVANT WINDS.

UPON this high mountainous coast some low plains immediately upon the shore are so completely overshadowed by the height of the mountains, that you have no idea of their extent until quite close in, and some accidents have occurred between Adra and Almeira in consequence of this, and there is so great a sameness in the appearance of the castles, towers, villages, &c., upon this coast, that they are not easily distinguished from each other, and when bound to those small places it is often difficult to get close in at the particular point that you wish. I was two days within ten miles of La Garoucha. The quarantine regulations after calling at a port of entry, (Almeira for instance,) and then going to those places are vexatious and lose much time.

Villarico, La Garoucha, and some other places to the north-eastward of Cape de Gatte have lately employed several ships in carrying coke, &c., to the lead works. Those places and Vera stand upon a triangular plain, broken by irregular hills and the risings of the interior mountains, with the high ridges of the Sierra de Villarico and Calerera upon each side of it, the factories, with their tall chimneys, are the best objects to distinguish those places, as we are sometimes puzzled to know the signification of the terms palaces and castles in foreign countries. The Rio de Cerebar is a mountain torrent, and in the dry season is blocked

up by a bar of sand across its mouth, and the little water left in its bed appears very acceptable, as the plain is much parched for want of rain. It is in lat. $37^{\circ} 12' N.$

Levant Winds.

That places being directly open to those winds, and the Directory stating that you could not ride there with those winds, and must proceed to sea upon the first appearance of their commencement, has led to much anxiety to the masters going there. In the first place, it would be difficult to comply with such directions, as you lay within a half or one mile of the beach directly upon a lee shore, and the sea comes home before the wind, and you must either reach Carthage or get round Cape de Gatte before you can get clear of it.

When the winds prevailed from the south-westward, they never blew so heavy as to prevent us from riding safely, whilst ships in the offing were under double and close-reefed topsails. At times, a heavy swell would come in from seaward, and the wind occasionally hauling more off the land, and opposing this swell, would raise the surf upon the beach, whilst it was not much felt by the ship.

When the winds were between N.E. and N.W., the N.E. winds were rather heavier than those at N.W., but of less duration (those two winds are about along shore). But the heaviest winds that we experienced were at N.W. across the land. During these winds we had so frequently heavy swells from the E.N.E., and occasionally from the S.b.E., as to leave no doubt that they were occasioned by those winds at sea, which did not blow home. But the wind opposing the swell raised such a heavy surf upon the beach, that all our detention occurred with off land winds. At other times the ships would tumble about and make it difficult to keep the boats alongside.

Action of the winds and how to ride.—The Levant winds never blow home at those places except in February and March, and then they are not considered dangerous. It is usual to second-reef the topsails and send down top-gallant-masts and yards, and during those two months, I should moor with both anchors an open hawse to seaward, but at all other times would stretch out 60 or 70 fathoms of chain, which will keep her clear of the anchor during light and variable winds, and only use the second anchor in the same manner as you would generally in roadsteads at home. There was certainly much bad weather at sea while we were there, and this was found the best plan.

Strangers arriving at a particular state of the winds, or those following the directions, are very apt to go upon a man-of-war's cruise for a week or a fortnight as I saw one do, and know others to have done for the following reasons:—The wind will freshen at S.b.E. with small drizzling rain, and gradually veer to E.S.E., where it will just lead you to think that it is in real earnest for a Levanter, when it flies to the N.E. and N.N.E., blows stronger, and then to the N.W., and blows a heavy

or hard gale, and you are much better and safer at anchor. But those that may have got under weigh, or have been afraid to anchor, cannot get to it; and when the weather moderates, much of your cargo may be out before they can get back. I was very careful at those times in making enquiries of the natives and Englishmen at the factories, to know that their action was regular, and they were always certain that the wind would come off the land, and that there was no danger.

Villarico and the factories at the Rio de Cuelear is the best anchorage. The bank gradually shoals from 14 fathoms, and you ride in between 5 and 6 fathoms: the holding ground is good, and at Villarico there are rocks on the beach that might assist in forming some shelter for the boats, but nothing of the kind has been done; and at the other places it is sand or gravel. At La Garoucha the bank is steeper, and you moor about half a mile from the beach in 12 fathoms of water, and will, with 70 fathoms of chain, swing off to 16, and in to 8 fathoms of water under the stern. A long scope upon one cable might be preferable to ride by on account of the two cables plunging a ship heavily into the sea; but it might give you too much range, as you go as close in as possible for the convenience of working with the boats.

Ballast, &c.—Ships going there with coke alone, should have their ballast in (or most of it); but they frequently have coals in the bottom for their destined port. Much delay may arise in getting ballast, and it is high; the same boats bring it to you off the beach, water is not easily got, and no provisions.

Should you think these remarks worthy of a place in your valuable journal, I should feel obliged by their insertion.

I am &c.,

RICHARD LEIGHTON.

To the Editor N.M.

BARCELONA, WINDS, &c.

BETWEEN Cape de Gatte and Barcelona we had very light baffling winds flying about between N.E. and S.W., with calms, and when the wind freshened, a short bubbling sea got up very quick. The sky was often dull and indefinite at this time, so that you could form very little idea of the weather, and there appeared to be a contention between the prevalent westerly winds in the Mediterranean, and the local northerly wind upon this part of the coast. We reached Barcelona with a fine south-west wind August 13th, and had a week of remarkable fine weather, generally calm during the night, with a light land-wind early in the morning. It is usual to sail with this land-wind in the morning: during the day the winds were light from the southward and south-

westward. The S. W. wind appears to be a sort of counterfeit here with almost any wind at sea.

Monsin or Monsuich is easily known. It stands near the middle of a triangular plain, and is nearly perpendicular to seaward. Llobregat river is in this low plain, which is like that of Almeida, very deceiving in the night.

After the very fine weather we had a severe thunder storm, which damaged some houses on shore, and was attended with torrents of rain and heavy gusts of wind, extremely variable.

The winds were still from the south-westward during the day, but very unsettled weather, and generally off the land at night. The land-wind about 4 A.M. rarely failed. At the end of a week of this unsettled weather, two vessels arrived that were off Cape St. Martin, and had a thunder-storm equally severe at the same time that we had it, and had since been working up with strong and heavy north-east and northerly winds, the very opposite from what we had in the mole. I have observed upon a beautiful day a fine breeze blowing from the south-westward, whilst the flags flying upon Monsuich signal-staff showed an equally fine breeze at N. W.

In the Mole.—Much damage occasionally occurs in the mole from the heavy swell thrown into it. Ships moor with both anchors ahead and ropes astern in the outer mole where the largest ships lay. December is considered the worst month for damage occurring. It does not appear that the S. W. winds, which blow nearly into the mole, are the worst for causing damage; but, that the worst element is the heavy swell thrown in by easterly winds at sea, striking the beach between Monsuich and the point of Llobregat river, then rebounds into the harbour along the shore, and causes a current to sweep out along the mole. It certainly would be a great improvement to this harbour, if a break-water water was built under Monsuich to prevent this swell from entering, or that the beach thence towards Llobregat river could be thrown back to allow it to exhaust itself.

The mountains about and to the south-westward of Cape St. Martin, appear the most rugged and fantastically shaped along the coast of Spain: but near Barcelona they appear to be more regularly formed into ridges and valleys, stretching from the coast at a moderate angle.

I have explained the difference in the winds close in shore at La Garoucha and Villarico, as well as at Barcelona. I found at the former place that the heaviest winds were at N. W., and I have found the heavy winds from the north-west and northward, blowing from the Spanish coast, over the Balearic Islands, an inducement in coming down the Mediterranean to edge to the northward after passing Sardinia.

Charges, &c.—The tonnage dues are heavy in this port, but the authorities are most corrupt. There was a ridiculous shew of strictness by a new officer upon my arrival there, and I was landed with a soldier, which none of the others had, but my soldier vanished without any apparent reason. However, we afterwards learnt that an understanding had

been come to; the number of ships entering the port yearly was great, and a regular gratuity to the officer solved all difficulties. The Spanish measurement is much larger than ours, but the line will contract or expand according as you apply the dollars. Ballasting is very expensive. It has to be brought in from the sea beach, or carted across the mole, and then put into boats, according to the weather.

Supplies were plentiful, although there were 20,000 soldiers in the city; but the prices rose in consequence of a report that 18,000 more were coming. There is a good market every morning, and a miscellaneous market twice a week.

It is a splendid city, with delightful walks and fine buildings, a walled city, but there is a suburb called Barcelonetta at the mole; and beyond the walls, the houses continue into the plain behind Monsuich.

I am, &c.

RICHARD LEIGHTON.

To the Editor N.M.

PORT ALBANY, CAPE YORK, AUSTRALIA.—*Extract of a Letter.*

WE found deep water in the Strait, between Albany Island and the main land, varying from 8 to 12 fathoms, all the projecting points of both shores being steep to; the bays on the main land, were all found to be shoal. But on the western side of Albany Island, a bay was found extensive enough to afford anchorage, or rather moorings for four or five of the largest steamers, where the water is so deep close in to low water mark, that no great expense could be required in forming a jetty of sufficient extent for them to haul alongside to complete their coals; sand-stone of a coarse quality may be procured on the spot, and plenty of timber from the main land on the opposite side of the strait, not more than half-a-mile distant.

The anchorage is limited in extent by the necessity of keeping out of the influence of the tide, which sets through the passage between the island and the main land, and when running in an opposite direction to the wind, causes a confused sea.

It is named Port Albany, is quite protected from the influence of the tide, and is perfectly sheltered during both monsoons; fresh water was procured in small quantities on the Albany Island, even at the end of the dry season, and I have no doubt, a permanent supply might be procured by sinking wells to a sufficient depth. The only well attempted during our stay produced water slightly impregnated with salt, at the depth of six feet from the surface; but it was commenced too close to high water mark. An abundant supply of fresh water, however, can always be procured from the main land, just abreast of Port Albany.

Port Albany is about four and a half miles from Cape York, and from the summit of Albany Island, distant about three-quarters of a mile from the Port: the approach of any vessel coming from the southward would be easily seen. Albany Island does not seem to be capable of affording much agricultural produce, as the soil is composed chiefly of light sand, and though even at the end of the dry season, when all the grass had been burned down according to the usual custom of the Australian natives, sufficient evidence remained to show that no supply could be expected adequate to the support of many sheep and cattle.

Evans Bay, which extends from Cape York to Albany Island, though not what can be called a secure anchorage, is far better than many others on the Eastern Coast of Australia, where considerable trade is carried on, even by large ships. During the period that the south-east wind prevails, the anchorage is sheltered by Albany Island, and the reefs projecting W.N.W. from it, and should the wind draw more round to the eastward, the extensive reefs, which surround Mount Adolphus, must, in a great measure, act as a breakwater to check the swell rolling in from the ocean in that direction.

During the period of nearly a month that the *Rattlesnake* remained at anchor in Evans Bay, several strong breezes were experienced; but there was never a sufficient amount of surf on the beach (though at times it became quite a lee shore,) to prevent our boats from landing and completing water, of which we obtained 75 tons in seven and a half days, without any difficulty. The only inconvenience was the strength of the tide at full and change; but the greatest speed measured only amounted to two miles per hour.

The natives in the neighbourhood of Cape York are very numerous, and more civilized than any we had previously seen; their canoes were better constructed, and fitted with mat sails, and their implements, both for war and fishing, seemed to be more carefully made. They seem to have a considerable amount of intercourse with the natives of the islands to the southward of New Guinea, two or three of whom were living amongst them.

Although during the month we remained at Cape York, our people were much employed on shore in detached parties, completing wood and water, there was not the slightest misunderstanding with the natives, who were very ready to assist in carrying the fire-wood and breakers down to the boats. The officers, when they landed, frequently made excursions more inland, for the purpose of collecting specimens, and always found some of the natives ready to accompany them.

As a harbour of refuge for the crews of vessels wrecked in Torres Straits, a settlement at Cape York, would be of great service; as most, if not all the vessels which are lost in attempting the passage, strike upon the reefs to the eastward of Cape York, which point the boat would have no difficulty in reaching, as the S.E. wind prevails during the only months in the year, when the passage is made.

At present, in the event of a vessel being lost on the Barrier reefs, the only chance the crew have is to proceed to Port Essington, and the passage across the Gulf of Carpentaria is by no means adapted for crowded badly provisioned boats. And as the land about Port Essington is very low and monotonous, there is great chance of passing it, in which case, a course must be steered either for the Portuguese settlement at Delli, on the north-east end of Timor, or else for the Dutch settlement at Coopang, on the north-west of the island, which would increase the distance to be traversed in the boats, by at least, from four to five hundred miles, in addition to the distance from Cape York to Port Essington, which is six hundred and five miles.

One or two anchorages were found by our boats amongst the islands to the northward of Cape York, but which, from the very strong rushing through of the tide, must always be inconvenient.

The *Rattlesnake* left Cape York on the 2nd of November, 1848, and arrived at Port Essington on the 9th of the same month. We found on landing at Port Essington, that all remained much in the same state as in 1841. The pier had been rebuilt upon a better and more solid place; but was not carried far enough out for boats to land at low water, every thing else seemed to have gone back, the houses, both public and private, were infested with white ants, and injured to such an extent, that at the period of our visit, none could have held out against a moderate gale of wind, and no house in the place, at the approach of the rainy season, was even water-tight overhead.

The first garden established by Sir G. Bremer, has proved to be a perfect failure, but a second one, comprising an area of nearly three acres, had improved at the period of our visit. Fruit, consisting of cocoa-nuts, pine apples, bananas, jack fruit, and oranges, was produced in sufficient quantities to supply our wants, but they had no vegetables, and from all we can learn, it was only during two months in the year, that a supply of vegetables, sufficient for the garrison, could be obtained.

The climate of Port Essington seems to have undergone considerable change since the first formation of the settlement in 1838, as a statistical account of the present state of the garrison will show. The detachment now serving there were landed in November, 1844, consisting of two officers, three serjeants, three corporals, one fifer, and forty-five privates; a second party were landed in 1847, of two officers, one corporal, and five privates; out of these men, eight have died, eight have been invalided, and, when we sailed, fourteen were on the sick list. Those who were well enough to do duty, were looking very ill, and, in point of health, formed a strong contrast to our ship's company.

During the week we remained at Port Essington, the weather was so very close and sultry, that several of our people employed on shore, (though far less exposed than they had been during the course of the survey, and in completing of wood and water at Cape York,) got a slight attack of fever, which went off as soon as we got fairly to sea.

Some alterations having been made in Mr. Tyer's chart, including a shoal laid down with 2 fathoms off Point Record, very much in the fairway channel, a careful examination was, therefore, made of the passage between Point Record and the Spear Point shoal, which proved that no change has taken place in the soundings since Mr. Tyer's survey, and that there is no shoal water in the position marked in the chart off Point Record. In running into the harbour, and afterwards working out again, we had a very good opportunity of testing the chart, which is very correct, our soundings reduced to low water, being almost identical with those obtained by him. We sailed from Port Essington November 16th, and after a tedious passage, caused by light westerly winds, arrived at Sydney 24th January, 1849, and found the "*Bramble*" there.

From what we have seen, and from Mr. Yule's recent experience, we are led to hope that when the steam navigation is fairly established, and the masters of steamers have made themselves acquainted with the passage, it will be only requisite to anchor once, or at the utmost, twice. A smooth sea, particularly favourable for steam navigation, would be secured, and the reefs and islands serve as so many beacons, to mark the best channel.

On the day of our arrival at Port Albany, a large party of natives crossed over in five canoes, under sail from Mount Adolphus Island and subsequently their numbers increased until, at one time, not less than 150 men, women, children were assembled at Evans Bay. But their stay was short, probably on account of the difficulty of procuring food for so large an assemblage, and the greater part dispersed along the coast to the southward. While collecting materials for a vocabulary, we found that several dialects were spoken, but we failed to connect them with particular tribes, or even find out which, if any, is the resident one. Among these people were two or three of the Papuan race, from some of the southern islands of Torres Straits, as indicated by their language. It appears that a constant friendly intercourse exists between the natives of the southern portion of Torres Strait, the Prince of Wales Islands, and others adjacent, Endeavour Strait, Mount Adolphus Island, and those of the main land, about Cape York, which last, from its central position, is much frequented during their occasional, perhaps periodical, migrations. This free communication between the Papuan and Australian races, which takes place at Cape York, accounts for the existence in the language spoken at Cape York of a considerable number (at least 31 out of 248) of words identical with those given by Jukes in his vocabularies of Darnley Island and Masseed, especially the latter.

The physical characteristics of the Australians, seen at Cape York, differ in no respect from these of the same race, which we have seen elsewhere. The absence of one or more of the upper incisors was not observed here, nor had circumcision been practised. The cicatrices on the body were as usual so varied, that it seems fair to attribute them more to individual caprice, than to any fixed general custom regulating

them. Many had a simple two-horned mark on each breast, and in some instances, we saw a clumsy imitation of the elaborate oval shoulder mark of the Torres Strait Islanders. Among these undoubted Australians, were as already observed, two or three Papuans. They differed in appearance from the others, in having the skin of a much lighter colour, yellowish brown, instead of nearly black; the hair on the body woolly and growing in scattered tufts, and that of the head also woolly, and twisted into long strands, like those of a mop. On the right shoulder, and occasionally on both, they have a large complicated oval scar, only slightly prominent, and very neatly made.

The custom of smoking, so general throughout the N.E. portion of Torres Strait, has been introduced at Cape York. Those most addicted to it, were the Papuans above mentioned; but many of the Australians joined them, and were equally clamorous for tobacco; still, although "*choka*" (tobacco) was in great demand, biscuit, which they had corrupted to "*bishkar*," or "*bizhikar*," was much more prized.

Note.—The pipe is of bamboo, as thick as the arm, and two or three feet in length, open at one end, and having a small lateral hole near the other for the bowl, which is also of bamboo, an inch in diameter, and three in length. The tobacco is rolled up in a dry leaf (generally *pandanus*) like a cartridge, then fitted into the bowl, which is shipped and fire applied. The pipe is filled with smoke, either in the usual way, or by applying the mouth to the bowl and blowing in. The bowl is then removed, the thumb being kept on the orifice, while handing it about, when the smoker takes one long inhalation, and then slowly allows the smoke to exhale.

These people appeared to repose the most perfect confidence in us, they repeatedly visited the ship, either in their own canoes, or the water-ing boats. They were always well-treated, nor did any circumstance occur during our intimacy, to give either party cause of complaint. Their canoes are similar to those of Torres Strait; but smaller and not so neatly constructed or ornamented. They are capable of carrying from ten to fifteen persons. The sail is made of matting (from a species of *aleocharis*) and is set between two masts, raking forward in the bow.

They did not appear to be well provided with weapons. The Papuans had a few bows and arrows, and the others some spears of three kinds. The first of these, apparently used in fighting and hunting, is usually 9 feet in length, of casurina wood, pointed with a sharp leg bone of the kangaroo, 6 inches long, which also forms a barb. The butt-end of the spear is formed by a short piece of light wood, with a small hollow at the end, to receive the point of the throwing stick, which is also formed of the hard and heavy wood of the casurina, about 38 inches in length, and $1\frac{1}{2}$ in width, laterally compressed, and having a cross-piece at the handle, made of two pieces of shell, frequently ornamented with the red seeds of *abr us precatinus*. The common fishing spear is lighter and more simple, without a barb; and a third sort is four-headed, tipped and

barbed with bone, as in the first described. The weather being fine, at least as regarded the absence of rain, no huts were constructed.

During our stay, the food of these Aborigines consisted chiefly of two kinds of fruit, the first of a *wallothia*, mealy and insipid; the second of a mangrove (*candelia*) the vegetating spirits of which, before dropping from the tree, are prepared for food by a process between baking and steaming. There are besides a few others, as the fruit of an *eugenia*, which is slightly acid and very pleasant, and of *mimusop kankii*, also several roots, including a large yam, which, however, we found too bitter to be palatable. At low water, the women usually dispersed in search of shell-fish, on the mud flats and among the mangroves. The men occasionally went out for fish, which were either speared or caught with the hook and line, the former of shell or tortoise-shell, so shaped as to form two-thirds of a circle; the latter constructed of the fibres of the stem of the rattan, (*calamus*.) twisted up in three strands.

Physical aspect.—The country in the vicinity of Evans and Cape York Bays, consists of a few ranges of low wooded hills, with small valleys and plains, and open country of greater extent. One of these ranges terminates in Mount Bremer, which is 420 feet high, the greatest elevation in the neighbourhood. The coast line, when not consisting of rocky head-lands, is either a sandy beach, or is fringed with mangroves. Behind this, when the country is flat, there is usually a narrow belt of dense brush or jungle. In the valleys one finds, what in the colony of New South Wales would be termed *open forest land*, characterised by scattered *eucalypti* and other trees, a scanty covering of coarse sedge-like grass growing in tufts on a red clayey soil, covered with nodules of ironstone and coarse quartz-ore sand. Large pinnacled ant hills, sometimes 12 feet in height, are here concomitants of this kind of country.

Geology.—The rock in the immediate neighbourhood of Cape York, is a porphyry, with soft felspathic base, containing numerous moderately sized crystals of amber-coloured quartz, and a few large ones of flesh-coloured felspar. It often appears in large tabular masses, split horizontally and vertically into blocks of all sizes. At times, when the vertical fissures predominate, and run chiefly in one direction, the porphyry assumes the schistose character, and large slate-like masses may be detached. The principal line of cleavage runs N.N.E. and S.S.W.

Botany.—One of the most interesting features in the botany of Cape York, is the occurrence of a palm, not hitherto mentioned as Australian. It is *conypha urens*, one of the noblest of the family, combining the foliage of the tree-fern, with a trunk a foot in diameter, and 60 in height. It is found in dense brushes, along with *seaforthia*, *conypha*, and *calamus*. Another striking tree, not found elsewhere by us, is *Wormia alata*, abundant on the margin of the brushes, where it is conspicuous from its large yellow blossoms, handsome dark green foliage, papery bark. On the dried up mud of the bed of a salt-water swamp, we found a species of that singular genus *Halos Strobilaceum*,

a chenopodiaceous plant, which does not appear to have previously been met with out of India.

Zoology.—During our stay we made two additions to the number of Australian Bats, one a *Molossus*, the other a *Rhinolophus*, nearly allied to *R. Aurantius*. Both were found in great numbers in some sandstone caves on Albany Island. A small kangaroo is very plentiful in the brushes, but no specimen was procured. It is the size of *Halmaturus Agilis*, but not so fulvous in colour. The only other quadrupeds seen, are an opossum (*Prendocherius Cookii*) brought in alive by the natives, and a small mouse, probably *M. delicatulus*. Birds are numerous in the neighbourhood of Evans Bay, and other parts of the district visited by us. Three of them are considered to be new; a *Sericornis*, a *Numenius* and another. In the brushes one meets with the *Myapodius*, Torres Straits pigeon, a *Podargus*, *Ptilonopus*, *Ewingii*, and many others, and in the forest flocks of scarlet shouldered, Blue mountain, and Moreton Bay parakeets, *Iphecotheus Australis*, two species of Oriole, *Dacelo Leachii*, *Tropidorhynchus Argenteiceps*, &c. Snakes do not appear to be plentiful, yet one day we killed two; the one, a slender very active green whip snake four feet in length, the other, the brown snake of New South Wales, where its bite is considered fatal. The seine was hauled several times on one of the sandy beaches, but with very little success. The most remarkable fish here is a fresh water one resembling a herring, (*Mezalops Setipinnis*), abundant during the wet season in the pools and water holes. The Mollusca obtained here may briefly be dismissed. The chief land shells are a *helix*, similar to one widely dispersed along the north-east coast, and at Cape York, attaining its greatest size, and a second species of papina. The sand flats afford a considerable variety of *Strombi Naticye*, &c., and a handsome olive, remarkable for its extraordinary variation in colour, size, and even form. I once tried the dredge, but only one specimen of importance was obtained; a species of *Phos*.

Port Albany.—As one of the more immediate beneficial results of our survey of the inner passage would be to facilitate its use by steamers, should arrangements at present contemplated be carried into effect, for the purpose of continuing the "Overland" Communication between Great Britain and India, from Singapore to the Australian colonies by way of Torres Straits, so it was of importance to find some place in the neighbourhood of Cape York, convenient for a coaling station during either monsoon. An eligible spot for this purpose was found in Port Albany, the name given to the narrow channel dividing Albany Island from the main land. Here a small sandy bay with sufficient depth of water close inshore was, after minute examination by Captain Stanley, considered to be favourable for the formation of a jetty, alongside of which the largest steamer could lie in perfect safety.

On two occasions we landed on Albany Island and walked over the place. It is three miles in length, and one in greatest breadth, its outline irregular from the number of bays and small rocky headlands. On

its western side the bays are small, and the shores generally steep and rocky with sandy intervals, the banks being covered with brush of the usual Australian inter-tropical character. The rock here is either a stratum of iron stone in irregular masses and nodules cemented together by a ferruginous base on a very coarse sand-stone, almost a quartzose conglomerate, in cliffs occasionally 30 feet in thickness. The latter stone is suitable for rough building purposes, such as the construction of a pier, but is much acted upon by the weather. On the north and eastern sides the bays are large and generally sandy, with the land sloping down towards them from the low undulating hills which compose the rest of the island. These hills are either sandy or covered with iron-stone gravel over red clay. They are thinly covered with a sprinkling of *Grevillea*, *Bonnia*, *Levupozen*, &c., and occasional tufts of the coarsest grass.

The place was seen under the most unfavourable auspices, being at the close of the dry season, and after most of the grass had been burnt down. Still we may confidently state that the herbage is not sufficient for the permanent support of more than a very few head of horses or cattle and about fifty sheep. Water was found in small quantities in several places, sufficient however for the support of a small party during the dry season, and by digging wells no doubt the quantity would be greatly increased. There are also several small spots where the soil is suitable for gardening purposes, thus ensuring a supply of vegetables during the greater part, perhaps the whole of the year.

Natural Capabilities of Cape York.

Water.—In viewing Cape York as the probable site of a future settlement, an important feature to be noticed is the comparative abundance of fresh water at the very close of the dry season. In Evans Bay it may always be procured by digging behind the beach, especially at the foot of some low wooded hillocks towards its western end. Native wells were met with in most of the smaller bays, and the size of the dried up water courses indicates that during the wet season a considerable body of water is carried off by them from the flats and temporary lagoons. At the back of Cape York Bay there is a large tract of low land which must occasionally be inundated, but, from the quantity of salt glistening on the surface of the hardened mud when we saw it, and its proximity to an extensive mangrove creek running up about a mile from the sea, the water at these times must be brackish. Behind the eastern termination of Evans Bay, a few hundred yards from the beach, we found in the beginning of October two small pools of water about a foot in depth in the bed of a lagoon surrounded by dense brush, but in the course of two weeks the water had disappeared.

Soil.—Were one inclined from interested motives to extol the natural capabilities of the neighbourhood of Cape York it would not be difficult to speculate upon, and at once to presume its peculiar fitness for the growth of tropical produce. Thus any swampy land might at once be

cried up as being peculiarly adapted for paddy-fields, and barren stony hills as being admirably suited to the growth of cotton, coffee and indigo. With the exception of a piece of rich soil, several acres in extent, on the eastern margin of a water course leading from the small lagoon behind Evans Bay, and which would be a good site for a large garden, we did not see any soil fit for cultivation, except small patches here and there in the brushes removed from the beach. In the belts of brush along the beaches the soil, despite the accumulation of vegetable matter, is essentially poor and sandy. It may be added that the value of the land above alluded to is much enhanced by its proximity to a constant supply of water to be procured by digging in the bed of the lagoon.

Pasturage.—Nearly the whole of the grass which we saw was of a coarse and sedge like description, which sheep would not touch, nor would horses or cattle from choice. Towards the end of the dry season, the grass, if not burnt off by the natives, as is usually the case, is completely dried up, and presents a most uninviting appearance.

Speculations.—In advocating the expediency of forming a settlement at Cape York, or of transferring thither the establishment now at Port Essington, one must be guided to a certain extent by the experience derived at the latter place. If during the eleven years' existence of this detached military port one finds much worthy of imitation in conducting the first stages of colonization, let him also be warned by the blunders committed, and profit by experience, of the effects of a narrow-minded selfish policy. Let us now consider the respective merits of Port Essington and Cape York.

The objects to be attained by forwarding a settlement on the North Coast of Australia, are believed to be:—

The cultivation of articles of Tropical Produce for Exportation.

There is one circumstance which alone is sufficient to unfit Port Essington and Cape York for becoming places of agricultural importance, viz. the exceedingly small proportion of arable soil, which, were it all under cultivation, never could produce more rice, sugar, &c., than would be sufficient for the use of a small establishment. It must be borne in mind that, in tropical Australia, agricultural operations, beyond the formation, keeping up of a mere garden, cannot be performed by European labour unless at a great expenditure of health, and consequently of life, thus rendering necessary the introduction of Malays, Chinese, or Coolies as labourers. It follows, therefore, that, on this coast, should a sufficiently extensive tract of fertile country ever be discovered, colonization for agricultural purposes need not be attempted except on the large scale, fortunately however there is little probability of such an occurrence; deceived as people have been by visionary theorists and others whose pecuniary interests would be affected, deceived at one time by the furnishing of false, and during a succession of years by the suppression of true information, a step of this importance would neither be undertaken nor sanctioned.

The introduction of British Goods into the Indian Archipelago.

It being well known that the inhabitants of the southern and eastern portions of the Indian Archipelago were desirous of establishing a trade with the British, and were only prevented from doing so by the power and influence of the Dutch, so it was confidently and strongly urged that, immediately upon the establishment of a settlement as Port Essington, the Malays would resort thither for trade.

That such has not been attended by the predicted result has been proved by the experience of eleven years. The virtually prohibitory duties imposed on British goods by the Dutch, their jealous and vigilant watchfulness against smuggling, the subjection in which the natives of the islands under their sway are held, and the influence which they have obtained over others, conjoined with their last stroke of policy, the throwing open of Macassar as a free port, render it highly improbable that any settlement of ours in the North Coast of Australia would enable the English trader to compete with the Dutch, or materially extend the British influence in these seas, unless powerfully supported by other measures.

The Relief of Crews of Vessels wrecked in Torres Strait.

Shipwrecks, once so common in Torres Strait, though yearly becoming more unfrequent, must yet be occasionally expected in a navigation rendered intricate by a complication of reefs and narrow passages. With scarcely a single exception, these wrecks have taken place to the eastward of Cape York, which the survivors had thus to pass in their boats on their way to Port Essington, 650 miles further on, as the nearest place where protection could be obtained. It should also be considered that, besides this additional distance (performed probably in a crowded boat on short allowance of food and water,) the land about Port Essington, being so low that the trees are the only land-mark, is easily missed by a slight error in the longitude, at all times a point difficult to determine in boat navigation.

There can, therefore, perhaps be no doubt as to the superior merit of Cape York, as a place of refuge, especially when conjoined to this there would be frequent opportunities of forwarding the wrecked crews to India, and elsewhere, by passing vessels.

The imperfectly known south-east Coast of New Guinea, with its noble rivers running up into the interior for hundreds of miles, will, probably 'ere long open up a new field for British commercial enterprise. In this case the presence of a settlement at Cape York, would be of importance, to the small trading vessels, which would then frequent the north-east portion of Torres Straits. At the same time the natives of Darnley and other Islands who have earned an unenviable notoriety for many acts of savage treachery would effectually be kept in check, and their friendship turned to account. In their large canoes they might easily visit the settlement, bringing with them tortoise-shell, yams, cocoa-nuts, and the other productions of their islands.

Cape York bids fair to be a much more healthy station than Port Essington, although it must be granted that with regard to the presence of endemic, and occasional visits of epidemic disease, the negative evidence it too slight to be relied upon. The situation of Victoria, at a distance of 16 miles from the sea, on the shores of a narrow harbour, surrounded by low wooded country impeding the free circulation of air, renders the place a furnace for days together when the sea breeze does not reach it. The land about Cape York, on the other hand, is freely exposed to the prevailing wind, during either monsoon, and a site for the buildings might be so chosen as to receive its full influence.

At Port Essington, the infrequency of external communication, while it ultimately tended to produce despondency and passive indifference, also prevented the regular transmission of supplies. The result was, that the food supplied was frequently of bad quality, or deficient in quantity, and some important article was usually wanting. This state of matters need never happen at Cape York.

The expense of forming such a small establishment as would ensure protection to our commerce passing through Torres Strait, and assistance to shipwrecked crews need not be great. The necessary buildings might be erected on the rocky peninsula, forming the eastern boundary of Evans Bay, within a very short distance of fresh water, and ground suitable for a large garden, besides being close to the anchorage and landing-place. The stone, although hard and somewhat difficult to quarry, would answer well for building, and a boat jetty might easily be constructed. From this place, Port Albany and the bay, recommended for a coaling depot, would be in full view, and constant communication kept up by signal, by which, also, the approach of any vessel from the southward might be made known to the settlement.

REMARKS ON STEAM NAVIGATION OF THE PACIFIC OCEAN, AND ON THE COMMERCE OF SOUTH AMERICA.

(Concluded from p. 297.)

HAVING thus touched upon the various articles of commerce which each State affords or requires, we will now enter on the plan by which it is proposed that interchange should be carried on by steam vessels

On reference to a map it will be seen that all the different Political divisions of South America, radiate as it were from a centre, and are bounded on one of their frontiers by either the Atlantic or Pacific Ocean. Bolivia and Paraguay are excepted, but they are easy of access by water likewise. The former by the Amazon, and the latter by the Parana river. From Chagres on the Atlantic side of the Isthmus I would have

a line of steam vessels, running along the coast of New Granada, touching at the ports of Carthagena, Laguayra, and Porto Cabello, &c., in the Guianas, at Demerara, Berbice, Paramaribo and Cayenne, in touching lastly at Bahia and other northern ports of the Brazils, to connect the stream of commerce with the English and Rio Janeiro line of packets. In connection with this branch of steamers I would propose that a bi-monthly vessel of light draught of water and great power, on the plan of the vessels employed in the Mississippi river, be despatched up the Amazon, with a view of gradually opening up the communication with Quito, Lima, and Potosi, within a few miles of each of which cities, feeders of this mighty river are seen running.

From Rio Janeiro another set of packets ought to run southward to the Rio de la Plata, touching at the various ports of St. Catherina, Rio Grande, Monte Video and Buenos Ayres, and here again an offshoot of smaller vessels, might foster trade and create a spirit of commerce in the great streams of the Uruguay and Parana, and their many tributaries; the Vermejo, Rilcomayo, Salado, &c. On the Pacific side of the continent all that requires to be done is to reduce the price of passage and freight money, the communication and conveyance from Panama to Valparaiso is sufficiently rapid and constant. We have now brought these two great arteries of Steam navigation, the one in the South Atlantic, the other in the South Pacific, into nearly opposite stations on either side of the continent; our next object must be to connect these two points, by the shortest and most expeditious route. Any person will naturally say, that a steam voyage from the mouth of the river Plate (as seamen love to call it) round Cape Horn, or through the Straits of Magellan, to Valparaiso, would alone, by the risk and expense attendant on it, annul all the advantages of the other part of my scheme; and to surmount that obstacle I have been induced to direct my attention to a route *across* the Continent of America, which was once eagerly, but not judiciously sought after, by the Spaniards, nearly a century ago: namely that of ascending the Rio Negro River from the Atlantic in lat. 40° south, and passing into the Pacific by streams which fall into it in about the same latitude. On a careful examination of the information we possess upon the feasibility of such an overland route, the geography of the continent in this latitude would favour one in expressing an opinion that there was every probability of such an attempt being attended with success.

In lat. 40° and 45° south, the continent of South America has a mean breadth of 550 miles, and in those parallels the Cordilleras are greatly diminished in altitude, and the range much detached and intersected by valleys of considerable expanse.

Mr. Darwin, whose delightful "Journal of Rescarches into the Geology of South America," every one ought to read, says in his description of the appearance of the main land of Patagonia, as seen from the sea in the neighbourhood of the Island Chiloe, "The line of the Andes is not in this neighbourhood nearly so elevated as in Chile; neither does it

appear to form so perfect a barrier between the regions of the earth." And again in another place he says, "We also enjoyed from the anchorage a splendid view of four great snowy cones of the Cordillera, including El Famoso Corcovado, (7,000 feet high,) the range itself had in this latitude so little height, that few parts of it appeared above the tops of the neighbouring islets." And, in addition to the above testimony, an examination of a good map will show that there are many long and narrow inlets running into the main land from the straits between Chiloe and the continent, and that Lake Llanquihue lies almost in the direct meridian of where the highest portion of the Andes would be supposed to occur, and that it is not one of those elevated bodies of water like Titicaca is well known. On the other hand we have the testimony of a Spanish officer, upon the possibility of ascending the Rio Negro. In A.D. 1782, Don Basilio Villarino ascended the Rio Negro, with a large armed party, carrying provisions in heavy launches, for the purpose of reaching the Pacific Ocean, dragging his ill-adapted flotilla against the powerful stream of the river. He reached longitude 68° W., in which neighbourhood he found two streams not far distant from each other, falling into the Rio Negro. The one from the N.W. he called the Diamante; and the other, and more distant one, from the S.W., he named Encarnacion. Ascending the former of the two as being more in the direct route to Valdivia, he found the stream becoming daily more rapid; and at last farther progress was impossible, the main chain of the Cordilleras being but two leagues distant, and the Volcan de Villarica (Cerro Imperial) was in full view, which he knew well his countrymen in the city of Valdivia could also see, and usually travelled the distance between the two points in three days.

The inhabitants in Villarino neighbourhood seemed to hold intercourse with the Spaniards on the Pacific side of the Cordillera, and spoke of the route as more tedious than difficult. An exploring party was despatched under an officer, and in this report he asserted that they reached a *valley*, on the south side of Cerro Imperial, which, as far as the eye could reach spread to the westward, the land rich and covered with vegetation. Fruits, especially apples, abundant, and the general features of the country very unlike the desert they had been travelling over from the Atlantic Ocean.

Villarino now descended the Diamante into the main stream, with the intention of pursuing his examination of the Encarnacion, which one cannot help regretting, he did not decide on doing in the first place, as the appearance of the Cordillera in the north-west direction of the Encarnacion, might have forewarned him of the Andean source of the Diamante. However, it was fated that he should not explore the Rio Encarnacion, for when on the point of starting, he found that his stock of provisions would not justify him in the attempt, and that the increasing numbers and hostile disposition of the natives rendered his farther advance into the country a very hazardous step. Thus foiled, he gleaned what information he could from the Indians, and favoured by the stream rapidly returned to the Atlantic.

From these Indian reports we glean that Villarino's highest point of ascent in the Encarnacion was only two day's journey from the ruins of a Jesuit mission on Lake Nahuelhuapi, (which mission was founded by the holy fathers from the Pacific side of the continent, and was sacked, and all its inmates massacred during the Araucanian war in 1704,) and moreover, these Indians asserted that Europeans, or white men, had reached the said lake from the sea in a boat. Villarino did not again attempt to carry out what I have no doubt he would have succeeded in, namely, that of reaching the Pacific Ocean by the Encarnacion, for it will be seen that the river runs from the exact position of the Lakes Nahuelhuapi and Llanquihue, whose superabundant waters in a country subject to heavy rains, must be thrown either to the east or west.

In 1847, I saw a letter from a Chilian residing near Valdivia, who observes, "it is fully ascertained that the Rio Negro lies under the same degree of latitude as Lake Llanquihue in Southern Valdivia; and it is observed that to the east of that lake, a great depression in the Andes gives foundation for the idea they have a communication, or indeed, that the lake is the source of the stream. In the present month a canoe has been seen on the lake, which it is conjectured came on it from the east, though of that there could be obtained no certain information, as none of our Indians live within 10 or 12 leagues of the banks of the lake, &c.

Taking the whole of this evidence into consideration, I cannot but think that a communication might easily be opened across the South American continent in this neighbourhood. Steam would soon overcome the rapid current of the Rio Negro, and a little engineering skill throw open an easy access from the waters of the Pacific, to the stream of the Encarnacion or Lakes from whence it springs. The natives, whose hostility principally arises from the ill-treatment they and theirs receive daily at the hands of the Spanish Americans, would soon be taught to learn how much to their advantage peace with us would be, and at any rate the fear of a few hundred naked savages ought never to deter us from deciding so interesting a geographical and commercial question.

Let not this, the latter part of my scheme be thrown aside as the dream of a sanguine man. This is an age of novelty and change,—what we laugh at to-day as a fallacy, is on the morrow a glaring fact. I have seen South America, and sailed along her varied shores, finding in each resources, produce, and capabilities lying waste. I have seen rich regions unexplored, a fertile land parched up for want of the stream which runs on neglected, because there is no market for the produce; the sugar-cane running wild, the cocoa-nut rotting on the ground, corn unsold in the granaries, and walls built of hides and horns, which we pay for so dearly; and, when I know, and I feel that steam, the mighty agent, can turn that sleeping land, from its present sleep of sloth, into one teeming with energy, life, commerce, and happiness, I do not envy the dullard who would say, let things be.

Surely, if the Northern Continent, so comparatively poor in productions, has become in the hands of our descendants so rich, so enlightened,

and with all, our best customer among nations, there can be no reason why the South should not equal it. That the day for a new era in the history of South America is not far distant, and that those energies, and wealth, the natives possess in no small degree, will be directed to legitimate objects of rendering their land as great as it is beautiful, I firmly believe.

If in these foregoing remarks I have written hastily, or jumped at conclusions, it must be forgiven on the score of my being too staunch an Englishman not to feel warmly, when I see a native Pancho on a guaucho's back, (and the Manchester looms idle,) a German knife in his hand, a Yaukee stirrup iron on his foot, and a French ribband on his hat, for my conscience tells me that English Commercial energy must be asleep, or such things could not be.

EL ENANO.

A FRENCHMAN'S REMARKS ON THE BRITISH NAVY.

THE following extract is from the pen of the late Chateaubriand, whose literary fame survives him. It may have some interest for the seaman, who, like others of his countrymen, no doubt is curious to know the opinion of foreigners respecting that service which has had such an influence over the affairs of the world.

The remarks, it will be observed, with reference to British seamen, seem to apply more particularly to their situation during the late wars; nevertheless, the expressions, brief as they are, coming from a Frenchman of talent, and who had seen much of the world, are not devoid of interest at the present time.

He says:—"Since England has become a maritime power, she has displayed her peculiar genius in this new career, her naval officers are distinguished from all others. The discipline of their vessels is singular,—the English sailor is absolutely a slave; put on board by force, obliged to serve in spite of himself; this man, so independent while a simple labourer, seems to lose all his rights to liberty as soon as he becomes a sailor; his superiors load him with the hardship and most humiliating yoke. How can these men, so proud and so illtreated, submit to such tyranny? This is the miracle of a free government: it is because the law is all powerful in that country, and when it speaks nothing resists."

The reason assigned by the illustrious foreigner, may perhaps be considered a just one generally. The Englishman has more stability of character than the Frenchman; habits as well as the idiosyncrasy of race or nationality, and climate, mould the personal qualities; and although *chacun à son goût* be true, there is a national taste too.

The Englishman has neither the vivacity (*gaieté de cœur*) or fickleness of the Frenchman; and, hence, notwithstanding his freedom of speech,

and action, he is more easily governed, and is less anxious for change than he would be if his feelings were influenced by a more mercurial temperament.

With reference to the seamen of the wars, it may be advanced as a truth that, they possessed the sterling qualities of genuine patriotism, generosity of disposition, and a hardy resolution to conquer all difficulties that beset them; and in whose minds selfishness had no place.

Those were the characteristics of the *race* generally; and it is a proud reflection that, whilst we acknowledge the restraint put upon their personal liberty, they acquitted themselves with a devotion to their country unparalleled in the annals of any nation, and have left a name and a fame, to posterity, for unshaken loyalty and valour, which will live in the hearts of their countrymen, and in the recollection of the world, as long as those annals shall last.

It is a theme which the memory loves to dwell upon—clouded alone by the consideration of that unhappy necessity which gave a cause for the displays. Without vaunting,—throw the recollection back to the days of Nelson,—to that astonishing feat, the result of his genius—the battle of the Nile, of which let the Poet speak:—

“ And thou, Imperial Cæsar, whose sole sway
The long-disputed world at length confessed,
* * * * *
How would ye own your fame surpass'd,
And on the sand your trophies cast,
When the storm of conquest o'er,
And ceas'd the burning battle's roar,
Beneath the morning's orient light,
Ye saw, with sails all swelling white—
Britain's proud fleet, to many a joyful cry,
Ride o'er the rolling surge in awful sov'reignty!”

WM. LILE BOWLES.

We resume the extract.

“ I do not think we should be able, or even that we ought, to transport the English discipline into our vessels; the Frenchman—ingenuous, frank, generous,—desires to approach his chief,* whom he regards as his comrade still more than his captain. Besides, a servitude so absolute as that of the English sailor, can only emanate from civil authority. Now, it is to be feared that it would be undervalued by our officers; for, unfortunately, the French obey the man rather than the law, and his virtues are more private than public virtues.”

If this be a correct exposition, then we have a decided advantage over the French in the internal management of our naval service; the power which the laws authorize, with the British seaman, is highly

* This sentence seems incomplete; there is something wanting to make up the sense. “ Desirous to approach his chief,”—as what? as a “ citizen.”? The “ equality ” of the revolutionary school! “ as a citizen, not as a subordinate,” is that it?

regarded; and the desire to approach his commander as a "comrade," is never felt by him; he has the good sense to know and to appreciate the necessity for distinctions, and, therefore, appears before him with the respectful, but manly bearing of one, who acknowledges a superior. Consequently, he is not remiss in his duty when governed by a harsh or severe chief whom he cannot like, nor, of course, with one he does regard and esteem, whose conduct has given rise to those feelings. Thus, his duty is alike performed; but with this moral effect,—his cheerfulness and happiness are insured, or otherwise in the exact ratio to the disposition displayed by, and the strength of attachment felt for, the commander.

Chateaubriand was mistaken when he asserted that the sailor's superiors load him with the hardest and most humiliating yoke. The rules of the Service do not emanate from the officer; he is as much subject to the force of the established discipline as the seaman is; and if the "yoke" be "hard" the subserviency is not necessarily "humiliating",—it is a condition which attaches to all classes, in degree, throughout the world; and any man in a subordinate situation who conducts himself with propriety will be respected.

The strictness and regularity observed are conducive to the seaman's own comfort; he is early initiated, and obedience becomes habitual, and is only oppressing when individual negligence, on the one side, and excess on the other, make it so. If every officer and foremast-man does his duty in accordance with the existing system, the "yoke" will not be found too burthensome to be borne. We proceed.

"Our officers of Marine were better instructed than those of the English: the latter knew only their manœuvres, the former were mathematicians and men of universal learning."

This appears to be too general an assertion. It seems quite impossible that our old neighbour of the Chateau Combourg—whose whole life was a long dream, tinctured with Natchezian, Atalacian, and Renean fictions, could have, by any means, available to him, arrived at the necessary data to admit of his so confidently pronouncing the fact he has given as a truth. However, *n'importe*, one thing does seem at least more certain—the French mariners were not such good practical seamen as those of the English; but that the English officers "knew only their manœuvres" is an assertion, we must believe, more gratuitous than warranted by truth.

He continues—"In general we have displayed our true character in our navy. We appear as warriors and as artists. As soon as we shall have vessels we will resume our right of primogeniture upon the ocean as upon the land. We shall also be able to make astronomical observations and voyages round the world; but that we shall ever become a nation of merchants, I think we may renounce the idea beforehand. We do all by genius and by inspiration, but we fail in following up our projects. A man possessed of considerable ready money and bold in commercial enterprizes, will, perhaps, elevate himself among us; but will

his son pursue the same career? And will he not rather think of enjoying his father's fortune than of augmenting it?

"With such a principle a nation does not become mercantile. Among us commerce like the rest of our customs, possesses something of the poetic and the fabulous. Our manufactures have been created by enchantment; they have emitted a great lustre, and then have become extinguished."

"As long as Rome was prudent she was contented with the Muses and Jupiter, and left Neptune to Carthage. This god, after all, had only the second empire, for Jupiter launched his thunders also upon the ocean."

Our extract is ended. Perhaps it will be considered that the late Admiral De la Gravier was a more competent judge of naval affairs than "Monsieur Le Viscomte." If the French naval officers displayed their true character of "warriors and artists," were they not outdone—*durant la guerre*,—by those of Britain? That we think, at least, will be admitted as "*un fait accompli*,"—rest we, therefore, content, and cheer ourselves with the hope (that at least also) if fate should bring us in battle array again, the same fact may be fulfilled. All the rest then as now we may not feel disposed to contest;—the possession of the oyster is better than that of the shell!

ARGONAUT.

THE ARCTIC EXPEDITIONS.

IN our last number we stated the departure of H.M.S. *North Star* for Baffins Bay, and alluded to the United States Government sending a ship to the same quarter, and another to Bhering Strait to assist in the search for Sir John Franklin's ships. We find in the *Morning Herald* sentiments on this subject so completely in accordance with our own that we here prefix them to Lady Franklin's letter to the American President, and the answer which she received, as it forms so prominent and interesting a feature in the history of Arctic Discovery.

The conduct of the Government of the United States in sending forth two expeditions to the Arctic Seas in search of Sir John Franklin and his brave associates, is beyond all praise. Probably, in the history of the world, there is not to be found on record so noble, so humane, and so generous a proceeding, on the part of one nation towards another, nor one more likely to cement that good feeling of fellowship which we are convinced it is at all times the wish of every Englishman to foster towards the citizens of the United States.

Truly did Lord Palmerston state in the House of Commons on Tuesday last, that "nothing could redound more to the glory of the United States;" and we entirely concur in the remark of Sir Robert Inglis, that "the example of such a spirit, set by one of the greatest empires in the world,

would go far to avert the chances of war, and is eminently calculated to promote the cause of general peace." Indeed there appears to have been, as there can only be, but one opinion on the subject, and the announcement, as our readers are aware, was received with hearty acclamations from all parts of the house.

The beautiful letter which has already appeared in print addressed to Lady Franklin, by Mr Clayton, does honour to his heart, and with the view of making it more generally known a copy is subjoined.

By the next account from Washington we may hope to hear whether any progress has been made in the equipment of the expedition, but the lateness of the season will probably prevent anything being done *this* year, as it would be next to impossible to fit out an expedition in time to enter Lancaster Sound this present summer. Yet we are not altogether without hopes. The well known energy and vast resources of that great nation may already have been called forth, and even *this* summer an expedition, under command of Captain Wilkes, the enterprising navigator of the Antarctic Seas, may be towed up to Baffin's Bay, and reach the threshold of their enterprise 'ere the door be closed for the winter months.

All that humanity, zeal, science, and fortitude can command we feel assured will be nobly carried out by Captain Wilkes, and his gallant party. Though we should regret, as Lady Franklin has remarked, that our own brave countrymen in those seas should not be the parties rewarded with success, yet we should cordially rejoice with herself and the relatives and friends of all who are embarked with Franklin if it should be to the humane, liberal, and enlightened conduct of America that they owed their restored happiness; and in either case the noble conduct of the United States will form one of the brightest pages in history, and will, we are sure, be read by our children's children for ages yet to come, and till that period shall arrive

"When granite moulders, and when records fail,"
with feelings of the deepest admiration.

Bedford Place, London, April 4.

"Sir.—I address myself to you, as the head of a great nation, whose power to help me I cannot doubt, and in whose disposition to do so I have a confidence which I trust you will not deem presumption.

"The name of my husband, Sir John Franklin, is probably not unknown to you. It is intimately connected with the northern part of that continent of which the American Republic forms so vast and conspicuous a portion. When I visited the United States, three years ago, amongst the many proofs I received of respect and courtesy there was none which touched and even surprised me more than the appreciation everywhere expressed to me of his former services in geographical discovery, and the interest felt in the enterprise in which he was then known to be engaged.

"The expedition fitted out by our Government for the discovery of the north-west passage (that question which for 300 years has engaged the interest and baffled the energies of the man of science and the navigator), sailed under my husband's command in May, 1845. The two ships, *Erebus* and *Terror*, contained 138 men (officers and crews), and were victualled for three years. They were not expected home, unless success had early rewarded their efforts, or some casualty hastened their return, before the close of the year 1847, nor were any tidings expected from them in the interval. But, when the Autumn of 1847 arrived without any intelligence of the ships, the attention of her Majesty's Government was directed to the

necessity of searching for, and conveying relief to them, in case of their being imprisoned in the ice, or wrecked, and in want of provisions and means of transport.

“For this purpose an expedition in three divisions was fitted out in the early part of last year, directed to three different quarters simultaneously,—viz. 1st, to that by which in case of success the ships would come out of the Polar Sea to the westward (or Behring’s Straits); 2dly, to that which they entered on their course of discovery, on the eastern side (or Davis Straits); and 3dly, to an intervening quarter, comprising a portion of the Arctic shore, approachable by land from the Hudson’s-bay Company’s settlement, on which it was supposed the crews, if obliged to abandon their ships, might be found.

“The last division of the expedition was placed under the command of my husband’s faithful friend, the companion of his former travels Sir John Richardson, who landed at New York in April of last year, and hastened to join his men and boats, which were already in advance towards the Arctic shore. Of this portion of the expedition I may briefly say that the absence of any intelligence from Sir John Richardson at this season proves that he has been unsuccessful in the object of his search.

“The expedition intended for Behring’s Straits has hitherto been a complete failure. It consisted of a single ship, the *Plover*, which, owing to her setting off too late, and to her bad sailing properties, did not even approach her destination last year.

“The remaining and most important portion of the searching expedition consists of two ships under the command of Sir James Ross, which sailed last May for Davis’ Straits, but did not succeed, owing to the state of the ice, in getting into Lancaster Sound until the season for operations had nearly closed. These ships are now wintering in the ice, and a storeship is about to be despatched hence with provisions and fuel, to enable them to stay out another year. But one of these vessels is, in a great degree, withdrawn from active search by the necessity of watching at the entrance of Lancaster Sound for the arrival of intelligence and instructions from England by the whalers.

“I have entered into these details with the view of proving that, though the British Government has not forgotten the duty it owes to the brave men whom it has sent on a perilous service, and has spent a very large sum in providing the means for their rescue, yet that owing to various causes, the means actually in operation for this purpose are quite inadequate to meet the extreme exigence of the case. For, it must be remembered, that the missing ships were victualled for three years only, and that nearly four years have now elapsed, so that the survivors of so many winters in the ice must be at the last extremity; and also it must be borne in mind, that the channels by which the ships may have attempted to force a passage to the westward, or which they may have been compelled by adverse circumstances to take, are very numerous and complicated, and that one or two ships cannot possibly in the course of the next short summer explore them all.

“The Board of the Admiralty; under the conviction of this fact, has been induced to offer a reward of £20,000 sterling to any ship or ships of any country, or to any exploring party whatever, which shall render efficient assistance to the missing ships or their crews, or any portion of them. This announcement, which, even if the sum had been doubled or trebled, would have met with public approbation, comes, however, too late for our whalers, which had unfortunately sailed before it was issued, and which, even if the

news should overtake them at their fishing grounds, are totally unfitted for any prolonged adventure, having only a few months' provisions on board, and no additional clothing.

"To the American whalers, both in the Atlantic and Pacific, I look with more hope as competitors for the prize, being well aware of their number and strength, their thorough equipment, and the bold spirit of adventure which animates their crews. But I venture to look even beyond these. I am not without hope that you will deem it not unworthy of a great and kindred nation to take up the cause of humanity which I plead, in a national spirit, and thus generously make it your own.

"I must here, in gratitude, adduce the example of the Imperial Russian Government, which (as I am led to hope by his Excellency, the Russian Ambassador in London, who forwarded a memorial on the subject,) will send out exploring parties this summer from the Asiatic coast of Behring's Strait northward in search of the lost vessels. It would be a noble spectacle to the world, if three great nations, possessed of the widest empires on the face of the globe, were thus to unite their efforts in the truly Christian work of saving their perishing fellow men from destruction. It is not for me to suggest the mode in which such benevolent efforts might best be made. I will only say, however, that if the conceptions of my own mind, to which I do not venture to give utterance, were realised, and that in the noble competition which followed American seamen had the good fortune to wrest from us the glory (as might be the case), of solving the problem of the un-found passage, or the still greater glory of saving our adventurous navigators, from a lingering fate, which the mind sickens to dwell on, though I should in either case regret that it was not my own brave countrymen in those seas whose devotion was thus rewarded, yet should I rejoice that it was to America we owed our restored happiness, and should be ever bound to her by ties of affectionate gratitude.

"I am not without some misgivings while I thus address you. The intense anxieties of a wife and of a daughter may have led me to press too earnestly on your notice the trial under which we are suffering (yet not we only, but hundreds of others), and to presume too much on the sympathy which we are assured is felt beyond the limits of our own land. Yet, if you deem this to be the case, you will still find, I am sure, even in that personal intensity of feeling, an excuse for the fearlessness with which I have thrown myself on your generosity, and will pardon the homage I thus pay to your own high character and to that of the people over whom you have the distinction to preside.

"I have the honour to be, Sir,

"With great respect, your obedient servant,

"JANE FRANKLIN."

Department of State, Washington, April 23.

"Madam.—Your letter to the President of the United States, dated April 4, 1849, has been received by him, and he has directed me to make the following reply:—

"The appeal made in the letter with which you have honoured him, is such as would strongly enlist the sympathy of the rulers and the people of any portion of the civilised world.

"To the citizens of the United States, who share so largely in the emotions which agitate the public mind of your own country, the name of Sir John Franklin has been endeared by his heroic virtues, and the

sufferings and sacrifices which he has encountered for the benefit of mankind.

"The appeal of his wife and daughter, in their distress, has been borne across the waters, asking the assistance of a kindred people to save the brave men who embarked in his unfortunate expedition, and the people of the United States, who have watched with the deepest interest that hazardous enterprise, will now respond to that appeal by the expression of their united wishes, that every proper effort may be made by this Government for the rescue of your husband and his companions.

"To accomplish what we have in view, the attention of American navigators, and especially our whalers, will be immediately invoked. All the information in the possession of this Government to enable them to aid in discovering the missing ships, relieving their crews, and restoring them to their families, shall be spread far and wide among our people; and all that the Executive Government of the United States, in the exercise of its constitutional powers, can effect to meet this requisition on American enterprise, skill, and bravery, will be promptly undertaken. The hearts of the American people will be deeply touched by your eloquent address to their chief magistrate, and they will join with you in an earnest prayer to him whose spirit is on the waters, that your husband and his companions may yet be restored to their country and their friends.

"I have the honour to be,
 "Your Ladyship's friend and obedient servant,
 "JOHN M. CLAYTON."

MISSING MERCHANT SHIPS.

Extract from Lloyd's List, 8, Dec., 1848.

The Lahore sailed from Matanzas, 2nd, Sept., for Cork and is supposed to have taken on board part of the crew of the "Regina" from Dominica and Antigua to London, about 25th Sept., in lat. 41°, long. 54°, since which she has not been heard of.

Seven men and sundry articles were taken from the Regina on the 25th Sept., by the "John Dunlop," and arrived at Liverpool 23rd Oct., she (Regina) was subsequently fallen in with abandoned, with main and mizen-masts carried away, fore-mast standing, main hatches and cabin bulk-head stove on the 27th Sept., in lat. 41° N., long. 54° W., and boarded by the Auguste and Bertha, arrived off Falmouth 15th Oct.

- | | |
|---|----------------|
| 1.—Madelina, Greenfell, Copper Ore, St. Jago, sailed 16th August, 1848. | |
| 2.—Hazard, Sugar, Havana or Matanzas, | 25th " |
| 3.—Zaida, Sugar, " " | 27th " |
| 4.—Isabella Cooper, Sugar, " " | 30th " |
| 5.—Sharon, Sugar, " " | 1st September. |
| 6.—Alicia, Copper Ore, St. Jago, | 1st " |
| 7.—Lahore, Sugar, Havana or Matanzas | 2nd " |
| 8.—Havana Packet, Sugar, " " | 2nd " |
| 9.—Auricula, Copper Ore, St. Jago, | 20th November. |
| 10.—Mary Dugdale, Copper Ore " | 26th " |
| 11.—Kelmaurs, Sugar, Matanzas, | 3rd December. |
| 12.—Hong-Kong, Sugar, Havana, | 15th " |

The above twelve vessels sailed from Cuba, between 15th August, and 31st December, and have not since been heard of.

F. T. C.

London, 20th April, 1849.

into the left-hand semi-circle in time to heave to on the larboard tack, at a sufficient distance from the centre, but with a force of 10 as marked in Admiral Beaufort's scale. It would, indeed, never do to attempt crossing the path with the great probability of meeting the centre, and being caught therein. The line S., E.N.E., is farther removed from the centre but even on this line in a large hurricane, it is very probable the ship would meet the centre.

I am, &c.,

W. R. BIRT.

To the Editor N.M.

PEACOCK'S ANTI SARGASSIAN PAINT.

THE Peninsular and Oriental Steam Navigation Company's iron steamer, *Ripon*, of 200 tons, has been docked, scraped, and coated with Capt. George Peacock's Anti-Sargassian Paint. We understand that an iron-plate, coated with this substance, has been sunk alongside the Ariadne hulk, in the harbour of Alexandria, for a period of four months, and found to be quite clean at the expiration of that time, and also another iron-plate, coated with it, in Dockyard Creek, Malta, for a period of nearly five months, with equally good results.

NOSSHEAD LIGHTHOUSE.

The Commissioners of the Northern Lighthouses hereby give notice, that a light-house has been built upon the point of Nosshead, in the county of Caithness, the light of which will be exhibited on the night of Monday the 18th June, 1849, and every night thereafter, from sunset till sunrise.

The following is a specification of the light-house, and the appearance of the light, by Mr. ALAN STEVENSON, Engineer to the Commissioners:—

The light-house is in N. lat. $58^{\circ} 28' 38''$, and in W. long. $3^{\circ} 3' 5''$. By compass the light-house bears from Ackergill Tower in Sinclair's Bay, E.b.S. $\frac{3}{4}$ S. distant 2 miles; from Duncansby Head, S.S.W. $\frac{3}{4}$ W., distant 10 miles; from Pentland Skerries Light-house, S.W.b.S. $\frac{1}{4}$ W., distant 13 miles; from Elzieness, N.N.E. $\frac{1}{2}$ E., distant $1\frac{1}{2}$ miles; and from Sarclethead, N.E. $\frac{1}{4}$ N., distant $6\frac{3}{4}$ miles.

The Nosshead light will be known to Mariners as a Revolving light, which gradually attains its brightest state once every half minute and then as gradually declines, until to a distant observer it totally disappears. The light will be visible towards the north and east, between W.N.W., and S.W. $\frac{1}{4}$ W. From S.W. $\frac{1}{4}$ W., to N.E. $\frac{3}{4}$ N., in a South-easterly direction, the light will be of the Natural appearance: but from N.E. $\frac{3}{4}$ N., to W.N.W., in a northerly direction, (or within Sinclair's bay,) it will be coloured Red. The lantern is elevated 175 feet above the level of the sea: and the light will be seen at the distance of about 15 miles, and at lesser distances according to the state of the atmosphere: and, to a near observer, in favourable weather, the light will not wholly disappear between the intervals of greatest brightness.

The Commissioners hereby further give notice that, by virtue of a Warrant from the Queen in Council, dated 11th August 1848, the following Tolls will be levied in respect of this light, viz:—

“For every vessel belonging to the United Kingdom of Great Britain and Ireland (the same not belonging to Her Majesty, her heirs and successors, or being navigated wholly in ballast), and for every Foreign vessel which, by any Act of Parliament, Order in Council, Convention, or Treaty, shall be privileged to enter the ports of the said United Kingdom, upon paying the same duties of tonnage as are paid by British vessels (the same not being vessels navigated wholly in ballast) which shall pass the said light house upon Nosshead, or derive benefit thereby, the toll of one Farthing per ton of the burden of every such vessel, for each time of passing the said light-house, or deriving benefit thereby, on a coasting voyage, and double the said toll for passing or deriving benefit on an oversea voyage: and double the said respective tolls for every Foreign vessel not so privileged.”

By order of the Board,

(Signed) ALEX. CUNINGHAM, Secretary.

Office of Light-house Board, Edinburgh, May 16, 1849.

DOINGS OF THE CRIMPS AT NEW ORLEANS.

In a letter received in Hull, from one of the crew of the *St. John*, is the following strange statement. At the time when the British ship *St. John*, was all ready, except the completing of her crew, to sail for New Orleans, on her recent passage to Liverpool, it came to the knowledge of the master that a few days previously, the Crimps of that port had shipped two dead men as part of the crew of another ship. The thing was done in this way. The Crimps have thirty-five dollars from the master for each man they ship. In order to secure this, and other “plunder,” the fellows inveigle sailors into their houses, and there keep them in a state of extreme drunkenness, until some vessel is upon the point of sailing. They are then lowered like logs of wood into a boat, and like any dead lumber hauled on board the ships they are to navigate, and put to bed, there to become sober. In the case alluded to, the master, on examining his bargain, found in the sleeping-berths, two dead carcasses, so cold, as convinced him that they had not died on board.

The sailors, who are thus knocked about most unceremoniously, require little enticement to enter the houses of the Crimps, the high wages paid for the run home being sufficient inducement. To prevent a like imposition with the above, the master of the *St. John* had his crew examined as they came on board. Several of them were “dead drunk,” but all were rigged as sailors. Next morning, however, when the ship was under sail, one of them asked where they were going to, and on being told to Liverpool, he expressed his astonishment, as he was an emigrant farmer, who had only two days previously landed from England. He had immediately on landing got drunk, fallen into the company of these Crimps, been robbed, and was now shipped as a British seaman. He, however, was not alone. There was a second emigrant shipped in like manner, who had only been in New Orleans a week; a third, who could scarcely speak a word of English, proved to be an Italian hurdy-gurdy boy, who had been kidnapped by these Crimps,

as had also more of the crew. One fellow positively refused to work at all, and it was not until he had been put in irons, and his food withheld, that he consented to do duty to the best of his ability. Such is the method of manning the British merchant marine in New Orleans. The hurdy-gurdy boy, on being discharged in Liverpool, met in the streets of that town a boy of his own country and the like occupation, and embraced him with the most extravagant delight.—*Hull Advertiser*.

EXAMINATION OF MASTERS AND MATES.

A List of the Masters and Mates in the Merchant Service, who have voluntarily passed an Examination, and obtained Certificates of Qualification for the Class against each assigned, under the Regulations issued by the Board of Trade, to the 31st of March last.

MASTERS.

Mar. 1st.—A. Parish, class 1st, age 33, ship Northumberland, 900 tons, London; A. Reid, 2nd, 53, Macqueen,* 1300 t.; J. Hart, 2nd, 25, Brunette,* 326 t., 324963; J. B. Kennedy, 2nd, 33, Tigris,* 33198; J. N. Gittins, 2nd, 37, Britannia,* 212 t., 12106; G. Browne, 2nd, 26, Plantagenet,* 806 t. 14375; W. Rogers, 3rd, 27, Sir John Falstaff,* 513 t. 247584; V. T. Howes, 3rd, 27, Countess of Eglinton,* 250 t. 436272; J. Petrie, 3rd, 33, Viatic, 257 t.,* 181667, Newcastle; J. Harper, 2nd, 39, Clio,* 424 t. 86891, Shields; W. M'Culloch, 1st, extra, 32, Dorset,* 293 t., 8820, Plymouth; J. M'Leish, 1st, 34, Morgiana, 354, t., 180263, Dundee.—5th.—D. Rennoldson, 2nd, 29, Plantagenet,* 806 t., 26358, London; T. Wellsman, 3rd, 27, City of Aberdeen,* 285 t., 36527.—6th.—W. Youngs, 3rd, 27, Jim Crow,* 104 t., 334495, Yarmouth; R. Vogwell, 1st, 23, Varuna,* 9472, Shields; C. Duncane, 2nd, 27, Nena,* 208 t., 64535, Dundee.—7th.—H. Dunsford, 1st, 31, Jane Cain, 270 t., Plymouth; J. Arkley, 2nd, 24, Burlington,* 286 t., 78832, Newcastle.—8th.—M. Brown, 2nd, 27, Harlequin, 294 t., Hull; T. Booth, 3rd, 38, Planet, 392 t., London; T. Miller, 2nd, 24, Daisy, 178 t., 83508, Dundee; J. Bennett, 2nd, 26, Stamfordham,* 236 t., 53189, South Shields.—10th.—W. Broadfoot, 1st, 30, Sovereign, 243 t., Glasgow; J. Sangster, 1st, 40, Lysander, 475 t.; F. R. Taylor, 1st, extra, 25, Achilles, 654 t.—12th.—W. Cameron, 2nd, 37, Charles, 238 t., London; J. Cammell, 2nd, 32, Scindian, 650 t., 20470; S. Frost, 3rd, 35, Brighton, 395 t., 1380; W. Clark, 3rd, 35, Caroline Agnes,* 570 t., 160370; G. Nickels, 2nd, 34, Anne, 83807, South Shields.—15th.—A. Skinner, 2nd, 26, Loharec,* 575 t., 328816, London; G. P. Lambert, 2nd, 34, Ellenborough, 1031 t., 27265; S. Potter, 2nd, 26, Richard Dart, 270 t.; J. W. Eves, 3rd, 32, Larpent,* 614 t., 179063; J. McKirdy, 3rd, 34, Mary Bannatyne, 550 t.; J. Hills, 2nd, 31, Mary Ann Cook, 254 t., 12723, South Shields.—16th.—F. Sullivan, 2nd, 25, Prince Regent,* 528 t., 69178, Plymouth; W. Liddell, 2nd, 27, Retreat, 337 t., Leith.—17th.—J. Ewing, 1st, 30, Persia, 669 t., Glasgow; W. P. Couch, 1st, 29, Jane, 700 t., Liverpool.—19th.—G. N. Livesay, 1st, 48, China, 58 t., London; G. E. Bird, 2nd, 36, Plantagenet, 806, t.; W. Brown, 2nd, 35, Tanjore, 422 t.; A. H. Fuller, 3rd, 36, Northumberland,* 900 t., 328327; J. Dorman, 3rd, 33, Portly,* 350 t., 343692; J. H. Pickrell, 3rd, 25, Sir Edward Parry,* 575 t., 436830; A. C. Couper, 2nd, 28, Yarangon,* 59213, South Shields.—20th.—T. Brodrick, 1st, 29, Seringapatam, 434 t., Hull; W. Giles, 2nd, 32, Princess Royal,† 1109 t., 273082,

Plymouth; D. Spink, 2nd, 23, Agnes Blakie, † 385 t., 48041, Dundee.—21st.—J. Gardner, 2nd, 32, Brougham, † 230 t., 182423, Dundee.—22nd.—M. Rogers, 2nd, 41, City of York, 841 t., London; J. R. Smith, 2nd, 29, Golden Spring, 316 t., J. Davies, 3rd, 36, Pestonjee Bomanjee, * 595 t., 33114; J. G. Appleton, 2nd, 34, Good Design, * 110 t., 212621, Yarmouth.—23rd.—J. Young, 1st, 50, Negotiator, 580 t., Liverpool; W. M'Pherson, 2nd, 28, J. Bromham, * 385 t., 448201; T. F. Liddle, 2nd, 36, Australian, 198 t., Plymouth; J. Kiell, 1st, 38, William, 252 t., Dundee; A. F. Morris, 1st, 33, Vixen, 200 t., Glasgow.—24th.—A. Scott, 1st, 36, Royal Shepherdess, 406 t., Leith.—26th.—W. Symons, 2nd, 39, Honesta, 136 t., London; A. Mackwood, 2nd, 13, Symmetry, 392 t.; A. Seaman, 2nd, 27, Equator, * 235 t., 7732; W. Wilks, 3rd, 35, Hebe, 213 t., 230231, South Shields.—27th.—H. Hughes, 1st, 47, Caroline, 372 t., Newcastle.—28th.—W. Waddington, 2nd, 25, Mary Ann, 478 t., Liverpool; J. Bell, 1st, 28, Teazer, 140 t., 257991, T. Campbell, 1st, 41, Velore, 484 t.—29th.—J. B. Lock, 2nd, 44, Vigilant, 298 t., London; J. Johnston, 3rd, 25, Persia, * 669 t., 211414; R. Deas, 3rd, 28, Abel Gower, * 350 t., 29919.—30th.—W. Jago, 2nd, 33, Priscilla, 516 t., 244010, Plymouth.—31st.—G. Taylor, 2nd, 36, Columbine, 406 t., Hull.

MATES.

Mar. 2nd.—J. Taylor, 3rd, 29, Hope, 337 t., 184047, Plymouth.—5th.—R. Williams, 2nd, 22, Nith, † 643 t., 407056, London; J. T. Townsend, 3rd, 35, Richmond, 180 t., 14824.—15th.—W. H. Notley, 3rd, 23, Druid, 249 t., 16190, London; T. Bevan, 3rd, 26, William and Charles, 137 t., 24718.—19th.—W. Butcher, * 2nd, 23, Caledonia, † 721 t., 23571, London.—22nd.—A. C. Jamieson, 3rd, 21, Scotland, † 1000 t., 436865, London.—23rd.—L. Webster, 2nd, 24, Sovereign, 243 t., 100770, Glasgow.—26th.—J. P. Newton, 1st, 27, William and James, 130 t., 1149, Dundee.—28th.—F. D. Fenwick, 2nd, 21, William, 252 t., 70586, Dundee.—29th.—T. Fuller, 3rd, 21, Tigris, † 427 t., 324187, London; J. Paterson, 3rd, 54, Countess of Seafeld, 450 t., 227331.

* W. Butcher, qualified to act in Steam Vessels only.

* As Mate. † As Second Mate. ‡ As Seamen. †† As Apprentice.

PASSING OF MASTERS.—*Mercantile Navy.*

February, 25th 1849.

MY DEAR SIR.—I am a constant reader of your valuable publication, and take great interest in your accounts of those who pass the examination at the Trinity-house.

But the object of my letter is to suggest a plan in the system of examination, which perhaps may meet the eye of those by whom the arrangements are conducted. I am the son of a professional man, and have been at sea ten years; the last four of that period in the Calcutta country service. Now, I received what is generally termed a good education prior to my going to sea, besides studying navigation under the care of a retired Lieut. of the Royal Navy. Since then I have studied at Mrs. Taylor's, under the able tuition of W. H. Prior, Esq., at which time I made myself thorough master of the work on navigation published by the abovenamed lady.

Having now given you an outline of myself for reasons I shall afterwards prove to you, I shall proceed to state that a few days ago a work was placed in my hands edited by a Mr. J. Griffin. Who the gentleman is I know not, but I felt inclined to work a problem through, which I shortly effected, but found myself deficient in the latitude by the reduction to the meridian, also

in finding the rate and error of chronometers between two given meridians. These by a little practice I shall soon become perfect in, thus you see as far as the theoretical part of the examination goes I am surely fitted to take command. But in proceeding with the book in question I find that an extensive knowledge of trigonometry is required for a first class, (letting alone the extra,) even advising the study of the works of Keith and Hutton, besides other qualifications, in which it would require a study of at least a year to become a proficient. Now, I have in my younger days gone through the first six books of Euclid, but I know nothing of these now, and cannot afford the time to study as every day is now of importance to me, as I have the promise of a share and command of a vessel as soon as I can prove myself capable by passing my examination at the Trinity-house.

Now, there is a first class extra, why should there not be a second class extra, and let the extra be obtainable by those who are able to work a lunar, find the lat. by reduction to the meridian, &c. With regard to seamanship, I think one class ought to be as qualified as the other, but of course I leave this to those who are better able to judge than myself.

With every apology for the egotism of this communication, I submit it for your perusal, and should you think it worthy a place in your valuable magazine, where I trust it will meet the eyes of those for whom it is intended, by inserting it you will greatly oblige.

Yours very faithfully,
MAIN BRACE.

MORE ODD FISH.

[The extracts which we have already made from the very interesting account of the kraken, so intimately concerns our Nautical readers, that we are induced for the same reason to take the following from the same source. We have already detailed a variety of "Odd Fish" in a recent number,—this contribution to the stock, as well as those preceding it, will apprise seamen of the great variety of objects there are in the depths of the ocean, and which sometimes appear at the surface, mistaken by the sailors for oceanic dangers.]

THERE is sufficient ground in the above facts to believe that, in certain parts at least of the ocean, there must exist some agency by which the waters of the lower strata acquire greater warmth than could have been anticipated, and certainly there is no evidence to show that they ever lose their fluidity, or cease to continue a medium in which organic life may continue. If there be truth in the theory of the earth's central heat, it may be that the temperature of the lowest depths of the ocean, depths measurable by miles rather than fathoms, may equal or even exceed that of the surface.

When we remember how highly stimulant of increase of size heat is in most divisions of the animal kingdom, it is not inconsistent with analogy to imagine, that in those parts where the energies peculiar to the marine creation exist in largest force and area, there also will be the greatest development of form. We see the oceanic fishes and even those of deep lakes greatly exceeding in size the denizens of the shallow waters, and geologists

universally ascribe the giant proportions of the reptiles of former periods to the high temperature then prevailing on the globe.*

It will be in place here to enumerate some of the largest creatures of both past and present existence; and to afford a ready standard of comparison, we will commence by naming the great porpoise, black whale, or finner. This is probably the hugest of living creatures, attaining a length of 120 feet, with a circumference of 30 to 40 feet; being in bulk the counterpart of a vessel of 300 to 400 tons burthen. Dead specimens have been measured 105 feet in length. The basking shark attains 40 feet, and from the fossil teeth of the white shark occasionally found, it is supposed formerly to have reached a length of 60 feet. The extinct saurians, *if extinct they be*, such as the ichthyosaurus and plesiosaurus attained 20 to 25 feet in the skeleton alone; but these are pigmies compared with the mighty iguanodon, whose fossil remains indicate a creature 70 feet or more in length. "Imagine this reptile," says one of our geologists, "re-invest its huge bones with the muscles and other integuments, add the armour of scales, and behold a lizard standing six feet from the ground, on limbs whose upper parts exceed the girth of an ox!" We speak of the elephant as the largest of terrestrial living animals, and only smaller than the mammoth of a former geological period; but there are grounds for believing that in the American mastodon there existed a contemporary with man which exceeded both.† The discoveries in the new red sandstone in Connecticut indicate that races of

* It is not intended to press this argument to its full extent, or to insinuate that the higher the temperature, consistent with life, the larger will be the development of animal organization, for this is not borne out by facts either past or present, especially with regard to fishes.

If we refer to the fossils of the distinct geological periods, it is only in the later formations that we find the gigantic remains of the former denizens of the waters, while in the earlier fossiliferous rocks, not only, we believe, are no reptiles discovered, but the same races of fish, sharks for instance, which subsequently expand so enormously, are seen of most diminutive size, measurable by inches instead of yards. The undue presence of carbonic gas in the atmosphere, however favourable for the growth of marine and aqueous vegetation, may account for the non-existence of terrestrial animals in those earlier periods; but this cause would not, we imagine, have anything to do with fishes, the inhabitants of another medium; their undeveloped size, therefore, must rather be referred to the too high temperature of the waters. It is probable that the degree of heat most favourable for expansion of size among fishes, may be fixed at a lower range than that for reptiles, or even terrestrial animals generally.

† In 1842 there was exhibited in this country the skeleton of a megatherium, named by the discoverer, Mr. Albert Koch, Missouriium Theristo-caulodon. The leading admeasurements of the bones were as follows:—

	Ft. In.		Ft. In.
Length of the whole skeleton	30 0	Total breadth of pelvis	7 2
Height	15 0		
Length of the Head	6 0	Width from one zygomatic arch to the	
Longest rib	5 6	other	4 0
Largest dorsal vertebrae	2 6		
Humerus	3 6	{ Greatest circumference	3 3
Femur	4 0	{ Smallest ditto	2 7
Tibia	2 4	Upper fore-teeth (two), breadth 4 inches	
Tail, 13 vertebrae	2 7	length	1 6
Fore-foot webbed and clawed	1 3	Do. back teeth (two)	7 0
Head	1 2		

birds also once existed on our earth, commensurate in their proportions with its other inhabitants. The length of some of its foot-marks perpetuated on the rock is 15 to 18 inches—the stride four to six feet; giving a biped probably 18 feet high.

Whatever difference of opinion may exist on the doctrine of successive development of organized beings, in respect of the perfection of their structure, it would appear that, in point of size, we lose ground, at least on the land.

Passing by man himself, and the traditions and evidences of the human race having formerly furnished more gigantic specimens than at present, it is certain, if we take history as we find it, that the lower animals, especially some of the reptiles, attained double the dimensions they now do. The American boas grow to 20 and 25 feet—the pythons of the old continent some ten feet longer; but Livy speaks of a huge serpentiform monster 120 feet long, which stopped the whole army of Regulus on the banks of an African river, until killed by the military engines. Pliny, confirming the story, declares that its skin and jaws remained in the Capitol till the Numantine war, a period of 120 to 130 years. He also relates that a python was exhibited in Rome, in the days of Claudius, 50 cubits long. Now, a sea serpent, if ever authenticated and measured, will be found probably not to exceed these dimensions.

The rapid increase of mankind, the subjection of the animal creation to his uses, and the progressive destruction of all the races that may be offensive to his interests or threatening to his safety, account sufficiently for the diminution in the size of those monster reptiles, without the necessity of supposing the foregoing instances to have been the lingering survivors of species now extinct, though this is feasible. But these causes need not apply to the generations of mighty creatures whose home is in the ocean depths. We have spoken of the superior size of the oceanic fishes, and of the effects of heat in developing structure. There is yet another circumstance peculiar to some classes of fishes, which also influences their size, their longevity, and the generally admitted fact that the cartilaginous kinds at least continue

The tusks, one of which was in its socket, measured 10 feet each, exclusive of the root, and were curved and borne horizontally, extending from point to point along the curvature 21 feet. The bones were solid and without marrow. Mr. Koch considers this creature to have been an inhabitant of large rivers and lakes. It was found in the state of Missouri, near the shores of one of the tributaries of the Osage river. The bones (exhumed in 1840) laid on a stratum of the upper green sand, and were covered to the depth of 14 or 16 feet with layers of alluvium, plastic clay, marl, and recent deposit from the river. But the most singular circumstance related by Mr. K., and which is the chief inducement for this notice, is the following:—"The *second trace* of human existence in connection with these animals, I found during the excavation of the Missourian. There was embedded immediately under the femur or hind-leg bone, an *arrow head of rose-coloured flint*, resembling those used by the American Indians, but of larger size. This was the only arrow-head immediately with the skeleton; but in the same strata, at a distance of five or six feet, in a horizontal direction, four more arrow-heads were found; three of these were of the same formation as the preceding; the fourth was of very rude workmanship, one of the last mentioned three was of agate, the others of blue flint. These arrow-heads are indisputably the work of human hands. I examined the deposit in which they were embedded, and raised them out of their position with my own hands."

As Mr. Koch's conclusions as to the contemporaneity of the human race with

to grow as long as they live. Some naturalists have estimated the natural duration of the life of the whale at 1000 years, which is not likely, being one of the mammalia. It is to the true fishes that the remark rather applies. We have not many data for judging accurately of the longevity of fish, but such as we possess do lead to the conviction that it is in this division of organized nature we must seek the patriarchs of creation, only to be surpassed by the wonders of the vegetable world. It is confirmatory of the doctrine of the continuous growth of many of the cartilaginous size. Those of osseous structures may also partake of this effect of longevity, as they certainly do, of the forcing power of the high temperature. Of the stimulant effect of warmth on the growth of fish, as well as longevity, a few illustrations may be interesting.

The herrings, taken collectively, says Swainson, are a small fish, few exceeding in size that which is so well known on our own coasts; yet they have been found in the tropical seas to attain the gigantic length of ten or twelve feet. The eels of Surinam are found fifteen or sixteen feet long. The largest cod caught on our shores weigh 60 or 70 lbs. In the Pacific they increase to 100 lbs. The pike is notoriously long-lived, and in individual instances attains most extraordinary dimensions. Some doubt is thrown on Gesner's account of the one said to have inhabited Heilbrun lake 250 years, yet he assures us its skeleton, nineteen feet long, was long preserved as a curiosity at Manheim. The sharks (cartilaginous) are met with in most latitudes, but the largest of the descriptive species are those of the tropical seas.

But perhaps the most remarkable of the cartilaginous families are the rays. The species on our coasts, such as the skate, have been known in individuals to attain a weight of 200 lbs.; but the pterocephali, which are entirely pelagic and *very rarely seen*, inhabit the tropical seas, and become so gigantic as to give rise to a suspicion that their appearance may be one of the phenomena on which the belief in the kraken has been based. In 1845, the captain of a vessel trading to Africa, informed the author, that on his preceding voyage, whilst lying at Fernando Po, he saw from the deck of his vessel, at a distance out at sea, several large fish of singular appearance; going in pursuit of them with two canoes, manned with some of the ship's crew and negroes, he came up with, and struck one with a harpoon, whereupon the creature set off with surprising velocity, swimming near the

the living animals which we now only know in their fossil remains, are extremely important, not only to the present inquiry, but to science generally, no apology is offered for adding here the *other instance* alluded to:—

"October, 1838," says Mr. Koch, "I disinterred the remains of an animal which had clawed feet, and was of the size of an elephant. This deposit was in Gasconade county, Missouri, on the shores of Burbois river. The principal part of this animal had been consumed by fire, which fire evidently had not been produced by volcanic eruption, but had been formed and kindled mechanically by human hands, as it appeared, for the purpose of destroying the above-mentioned animal, which had been mired here and was unable to extricate itself.
Nine feet beneath the surface, I found a layer of ashes from six to twelve inches in thickness, mingled with charcoal, large pieces of wood partly burned, together with Indian implements of war, as stone arrow-heads, tomahawks, &c.; also more than 150 pieces of rock, varying from three to twenty-five pounds weight, which must have been carried here from the rocky shores of the Burbois river, a distance of 300 yards—these had been thrown evidently with the intention of striking the animal. I found the fore and hind feet standing in a perpendicular position, and

surface, and towed the canoes a distance of three miles before they succeeded in killing it. On getting it on shore it was found to measure fifteen feet by nine; and though the smallest of the schole, its weight was so great that all hands could scarcely haul it on the beach. From the description given by the captain, there was no difficulty in identifying his prize as an eagle ray. One of these creatures is stated to have been taken near Guadeloupe, twenty-five feet in expanse from the extreme of one fin to the other across the body, and fourteen feet from the snout to the tail, and it required seven yoke of oxen to draw it on shore. A schole of such creatures, seen from a distance through the mirage of a tropical sun, might, to a lively imagination, realize some parts of the description given of the appearance of the kraken.

We also find the mollusca to increase wonderfully in size under the influence of warmth, and protected by deep water. Contrast, for instance, the Polynesian clam with the European oyster—the medusæ of the narrow seas with those of the Pacific, five feet in diameter. The same remark will apply to other species as the asteridæ.

But there is an order of this class (mollusca) which is suspected to furnish, if not the solution of one branch of the present inquiry, at least a species that may fairly come within the category of sea monsters.

This is the cephalopoda, a form of animal life so strange, linked indeed to other creatures by properties in common, yet possessing an organization so eccentric, and exercising its functions in so peculiar a manner, that in its contemplation analogy fails us, and we are tempted to believe that it is offered to our view as an intimation of a new series of forms existing in the submarine world hitherto unthought of. To continue the description in the language of Beale, "These creatures—endowed with hearing, seeing, touch, smell, and taste—are second to no inhabitant of the waters in the complex structure of their organs. Besides these senses, they possess the remarkable power of adhesion to the surfaces of bodies by means of the acetabula or suckers, which line the inner surface of their tentacula. In addition to all this, the sepia possess the rudiments of fins, which in the sepia octopus are elongated beyond the length of the body, terminating in a thick cylindrical portion covered with numerous suckers, and in some cases with a row of sharp claws added. By means of these the animals can fix themselves, as by anchors, firmly to the rocks during the agitation of the waters. Their eyes are phosphoric, they are amphibious; they swim with their heads behind,

likewise the full length of the leg below the layer of ashes, so deep in the mud and water that the fire had no effect upon them. . . . A few of the teeth appeared to have been broken out by the force of the rocks thrown at the head of the animal, and were carried some little distance, so that they escaped in a measure the violence of the fire, and have all the appearance of those of a carnivorous animal."—*Koch's Description of the Missouriium Therist.*

From recent inquiry we are enabled to state that Mr. Koch's skeleton of the Missouriium Theristo-caulodon, on being submitted to the scientific examination of Professor Owen, was found to be made up from the remains of two or three megatheria. Skillfully re-arranged, it now stands in the British Museum—still, perhaps, the largest representative of the osseous structure of these stupendous organisms—the length of the skeleton, even now, being twenty feet. The tusks are restored to their usual position in the skull of the mastodon. One or two interesting papers have been read on these remains, at the Meetings of the Geological Society; but whether the evidence given by Mr. Koch, of the contemporaneity of the living megatherium with man was then explained away, the author has not ascertained.

and walk with it downwards." They are of all sizes, from the microscopic form to those enormous dimensions which more particularly entitle them to this notice.

Pliny spoke of the colossal cuttle fish as *polypi*; he described them as having bodies as large as a barrel, and as infesting the artificial fish-reservoirs on the coast of Sicily. His account is confirmed by modern naturalists. Swainson saw specimens on the coast of Sicily, whose tentacula at the base were as thick as a man's leg; and we shudder while reading Sir Grenville Temple's narrative of the dreadful death of a Sardinian captain at Jerbeh, who perished in the horrid embraces of one of these monsters, while bathing, and was found drowned in four feet water, his limbs strongly bound together by its tentacula. These are the creatures so dreaded by the Polynesian divers for shells; and though the multitudes which are found about the shores of the Southern seas do not exceed greatly our own specimens, there are strong grounds for believing that, in the depths of the great ocean, this race realize the proverbial saying of fishermen, "that the cuttle fish is the largest fish that swims in the sea."

Denis Montford, an old writer on the mollusca (but whose work we have not met with,) mentions several instances of the appearance of this *coloesus* of the deep, and gives at length the story referred to by Sir J. Jardine in his chapter on the Kraken in the *Naturalists' Library*. This account also appears in full in an article on the sea serpent in the second or third bound volume of *Blackwood's Magazine*, and the catastrophe is related with the circumstantiality of truth. The circumstances are briefly as follows:—

Dens (the name of the navigator), being becalmed off the coast of Africa, availed himself of the opportunity to have the sides of his vessel scraped; and while his crew were thus engaged, this monster of the deep emerged from the surface, and swept off two of their number, itself losing one of its tentacula by the blow of an axe. Beale, the writer on the sperm whale, relates a struggle he had with a cuttle fish of ordinary size, which he found on the shore of one of the Pacific islands, and which fastened on his arm. He describes these creatures as possessing the power of projecting themselves through the air 80 to 100 feet, by the rapid rotatory motion of their tentacula. He also mentions being startled one day by seeing a *sepia octopus* rising rapidly to the surface, using its long arms with a spiral motion. A specimen of this species was found dead in the Pacific, and described by Drs Solander and Banks on Cook's first voyage; its body was six feet long, and flocks of birds were feeding on it. Part of the remains were brought home, and deposited in the Museum of the College of Surgeons.

Beal considers that the spermaceti whale feeds on the cephalopoda, descending to great depths for that purpose. On one occasion, after the capture of a cachalot, an enormous limb or tentaculum of a cuttle fish was found in its month, and though partly corroded, was 27 feet long.

NAUTICAL NOTICES.

To the Editor of the Cape of Good Hope Shipping and Mercantile Gazette.

AGULHAS LIGHT.—Dear Sir.—In reply to your request, respecting the "Agulhas Light" I can scarcely express to you how pleased I was at making it on the evening of the 24th inst.; for having got a latitude by star, just at dusk, I determined to round the Cape within half-a dozen miles, to

make certain of a sight of the light, which I did at 7 P.M.; and you may imagine with what confidence I stood on, before a strong south-east breeze, so certain of my position.

It was showing most brilliantly and appeared to me as one of the finest fixed lights I have ever seen, and must prove of immense advantage to the Shipping Interest.

Very faithfully yours,

EDWARD P. NISBET,

Commander of the ship "Agincourt."

Table Bay, March 26th, 1849.

WRECK OF AN EMIGRANT SHIP AND LOSS OF LIFE.—Intelligence of the total wreck of the *Hannah*, freighted with nearly two hundred emigrants, bound to Quebec from Newry, was reported during the week at Lloyd's, the particulars having been received by the American mail-steamer *America*. at Liverpool. The *Hannah* was a brig of between 150 and 200 tons burden, belonging to Maryport, and manned by a crew, it is said, of 12 seamen, under the command of Mr. Shaw, the master. On the 3rd of April last she sailed from Newry, with the above number of emigrants on board, having been previously overhauled and examined by her Majesty's emigrant agent at that port. The emigrants chiefly consisted of agricultural labourers, and their wives and children. The passage up to the 27th, considering the season of the year, was favourable. The vessel then encountered heavy winds and a quantity of floating ice. On the morning of the 29th, the unfortunate ship struck on a reef of ice; it was about four o'clock when she struck.

A charge is brought against the master and first and second officers, of their having been guilty of one of the most revolting acts of inhumanity possible to be conceived. They had got the life-boat out, and the moment they found the vessel would inevitably go down they jumped into it, and abandoned the wreck, with the emigrants on board. Their screams for help rent the air, and it was with difficulty that the remainder of the crew could induce the frantic creatures to comprehend the only chance left of saving their lives. Fortunately, the ice was firm under the ship's bows, and the seamen convincing them as to its security, many got on it. Its solidity being then apparent, a desperate struggle took place amongst the emigrants to leave the wreck. Men, women, and children, with nothing on but their night attire, were scrambling over the mass of ice. Many of the poor creatures slipped between the huge masses, and were either crushed to death or met with a watery grave. The last to leave the wreck were some of the crew, who contrived to save a small portion of spirits and a few blankets.

Soon after they had got clear, the ship's stern rose as it were above the water, and she went down head foremost just forty minutes after the collision with the ice. The sufferings of the wretched creatures were most harrowing. The seamen who were among them humanely gave up what covering they had to the women; some of whom had been shockingly wounded and bruised. Thus were they exposed the whole of that day till five o'clock in the afternoon, when a vessel hove in sight, and bore down to the edge of the field of ice. It proved to be the bark *Nicaragua*, also bound for Quebec, Captain Marshall. He got the ship's ice-defender down, and prepared to take to the ice. By seven o'clock he had got so close in, that in the course of two hours, he and his crew succeeded in getting hold of about fifty of the poor

creatures, and placing them on board his vessel. The remainder stood crouched together in another part of the ice, some distance off, inaccessible from the position of the ship. Captain Marshall had all sails clewed up, and got a rope fastened to a piece of ice, and with the long boat pushed off with his men to the spot. After considerably difficulty he succeeded in getting to the edge, where they remained huddled together. The whole were saved.

The number got on board the *Nicaragua* were 129 passengers and seamen, the greater part of whom were frost-bitten. As far as Captain Marshall could ascertain from the survivors, the number that perished by being crushed to death between the ice and frozen to death, were between fifty and sixty. As soon as he had succeeded in getting all on board, the ship was got underweigh, and proceeded in the direction of Cape Ray. Every comfort that his means afforded was placed at the sufferers' disposal. The next day, meeting with the barque *Broom*, of Glasgow, twenty-seven of the poor creatures were transferred to that vessel; and in the course of the following day, forty-nine of the survivors were placed on board three other vessels. The *Nicaragua* reached Quebec on the 10th of last month. The fate of the master and the others, who took to the life-boat and abandoned the emigrants, is not known.

WRECKS AND ACCIDENTS IN THE GULF OF FLORIDA.

May 21st, 1849.

SIR,—Should you think the following remarks worthy of a place in your valuable journal, I trust they may be useful to some of your readers. Wreckers are not allowed upon the coast of Cuba, as they are upon the other side, and the Bahamas, &c., I am not certain whether the rule is general or local, in consequence of the extensive Colorados reefs; but in that part, the production of the "Capitan de Portedo" extends 20 fathoms from the beach, and thence commences the "Alcalde de Mar," (magistrate of sea,) this officer takes charge of all wrecks. He may give advice, but cannot take charge until the property becomes a wreck, when you have to pay him five and a half dollars per day for his attendance, and a similar sum for his boat and crew; also guards, when they are requisite, to watch tents or the wreck. This security does not appear so good as might be expected, as my tent was extensively plundered, I believe by a Spanish coaster. This was reported to the commandant of the district; but I could get no satisfaction respecting it. Plundering wrecks is not received in a very criminal point in the most enlightened countries, and we cannot expect very correct notions of the rights of property in so wild a place. From the "Alcalde de Mar," and the few inhabitants, I certainly received *great kindness* when amongst them, for sometime alone. In case of wreck, it is generally best to proceed to Havana, to dispose of wreck, or hire vessels to transport materials that may have been saved. Whilst there is hope, a communication should be sent to the British Consul in Havana, who will send assistance if there be a British man-of-war in that port. But communication is bad. It cost me a doubloon to send a letter and get an answer, and it went two-thirds of the 60 miles and re-

turned the same by a steamer, so bad are the roads, although it only went to Cayo Blanco, the eastern part of the Colorados.

When accidents occur in those parts, to go to Havana for repairs labourage is enormous, and the labour small; materials are also high, while on the other hand, although Key West may be a very convenient place in such cases, it is unfortunate that *wrecking is their staple trade*, and you have little choice. Whilst in Havana, there is a larger field, and you have the choice of respectable merchants, into whose hands to put your business. In such cases, agents should be as independent as possible of such business, as highly respectable, they will generally prove the most economical, and a better shield to the master, should there be reflections, as he must bear the blame, should there be any; and there are many cases, where men in their own capacity, can better advise them than *resident merchants*. There can be little doubt, that many of the cases mentioned in Mr. Lorimer's useful little book, would not have occurred had the masters not received interested advice. Both *sale* and *bottomry* might have been avoided; but some acts of meanness on the part of underwriters always furnish texts to shew that you must *sell* to protect yourself. I was once asked how I could call a ship seaworthy and recommend her removal, when a part of her *keel* was gone, when it had been decided that a ship with *rotten top-gallant stud'sails* was pronounced to have been unseaworthy. I have seen a case quite as bad as that of Mr. Lorimer's, at Calcutta commence, and only the circumstances of freights, &c., could prevent it from *ending* as bad; and the master thought that he was acting upon the best advice, and that he could not do wrong in acting upon such authority, simply because he had not sufficient *self-reliance*, and made a guiding rule of a simple opinion, in place of weighing well different opinions, and, indeed, being even obstinate at times.

RICHARD LEIGHTON.

To the Editor N.M.

FOUNDERING OF MORE EMIGRANT SHIPS,—ONE HUNDRED LIVES LOST.

ADVICES received on Monday from Quebec, state that at midnight, on the 10th of last month, the *Maria*, from Limerick, an old vessel, manned by a crew of ten hands, with 111 passengers, when within fifty miles from St. Paul's, ran into an iceberg with terrific force. The whole of her bows were stove in, and the next moment the sea was rushing into the hold, with the violence almost of a cataract. A piercing shriek was heard from below, but it was only of a few moment's duration, as the ship went down almost immediately. It was the mate's watch, who, with one seaman and a cabin boy, succeeding in saving their lives by one of the boats which floated from the wreck as she foundered. About twenty of the passengers managed to reach the deck just before she went down, some of whom jumped on to the ice, while others clung to the floating spars. Nine only, however, could be preserved, six men, two women, and a boy, who had got on to the ice. Nothing was seen of the master or the rest of the crew; they all perished with the remainder of the passengers. Exposed in the boat to the most inclement weather, the helpless survivors remained the whole of the following day.

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Eventually, a barque, named the *Roslyn Castle*, and the *Falcon*, a brig, approached, and took them on board. The poor creatures had suffered severely from cold, and their condition was the most heartrending. Their names are given as follows:—Michael Cussack, Joseph Lynch, Bridget O'Gorman, spinster, —. Conners, William Brew, John Hogan, and Patrick M'Toque; the survivors of the *Maria's* crew are:—William Collins, (mate,) John Pickering, (seaman,) and Michael Tague, (cabin boy,) making in all, out of the one hundred and twenty-one souls on board, only twelve saved. In consequence of the brig *Falcon* being short of water, those who were picked up by her were transferred on board the *Roslyn Castle*, which proceeded direct to Quebec, and arrived there last Saturday fortnight.

SALT WATER MADE FRESH.—McBride's process.—At length we have fresh water from salt, the problem is solved effectually and economically. We have attended, by invitation, Mr. Mc Bride's experiment, and have no hesitation in pronouncing that he has fully succeeded in accomplishing this long looked for and great desideratum. Distilled water, we all know, is as old as the hills, but distilled water, or water simply distilled by evaporation and condensation, is flat and insipid; it becomes nauseous to taste, being deficient of the oxygen of the atmosphere, and is a very different article from that sparkling, clear fluid, which Mr. McBride produced in our presence. Mr. McBride's invention (which he has patented) consists in giving to the water, which is produced by his process, that vivifying quality possessed by spring water, and this he does, (which he calls aerating it,) in a greater degree, than even is contained in spring water, (5 per cent. more,) simply by mixing atmospheric air with it while in the state of steam. The whole process is explained by this simple fact. The means employed, consist simply of a boiler, a condenser which receives the aerated steam and the aerator or air pump, (employing one person to keep in action,) all inexpensive, and occupying small space, well adapted to a ship. The condenser has to be kept full of cold sea water, which condition is effected by two tubes, one for introducing the cold water, the other for carrying off the same when heated by the condensed steam, and the expense of fuel is considered to be about 20 per cent. in addition to the usual expenditure.

We heartily congratulate the inventor on the complete success of his method, and those especially, who go down to the sea in ships and make long voyages to distant lands, who will hereafter derive the benefit of it. The advantages which it will afford, appear to us almost incalculable to men-of-war, merchant ships, emigrant ships, steam vessels, to all, the article of fresh water, how invaluable; perhaps more so to the crowded emigrant ship, the living cargo of which is ill calculated to undergo privation from water; to men-of-war, it will afford room for provision; to merchant ships, cargo; and to steam vessels, provision and cargo, or fuel; these vessels, again, having the advantage of employing their engine to working the aerator, and their waste steam to be converted into pure fresh aerated water. Those who can remember the process in former days of covering the deck every night, in the middle watch, with empty casks to get at full ones for the following day, appreciating the system of tanks, as they now do, will appreciate still more the McBride process, when they see these huge lumbering iron boxes left on shore as useless. Such times will come.

THE SAILOR'S HOME.—We have just received the report of the Committee for this year: from it we extract the following. “During the past year 112 ships have been manned by the Sailor's Home, and 4633 boarders have been received; while the whole number of sailors, who have passed through the Institution, amounts to 41,992, of these 11,191 were old boarders; men, who having once enjoyed the benefits and comforts of the establishment, return to it when they revisit the Port of London, frequently bringing with them their messmates, the companions of their voyage.” This is as it should be, and of which we may have more to say in our next.

NEW BOOKS.

A MANUAL OF SCIENTIFIC ENQUIRY prepared for the use of her Majesty's Navy, and adapted for Travellers in general.—London, Murray.

We have the origin of this important little volume in the following memorandum. The idea which gave birth to it was good—it is a standard for the appeal of the naval officer, who would distinguish himself in the walks of science compatible with his profession, a kind of normal point to which he may refer his progress. But here is the memorandum.

It is the opinion of the Lords Commissioners of the Admiralty, that it would be to the honour and advantage of the Navy, and conduce to the general interests of science, if new facilities and encouragement were given to the collection of information upon scientific subjects by the officers, and more particularly by the medical officers, of Her Majesty's Navy, when upon foreign service; and their Lordships are desirous that for this purpose a Manual be compiled, giving general instructions for observation, and for record in various branches of science. Their Lordships do not consider it necessary that this Manual should be one of very deep and abstruse research. Its directions should not require the use of nice apparatus and instruments: they should be generally plain, so that men, merely of good intelligence and fair acquirement, may be able to act upon them; yet, in pointing out objects, and methods of observation and record, they might still serve as a guide to officers of high attainment: and it will be for their Lordships to consider whether some pecuniary reward or promotion may not be given to those who succeed in producing eminently useful results.

Their Lordships are aware that in the instructions prepared under the direction of the Royal Society for the Antarctic expedition, in the hints for collecting information given to officers on the expedition to China, in the excellent book by A. Jackson, entitled “What to observe,” and in other documents and publications, the fullest directions are to be found; but they are either more voluminous or more closely confined to objects which regard particular localities, than is to be derived for a general manual. Their Lordships are, therefore, desirous that a new compilation should be made, and are satisfied that their wishes would be best met, if they could obtain the assistance of some of our most eminent men of science in the composing, by each of a plain and concise chapter upon the head of enquiry with which he might be most conversant, and they have been readily and kindly promised the advice and labour of Sir John Herschel in revising the whole, and preparing it for publication. The several heads of enquiry are as follows:—

Astronomy, Botany, Geography, Hydrography, Geology, Mineralogy, Magnetism, Meteorology, Statistics, Tides, and Zoology.

Independently of matters of exact science, their Lordships would look, in many instances, for Reports upon national character and customs, religious ceremonies, agriculture, and mechanical arts, language, navigation, medicine, tokens of value, and other objects; but for these only very general instructions can be given, though valuable Reports may be expected from men of observation and intelligence, acting under the encouragement which the notice of whatever is well and usefully done, is certain of affording.

It would give additional value to each chapter if the name of him, by whom it might be composed, should be affixed to it; and their Lordships are anxious that no time be lost in the preparation of this work. They are sending a surveying vessel to New Zealand, and have others in the Torres Straits, and in other parts of the world. A new establishment is contemplated at Borneo. Expeditions are proposed in search of Sir John Franklin. They have cruisers in every sea; and where the ships of the navy are not present, it sometimes happens that the vessels of the merchant are conducted with much intelligence and enterprise, and for all of these the work proposed would be valuable.

MANNING THE NAVY; *a statement in which the evils and losses of the present system are set forth, &c., by Arthur Parry Esq. Wilmot, Commander R.N.*—London Cleaver, Piccadilly.

A little volume on a great subject, dedicated to the Right Honorable Horatio Earl Nelson!—would that the name were the means of trying the experiment it recommends, well worthy as both are of each other. But of this we have little hope, and “onward” is the word as usual.

It would form a large volume if all the projects and proposals, that have been committed to paper on this important subject were collected into one, a subject which has employed the pens of many right, as well as wrong minded men, from the times of Nelson to those of Screw Steamers, and yet we are as far as ever we were from adopting any, and our seamen in consequence scatter themselves far and wide. Even our own pages have long ago, and even yet do teem with proposals for providing a supply of seamen for the navy.

There are so many home truths in this little volume, so many undeniable facts illustrating the unfortunate, we had almost said, but at least the undesirable position of the Royal Navy, when “a crack ship” is paid off that we cannot but join with the author of it in wishing that some master-mind would point out a successful remedy for them. There appears more reason that islanders as we are, with large and distant colonies, we should have more reason for maintaining a standing navy than a standing army, a remedy after all we apprehend in spite of penny-wise finances, the most efficacious for manning a fleet in case of necessity. But we have done with fleets at present, at least for war purposes. May that happy condition long continue, and may British seamen be employed in the worthier pursuit of extending the blessings of trade and civilization throughout the world in preference to manning fleets for war.

Commander Wilmot proposes to establish barracks in Dockyards for the reception of seamen, who are, while on shore to work in the yard. The system of entering paid off seamen, as seamen riggers promises little for the plan. Those, however, who are interested in the subject will judge for themselves. Commander Wilmot, has spoken fully and candidly on the subject, and with a practical knowledge of the evils he has pointed, and his work deserves a careful perusal.

NOUVELLES ANNALES de la Marine et des Colonies;—Revue Mensuelle, 1849.

Numbers one to five of this useful periodical have appeared, and we hail with much satisfaction the revival of a work, after some few months of cessation, from the pages of which we have derived much useful foreign information, and in the pages of which we see acknowledged much that is translated from our own. We trust, that the same spirit, which has revived it will be enabled to continue it for the benefit of seamen generally, in spite of the political storms which may surround it, calculated as it is to enable seamen to brave storms of another kind, the storms and dangers of the ocean.

CASUALTIES AFLOAT with Practical Suggestions for their prevention and remedy Illustrated by original Anecdotes.—By Lieut. A. F. Kynaston, R.O.: London, Trelawney Saunders, 1849.

“Casualties Afloat” supply ample subject on which “to point a moral from a moving tale” and to suggest that useful maxim which should be uppermost in the mind of every officer afloat;—“Precaution is the Parent of Security,” or “Prevention is better than Cure,” both wholesome and excellent in their way, and the neglect of which is well known by any officer of experience, to have sent many a poor fellow to his last resting place.

“A man overboard” is the principal casualty illustrated by Lieut. Kynaston in his suggestions, for their remedy (we do wish he had adopted a smaller size for his book; this is not the age of large volumes,) and he has shown the different evolutions a ship may perform under sail to preserve or regain the position which she occupied at the moment of the accident. There are many good hints on this subject as well as others, which come home to the naval officer, and we shall return to the work when we have more space.

THE PLANTAGENET RAZOR.—This is a very important addition to the equipment of the emigrant; the sea service of the yachtman and sailor; the toilet of the nervous and invalid; and we should recommend it to all who are about to embark on long voyages, as they may shave with perfect confidence in all weathers.

THE LATE ADMIRAL WARREN.—A very handsome tablet has been placed on the right of the Communion in the Dockyard Chapel, Devonport, in memory of this gallant officer, who was Admiral Superintendent of the Dockyard:—“Sacred to the memory of Frederick Warren, Vice-Admiral of the Red Squadron of H.M. Fleet, who served for many years as Rear-Admiral Superintendent of this Dockyard; as an officer he was zealous and steady in the performance of his duty; in danger, calm and resolute; and in domestic life, he was an affectionate and attached husband and father, and by his marked kindness of heart and extensive benevolence he gained the esteem and regard of all who knew him. His numerous Naval and private friends have, in testimony of their respect, placed this tablet as a memorial of his worth. He departed this life at Cosham, March 22, 1848, in the 73rd year of his age, and his remains are deposited in the churchyard at Wymering, in the county of Southampton.”

METEOROLOGICAL REGISTER

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory,
From the 21st of April, to the 20th of May, 1849.

Month Day.	Week Day.	Barometer in inches & Decimals		Fahrenheit Thermom. in the shade			Wind. Quarter. Stren.				Weather.		
		9 AM.	3 PM.	9 AM.	3 PM.	Min.	Max.	AM	PM	AM	PM	A. M.	P. M.
		In Dec.	In Dec.	o	o	o							
21 S.		29.77	29.91	35.45	29.46			NW	W	2	2	bc	bc
22 Su.		29.94	29.89	42.47	33.48			SE	S	1	2	od (2)	op (3) 4)
23 M.		29.59	29.57	47.45	41.49			SW	N	1	2	or (1) (2)	o
24 Tu.		29.80	29.79	45.47	37.49			N	W	2	1	og	og
25 W.		29.74	29.79	48.56	43.57			SW	SE	1	1	or 1)	bcm
26 Th.		29.72	29.78	45.55	44.56			SW	NW	1	1	og 1)	bc
27 F.		29.86	26.76	46.57	38.58			SW	SW	2	4	bc	bcr (4
28 S.		29.70	29.81	50.50	42.54			W	S	2	2	bcp (2)	bctpr (3
29 Su.		30.19	30.25	49.56	41.57			NW	NW	1	1	bcm	bcm
30 M.		30.36	30.30	54.63	47.64			NE	NE	1	3	b	b
1 Tu.		30.15	30.05	42.58	39.59			NE	NE	4	4	o	o
2 W.		29.96	29.94	48.61	46.64			NE	NE	2	3	ogd (2)	bctlr 4)
3 Th.		29.85	29.85	56.66	48.67			NE	NE	1	2	bc	bc
4 F.		29.94	29.91	59.71	46.72			NE	E	2	3	b	b
5 S.		29.86	29.82	59.71	50.72			NE	NE	3	2	b	bc
6 Su.		29.84	29.82	50.63	44.63			NE	NE	4	4	o	bc
7 M.		29.90	29.95	47.52	46.53			NE	NE	6	6	qo	qbc
8 Tu.		29.99	30.02	48.49	38.50			NE	NE	5	5	qbc	qo
9 W.		29.98	29.99	46.48	40.49			N	N	5	4	qog	op (3)
10 Th.		29.92	29.90	44.47	40.48			NW	NW	2	2	ogd (1) (2)	ogd (3 (4
11 F.		29.85	29.91	46.53	42.54			NW	NE	2	4	bc	o
12 S.		30.21	30.22	50.58	38.58			NE	SE	1	1	o	bc
13 Su.		30.08	30.00	59.63	43.65			SW	SW	1	3	bc	o
14 M.		29.66	29.58	57.63	47.64			SW	SW	4	3	bcr (2)	bc
15 Tu.		29.57	29.59	54.64	48.66			W	W	4	3	o	bc
16 W.		29.46	29.48	55.65	50.66			SW	S	2	4	or (1) (2)	bc
17 Th.		29.34	29.36	56.62	51.63			SW	SW	5	6	qbc	qbcd 4)
18 F.		29.49	22.62	57.62	51.63			SW	W	4	5	op (2)	qbcp (3
19 S.		30.00	30.03	51.62	49.63			NW	NW	2	3	o	bc
20 Su.		29.84	29.80	53.55	51.56			SW	SW	4	3	or (1) (2)	or (3) (4)

APRIL, 1849.—Mean height of the Barometer=29.668 inches; mean temperature=43.8 degrees; depth of rain fallen=2.39 inches.

BIRTHS, MARRIAGES, AND DEATHS.

BIRTHS.

May 23, at Doddington Place, the wife of G. S. Singer, Esq., R.N. of a daughter.

June 4, at Devonport, the wife of Com. Tause, R.N., of a daughter.

June 1, at Stoke Road, Gosport, the wife of F. J. Fegen, Esq., R.N., of a son.

June 9, at Belvedere, Shrewsbury, the wife of Lieut. Charles Marcuard, R.N., of a daughter.

MARRIAGES.

DEATHS.

May 29, at Charles Church, the Rev. Mamerto Gueritz, curate of Shepton Beauchamp and Barrington, Somersetshire, to Ann Derby, youngest daughter of the late Com. George Lawrence, R.N.

May 30, at St. Giles's, T. T. Powell, Esq., to Amelia, youngest daughter of the late Capt. Ring, R.N.

June 5, at Folkestone, A. Swan, Esq., C.E., to Maria Mary Ann Collins, step-daughter of Capt. Kennicott, R.N.,

June 7, at St. George's Bloomsbury, the Rev. John Philip Gell, M.A., late Warden of Christ's College, Tasmania, to Eleanor Isabella, only child of Capt. Sir John Franklin, R.N.

June 7, at Braishfield Lodge, Romsey, Hants, Vice-Admiral Henry Hill, at an advanced age.

June 11, at Sunbury, Middlesex, Com. James Cannon, aged 42.

June 8, at Devonshire Place, Exeter, Lieut. E. L. Brown, aged 39.

June 7, at Manchester, Lieut. H. Walker, aged 65.

June 12, at Peterborough, West Canada, Lieut. R. P. Madge.

June 9, at the Royal Naval Hospital, Stonehouse, Mr. J. M. Hobbs, Paymaster and Purser, aged 40.

June 4, at Parkfield, near Purbrook, Hants, William Taylor, Esq., aged 88.

METEOROLOGICAL REGISTER.

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Month Day.	Week Day.	Barometer In Inches and Decimals.		In the shade				Wind. Quarter. Strength.				Weather.			
		9 A.M.	3 P.M.	9AM	3PM.	Min	Max	A.M.	P.M.	A.M.	P.M.	A. M.	P. M.		
21	M.	29.81	29.86	56	64	51	65	NE	E	2	1			bc	bc
22	Tu	29.82	29.78	52	62	49	63	SW	SW	3	4	o		bc	bc
23	W.	30.02	30.12	56	64	47	65	W	NW	2	4	or [2]	bep [2]	bep [3]	[4]
24	Th.	30.26	30.16	59	71	47	72	SE	SW	2	2	bc		bc	bc
25	F.	29.98	30.01	61	71	55	71	W	W	1	3	bc		bc	bc
26	S.	30.06	30.05	64	68	53	69	SW	SW	3	3	bc		bc	bc
27	Su.	30.12	30.10	63	73	52	74	W	N	1	2	bc		bc	bc
28	M.	30.19	30.23	53	56	51	57	N	NE	2	2	otr 1] [2]		or [3]	[4]
29	Tu.	30.23	30.21	56	64	51	65	NW	N	2	2	bcin		bc	bc
30	W.	30.20	30.19	60	72	50	72	SW	SW	1	1	bem		bc	bc
31	Th.	30.05	30.05	67	74	55	75	E	SW	1	2	o		bc	bc
1	F.	30.09	30.13	61	71	51	72	SW	W	3	3	bc		bc	bc
2	S.	30.14	30.15	65	73	54	74	W	NE	1	2	bc		bc	bc
3	Su.	30.26	30.27	62	70	52	72	NE	E	3	4	b		b	b
4	M.	30.16	30.10	67	74	53	75	SE	E	2	2	bc		bc	bc
5	Tu.	29.91	29.88	70	76	58	82	NE	SW	1	3	o		bct	bct
6	W.	30.12	30.17	62	61	58	66	NE	NE	3	3	bc		od [3]	od [3]
7	Th.	30.19	30.14	60	67	50	68	NE	NE	4	4	o		op [3 4]	op [3 4]
8	F.	29.03	30.01	60	63	51	65	NE	NE	4	4	bc		bc	bc
9	S.	29.95	29.89	52	60	46	62	N	N	5	4	qbc		bc	bc
10	Su.	29.69	29.77	55	41	45	55	W	N	2	5	o		qo	qo
11	M.	29.82	29.86	54	59	43	60	N	NE	4	4	bc		bc	bc
12	Tu.	29.94	29.94	54	58	42	59	W	W	2	2	bc		bc	bc
13	W.	80.04	30.10	53	62	45	63	NE	NE	3	3	bc		bc	bc
14	Th.	30.19	30.15	56	64	40	64	NE	NE	3	3	b		b	b
15	F.	29.96	29.88	62	65	44	66	NE	E	3	4	bc		bc	bc
16	S.	29.80	29.80	58	68	51	69	N	N	6	5	qo		qo	qo
17	Su.	29.96	30.02	58	64	50	65	N	N	3	3	bc		bc	bc
18	M.	30.09	30.08	58	68	47	69	SW	SW	2	4	bc		bc	bc
19	Tu.	29.94	29.96	63	58	49	65	SW	SW	4	5	bem		qber 3]	qber 3]
20	W.	30.16	30.17	54	70	48	70	N	SW	2	4	bm		bc	bc

MAY 1849—Mean height of the barometer=29.916 inches; mean temperature=66.8 degrees; depth of rain fallen=4.27 inches.

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THE
NAUTICAL MAGAZINE

AND

Naval Chronicle.

AUGUST 1849.

HOUT BAY,—Cape of Good Hope.

[A correspondent calls our attention to a little bay, which from its peculiarly convenient situation, might prove serviceable to steam navigation, if its advantages were made known both in that respect and the resources it can afford. Being close to Table Bay, of the Cape of Good Hope, it is but fair that it should have its chance of benefitting by that rapid progress of improvement which signalizes the Southern provinces of the Cape colony, and accordingly we gladly contribute our assistance in claiming for it the attention of our readers. We have received from him the annexed correspondence.]

Cape Town, Cape of Good Hope.

SIR.—Perceiving by the late papers from England, that a Company is about to be formed, to be styled, “The East Indian and Colonial Screw Propeller Navigation Company,” for the despatch of vessels from England to Calcutta, viâ, this place, Mauritius, Madras, and *vice versâ*, and as it must be an object of the first importance, to the ultimate success of the Company, that as little detention as possible be occasioned at the different places, where the vessels must put in for coaling, I take this early opportunity of bringing to your notice, the advantages which in every respect combine to further this object by fixing upon Hout Bay, as the most desirable place for the coaling of the Company’s ships, over any other in this Colony. In Hout Bay there is not a day in the year in which the steamer could not lay alongside the hulk, and complete her coaling without interruption, whereas, there are few days in the year

that the like operation can be carried on either in Table Bay or Simons Bay, and often for days together during south-easters and north-westerns, no coaling can go on, even by boats, which would at once expose the vessels to great uncertainty in their movements from this place.

Hout Bay forms a land-locked bason, where the coaling of vessels can be carried on without interruption, besides the advantage resulting in point of economy, by being able to carry on the coaling without the necessity of boats, in every other respect, the necessary supplies for the vessels can be procured at as cheap a rate as at Table Bay, and certainly much cheaper than at Simons Bay.

In support of the superior advantages of Hout Bay, I beg to enclose an opinion as conveyed by the Hon. Capt. Henry John Rous to the Admiralty, which will, I trust, at once remove any impression as to my motive in urging this matter for the consideration of the Committee of Management, as being one only of self-interest, to which I might otherwise be exposed, possessing as I do, an estate at Hout Bay.

Should this suggestion be deemed worthy of consideration, I shall be most happy to render the Company any assistance in my power, in the furtherance of their object, and willing and ready to afford any information in detail, that may be required in carrying out and facilitating the despatch of their ships.

The only other bay, which might present itself for consideration, is Saldanha Bay, which certainly holds superior advantages to any other in point of security and size, but its distance from the capital being about 70 miles, surrounded by a country unfit for the production of vegetables, and most of the other necessaries required for shipping, and there being no water, combine at once to shut out this otherwise beautiful harbour.

In conclusion, I can only say that, whatever bay may be fixed upon, I shall always take a lively interest in the prosperity of this enterprising undertaking, and shall be glad to find myself of service in furthering its object.

Nothing can be added to the following clear and full description of Hout Bay by Capt. Rous. The security of this bay, and the readiness with which all sorts of provisions can be supplied and put on board vessels at anchor in it, will in time render it a place of resort for ships of every description on their way to or from the East and West. Our steamers will often find it convenient to touch at it in rough weather, for provisions or water, or to land or receive passengers.

I have been much at Hout Bay, and from the information obtained from the farmers it would appear that the sea never rolls home into the bay, even when the wind is at its worst point, viz. S.W., a quarter from which it rarely blows. The finest garden ground in the neighbourhood of Cape Town, is in the valley which runs down to the head of the bay, and a stream of fresh water called the "Hout River" passes through it. A tolerable carriage road is carried from the farm, alluded to in the paper, to Wynbery. I have frequently driven over it in a light phaeton with two horses.

Merchant vessels frequently put in here in south-east gales, when the working up to Table Bay would be attended with loss of time and fatigue to their crews. Close in on the western side the water is described as being always tranquil, and as such, offers itself as a more superior place for the establishment of a Floating or even land depot for coals, than either Simons Bay or Table Bay, inasmuch as ships can rarely go alongside the coal ships at those places; whereas at Hout Bay it is believed they can almost always do so. The depth of water also allows a steam vessel to get tolerably close to the shore. And a coaling pier might be run out at a moderate expense, the timbers being obtained at the Admiralty ground at the Knysna.

P.S.—My idea is that if more use were made of Hout Bay there would be little need of a breakwater at Table Bay. A lighthouse on Chapman point, or on any other suitable position, would enable merchant or any vessels to enter the bay at night as well as in day.

Extract of a letter written to Rear Admiral Robert Pamplin, by Hon. Henry John Rous, Captain of H. M. Sloop *Podargus*.

His Majesty's Sloop Podargus, St. Helena, March 29th, 1819.

“Returning from my cruise in search of Saxenburg, H. M. Sloop *Podargus* ran into Hout Bay on the 1st of January 1819, in a heavy gale of wind from south-east, being short of water, and having split most of her sails, and sprung her foretop-mast, in an attempt to weather Cape Point.

“With the exception of Saldanha, there is no harbour so commodious, safe, or that has so many advantages, as Hout Bay. Situated at the south-west extremity, it presents a secure retreat to ships not able to weather Cape Point in strong south-easterly winds, when they could not beat to the anchorage in Table Bay; and in the winter to ships exposed in north-westerly gales, when it would be impossible to work into False Bay, and they would not dare to attempt the anchorage on a lee shore in Table Bay.

“Yet, with this local superiority, situated in a rich and healthy part of the Colony, with abundance of water, a large farm a mile distant, which supplies the navy contracts with beef and vegetables, and within 14 miles of Cape Town, it is entirely neglected.

“The Harbour forms a bason about five or six miles in circumference where, with moorings laid down, twenty sail of the line can be landlocked, in from six to nine fathoms water, fine sandy bottom. High water at full and change at three o'clock; rise about six feet.

“The entrance is remarkably fine, and cannot be mistaken; deep water on either shore within a stone's throw.

“The patch of rocks in Captain Rous' plan is a mile and half further to the westward, and about one mile from the shore; they are visible quite out of the direction of ships approaching from the eastward, and may easily be avoided in running in from the westward with a north-westerly wind.

“I have no doubt that there is a good passage in shore of them.

"The other objection assigned is, that a heavy swell rolls in to the land, with a south-westerly wind. But this swell cannot dangerously affect ships lying in a land-locked harbour; and south-west winds are seldom prevalent during the dry season at the Cape.

"I presume to state my opinion that Hout Bay, in every point of view, is the proper situation for our dock-yard Establishment. Its great facility of ingress and egress, which was exemplified soon after the Cape first fell into our possession, by a French frigate having run in, completed her water, obtained supplies of cattle and vegetables, and again made sail with impunity; in consequence of which, a fort and block-house were erected on the eastern shore, and a captain's guard of 130 men stationed there during the last war. The short distance from Cape Town both by sea and land; the superiority of the harbour, and rich country surrounding it, render it infinitely superior to Simons Bay, which is exactly the reverse in all those leading points. Besides the difficulty of getting to Simons Bay either in the north-west or south-east gales, ships are liable to be detained three weeks by the latter, whereas at Hout Bay the wind blows out of the harbour every morning at day-light.

"When the numerous dangers in False Bay are considered, and the number of wrecks every year, in that and Table Bay, I cannot help regretting that this excellent harbour should remain useless, and that such an indifferent situation as Simons Bay should be chosen for our Naval Arsenal."

PASSAGE FROM THE CAPE TO AUSTRALIA.

[Masters of ships bound to Australia may derive some useful information on making the passage from the Cape in the following EXTRACT FROM THE REMARKS OF H.M.S. HAVANNAH.*—*Capt Erskine, From the Cape of Good Hope to Sydney, sailed July 3rd, arrived August 7th.*]

THERE seems to be a general notion among masters of ships, at present, that this passage is best made by getting into high southern latitudes, in which westerly winds blow very steadily and constantly. But this is not always the case; a glance at the *Havannah's* log will show, as it will be seen that, keeping always to the northward of 39°, she made the passage in the unusually short period of thirty-four days. As her route was determined by a careful attention to the changes of the barometer and sympiesometer, a few remarks on this subject, may not be unserviceable. From what I have heard of the prevailing winds of the Southern Indian Ocean, I was led to believe, that they consisted generally of a series of revolving gales, travelling to the eastward, their centres (at this time of the year) keeping about the parallel of 40°, and

* We noticed this excellent passage of Capt. Erskine in our May number; this discussion of it will be useful.—ED.

I imagined that by running in the northern or left-hand semi-circle of these gales, a ship might profit by the whole of their westerly portion. My reasons were as follows:—Flinders, vol. 1, chapter 3, page 45, says, “having made this passage three times before, I was satisfied of the impropriety of running in a high southern latitude, particularly when the sun is in the other hemisphere, &c., *not only from the winds, these being often stronger than desired, but because they will not blow so steadily from the westward.* In the latitude of 42° I have experienced heavy gales from the north and from the south, and even from the eastward, in the months of June and July”. He continues “it may not be improper to anticipate upon the voyage, so far as to state what was the result of keeping in the parallel of 37° in the month of November.

“From the Cape of Good Hope, to the island of Amsterdam, the winds were never so strong as to reduce the *Investigator* to close reefed top-sails, and on the other hand, the calms amounted to no more than than seven hours in nineteen days. The average distance on the log book in direct courses, for we had no foul winds, was 140 miles a day, and the *Investigator* was not a frigate but a collier built ship, and deeply laden. In the following twelve days, ran from Amsterdam to the south-west Cape of New Holland, the same results attended us, and 158 miles a day was the average distance, without lee-way or calm.”

The Australian Directory also says (page 1, I do not know on whose authority) “Ships from the Cape of Good Hope, bound to Port Jackson, should run down their longitude on the parallel of 39° south, where the wind blows almost constantly from some western quarter, and generally with not so much strength as to prevent sail being carried to it. In a higher latitude the weather is frequently more boisterous and stormy, and sudden changes of wind with much squally weather, are almost constantly to be expected.” I might quote other authorities, leading one to infer that by keeping so far to the southward, a ship would probably encounter, either the proximity to the centre of the storms, or the semi-circle of foul winds. I chose accordingly, the parallel between 38° and 39° , and had I not wished to make the island of Amsterdam, would have kept even to the northward of that, probably with advantage. By inspecting our log, it will be seen, that after profiting by two shorter rotary gales, the progress of which was most exactly shown by the glass, the ship ran from the 16th to the 21st of July in one, the glass visibly rising more or less, and the wind veering as she outstripped or fell short of the velocity of the storm’s travel; and that on the night of the 17th on rounding to for $1\frac{1}{2}$ hour to allow the centre to pass, when it blew very hard, the glass rose almost immediately, but ceased doing so, after we bore up and overtook the storm.

On the 21st the centre got ahead, wind shifting to southward of west and glasses rising, having run about 1185 miles in 5 days, or at the rate of nearly 10 knots an hour. Although I could afterwards get no precise account of the weather, which followed this date, along the south coast

of Amsterdam, further than that it had blown very hard. I have no doubt that, (as I expected,) this gale swept the whole of that coast, as on closing it on the 28th, instead of the usual easterly current of a mile or more an hour, we found on that day a set, N. 73° W., 14 miles; on the 29th, W. 27 miles; and on the 30th, N. 41° W. 13 miles, the reflux evidently of the storm wave, whilst on the 4th of August the current had resumed its old course of N. 45° E. 20 miles.

On examining, after our arrival at Sydney the logs of two merchant ships, the *Fairlie* of London, and *Ganges* of Liverpool, which made the passage about the same time as ourselves, but a degree or two more to the southward, I found they had occasionally north-east winds, while we had west gales, and both ships, from these causes, were unable to fetch the entrance to Bass's Straits, and were forced to go round Van Diemen Land, a loss of time of at least 4 or 5 days.

As far as my own limited experience goes, these remarks only refer to the open ocean, the winds evidently sometimes being nullified by the neighbourhood of the land, &c., although Flinders's account of the usual progress of the gales in Bass's Straits, describes perfect rotatory storms. In our case, the southerly gale which took us through the Straits, and thence rapidly up the coast to Port Jackson, was certainly not of this description, as although it blew very heavy on the night of the 4th of August, it veered for an hour or two to the S.S.W., the glass only fell to 29° 84', rising very soon afterwards, when the wind resumed its old direction.

Having had a good observation, I did not hesitate to enter Bass's Straits at night, keeping in mid-channel between Otway and King island. Since then, the light on the former has been exhibited. I have my doubts, however, and I believe speak the opinion of Capt. P. P. King, the first of Australian authorities, whether the light should not have been placed on King Island, the gales blowing hardest from south and south-west. Cape Otway is a lee shore, and in our own case, I should never have thought of edging away towards it, to make a light. The reason generally assigned for the present position, viz: keeping a ship off the Harbinger rocks appears not to be worth considering, as they lie within a few miles of the shore of King Island, and a light on the latter would be a sufficient guide for them. Made Wilson's promontory in the morning of the 5th of August, and ran in a fresh southerly gale, between it and Redondo. When abreast of the Crocodile rock, then between 4 and 5 miles distance, saw it breaking distinctly from the main-top. Observed as we passed in the evening that *the light-house on Kent's Grope was completed and the light-shown*, so that either entrance to the Straits, has now this great advantage.

I believe it is now generally known, that the coast line from Cape Howe to Port Jackson,* as originally laid down by Flinders from observations in a small boat, is about 10 miles too far to the eastward.

* Or rather as far north as Red point in Lat. 34° 30'.

Capt. Stokes in the *Acheron* informs me that he has steamed over the assigned position of Cape St. George, south of Jervis Bay, and he has corrected the coast line in our Admiralty chart accordingly.

A CRUIZE THROUGH THE MOZAMBIQUE CHANNEL, in *H.M.S. Geysler*.
By *J. Richards, Master, R.N.*

(Continued from page 344.)

AFTER completing a survey of the anchorage we made up a party to visit a waterfall, situated about two miles from the town. Starting early we made a detour to the eastward to look at the country: arriving on the high ground above the fall by eight o'clock. From this spot the view on every side was very fine. Towards the peak the land ascended in gentle swellings for about two miles, covered with rich grass, and relieved occasionally with clumps of cocoa-nut and other trees. Beyond this arise steep hills, forming in ridges up to the peak, pretty well covered with wood, and intersected with deep ravines, the peak itself being buried in the clouds. On our right a bold ridge of land towered far above us, continuing towards the sea; then looking seaward the town is just visible in the gorge of a deep ravine, whilst at our feet a sheet of water fell over a precipice down which it makes the eye dizzy to look. But as our appetites were by this time pretty sharp, we thought that "Goliath" just heaving in sight from between some clumps of trees below, and bearing a hamper of provisions, was not the least interesting feature of the scene. After bathing in the stream we all set to work and made a hearty breakfast; then wishing to view the grand fall from below, some of the most adventurous among us commenced the descent. This was ticklish work, in which, the natives could not be persuaded to accompany us, so Doctor Jolliffe, young Sunley, Hearnden, Jones and myself proceeded without them. We succeeded after an immense deal of trouble, and ascending the mountain on the opposite side, arrived at the town at four o'clock pretty well tired. I should mention that when the natives saw us disappear in the ravine they went home and reported that we had got into a pit and could not get out; in consequence of this the Sultan sent a party of natives to our assistance with ropes to draw us out, these we met on our return just as we were about to enter the town.

In our walk we saw a great variety of birds, but not one guinea fowl, although we had been told there were plenty on the island. The soil was everywhere of the most luxuriant description, and I am told would grow sugar quite equal to Mauritius. The natives make a small quantity which fetches a good price at Mayotte. Any one, therefore who, is acquainted with the Johannese method of culture and manufacturing this article, may form some idea of what might be done with capital combined with European energy and intelligence. Every thing seems

favourable to the enterprise of Englishmen at this moment. The Sultan standing in great awe of his near neighbours the French, would gladly receive any English that might choose to settle here; but the surest guarantees is the peaceable disposition of the people themselves; their wishes on this subject, and the large black and slave population, which is said to be continually increasing by fresh importations from the Mozambique (of course without the knowledge of his Majesty).

I am told that the lower classes of the Johannese are very industrious, and that no difficulty is anticipated in procuring free labour, sufficient to bring a considerable quantity of the soil under cultivation, and at a very much cheaper rate than at Mauritius, in addition to which the planter would have a rich virgin soil, and in most cases entirely free from trees or bushes.

All the Johannese are passionately fond of trading, and in their dealings with Europeans generally consult Mr. Sunley, whose advice they seem to appreciate; as I have heard them remark "At one time we did so and so, but now there is an Englishman among us, thank God we know better".

Nothing surprised us so much as the number of natives speaking English, and the general correctness of their pronunciation, but I am told that from the decreasing intercourse with us, and their constant communication with the French at the neighbouring island of Mayotte, their language and influence is gradually superseding ours.

We employed Abdalla Abbas in negotiating our purchases of stock, &c., and found him exceedingly useful. He speaks English very correctly, is of gentlemanly address, and seems always eager to serve us in any way; neither did this seem to arise so much from the hope of gain as from being considered our friend, and gaining knowledge. Most of these people have certificates of character given to them by the masters of vessels putting in here, so of course our friend had his share of them, but that which he seemed most proud of was given to him by Captain Brown, of H.M. brig *Snake* and which set forth that he had given considerable assistance to the officers and ship's company at the time of her wreck near Mozambique.

Whilst we were here several dows arrived from Comoro, laden with bullocks. This trade appears to be considerable for such a small place, one dow generally arriving every day with from 30 to 40; however this taking place whilst we were here may be the result of accident.

We know of no harbours on this island, but I have been told by the natives that there are two very good ones on this side of the island. They must of course be small, probably nothing more than openings in the reefs, which at some parts extends near half a mile from the shore.

The natives were all much pleased at the idea of a Consul being sent here, he is now expected daily, and I have no doubt that when he arrives, considerable impulse will be given to industry and commercial enterprise. The cattle of Johanna are very fine, goats and fowls also are plentiful, but considering the great fertility of the soil, the supply of vegetables

brought to market was very small, excepting of course those articles that are indigenous to the island and grow without culture, such as coconuts, arrow root, &c., which are very abundant. As a list of prices may be of service I may mention that for bullocks we paid £1. 18s. each, fresh beef 2½d. per lb., vegetables about ¼d. per lb., pumpkins 4d. each, sweet potatoes 1s. per basket, fowls 7s. per dozen, arrow root 8s. per cwt.; bananas are dear, mangoes plentiful, as also are pomegranates, tamarinds and pine apples.

We purchased for the ship's company's use 800 lbs. of vegetables, including pumpkins, sweet potatoes, and yams for £1. 15s., and fodder for oxen 5s. per load.

Having made a survey of the anchorage off the town during our stay here, it may be as well to offer a few remarks on its approaches, &c.

On this head I think Horsburgh's directions very good, but I have been told by several masters of merchant vessels, that the great caution recommended by him in approaching the island and anchorage, impressed them with an idea of great danger, which is further increased by not having a proper plan of the place. This induced me to make a close survey of the anchorage and its neighbourhood, from which any one wishing to anchor here may choose their own position. I have, however, marked the spots which I consider the best, and there is plenty of room between the points included in the survey to work up.

Whilst the *Geysier* remained at Johanna the land and sea breezes blew pretty regularly, with light variable airs between, but chiefly from the N.E. The barometer steady 30.00. Thermometer ranging between 76° and 79°. The climate delightful.

I interrogated the lieutenant in command of the French schooner concerning the reefs and shoals east of Mayotte, but did not add to my stock of information. Although he had been cruising in these seas for a considerable time, and frequently passed these dangers, yet it was at too great a distance to be of any service, so I gave him a copy of my plan of the *Geysier* reef and shoal. On examining his chart I found three reefs marked down in nearly the same situation as I afterwards found were marked in most of our Admiralty charts, and a bank of soundings extending from the easternmost reef to the eastward for about three or four miles, and having from 40 fathoms to three feet on it.

The commander of the French schooner having some business to settle at Mohilla, got under way on the 8th to run over there.

Having completed our business and filled up with water we wayed from Johanna on Sunday the 10th of September at 6h. A.M., and steamed over to Mohilla, steering for the principal town named Doáng, at which place we arrived at noon. Here we found the French schooner at anchor, and several Arab dows in a small harbour off the town.

The natives had been told of our coming by the Frenchman, so directly we anchored a messenger came on board from the Queen to welcome us. In the afternoon the Captain landed to wait on her Majesty, accompanied by James the interpreter and Mr. Sunley, who had come over with

us from Johanna. He was received on the beach by a guard of 50 men armed in the European manner with muskets and bayonets. They presented arms, and went through several manœuvres with great regularity. On entering the palace he was received by the Queen, (a good looking girl of about fourteen years of age). The governor of the town, who is at present Regent or Protector, and several of the principal officers, all of whom imitate the European dress on such occasions, besides a pretty young Creole Frenchwoman, who had been sent by her countrymen at Mayotte, to superintend the young queen's education. After a little chit-chat, and arranging the time of saluting, &c., our party returned on board. As neither the queen nor any of the principal officers or soldiers are Arabs or natives of the island, it may not be uninteresting to shew how they got in to power.

Every body knowing anything of the history of Madagascar, in Radama's time, will recollect that Ramanetaka was one of the most successful of Radama's generals, and at his death was governor of Majunga, (Bembatooka,) which province he had conquered. On the accession of the present queen, (Ranavalona,) he became an object of jealousy and dread to the party in power. It was therefore resolved to destroy him. But as he was a near relative of the late king, and very popular, and further being an experienced general and at the head of 500 experienced soldiers, it was thought dangerous to do it openly and by force.

About the middle of May 1828, an officer with 20 soldiers, arrived at Majunga from Tannarveivo, to summon Ramanetaka to the queen's presence, under pretence of requiring his services at the consul, but several of the party having received hints of what was to take place, before leaving the Capital, privately told Ramanetaka, and advised him to escape. He apparently treated their advice slightly, and said all would go right enough directly he made his appearance before the Queen. He accordingly prepared for his journey intending to take a guard of 200 men, with all his wives, slaves, goods and chattels.

At this time there were several Arab dows at anchor off the town of Majunga, and as Ramanetaka possessed many slaves and much baggage, he engaged the dows and gave out that he should embark and proceed up a river to the southward, which it was well known would save a deal of time. He embarked accordingly, and proceeded out of the bay, then declaring his intention of visiting Johanna first, ordered the dows to be steered in that direction.

He arrived before the town of Johanna on the fifth day, and immediately despatched a messenger to the King asking permission to land. This was granted, and he landed with all his people.

Just about this time the king of Johanna was engaged in a war with the people of the neighbouring island of Mohilla, and seeing that Ramanetaka's band of 200 men were armed with muskets and bayonets, he requested their assistance. This being granted, Ramanetaka was appointed commander-in-chief of the entire force, and he proceeded to reduce the island of Mohilla.

Arriving before the principal town (Doang) he found the walls too strong to storm without cannon. He therefore commenced a strict blockade, which as they had neither provisions nor water in the town, obliged them to surrender on the seventh day from the commencement of the siege. Ramanetaka then, after disarming the walls of their cannon, and the people of their muskets, swords, &c., returned in triumph to Johanna. For this service the king of Johanna gave him an estate on which to locate himself and people, and he remained there five years peacefully directing the cultivation of it.

In this time the Johannese respected Ramanetaka very much for his uprightness, and frequently contrasted his conduct as a prince among his own people, with that of their own king, to the sad disadvantage of the latter. This excited the jealousy of the king, who sent for Ramanetaka, and said you must leave my country as your influence is getting greater than mine. Ramanetaka, therefore, once more prepared to embark in quest of a home.

But in the meanwhile some of the chief men came to him and said, "The people are all with you, why don't you become our king"; to which he generously replied, "Your king first received me when I came here, how then can I turn him from his throne". Seeing that they could not prevail on Ramanetaka to join them, they proceeded without him, and drove the king off the island; then again offering the authority to Ramanetaka, he accepted it, the former king having gone to Mohilla, where he died shortly after. Some time after this Ramanetaka went to Mohilla where he was elected king also, and for some reasons which do not appear he took up his residence there, seldom visiting Johanna.

This probably excited the jealousy of the Johannese, who threw off his authority and elected another king. And now commenced a series of expeditions from one island against another in which the Mohilla, people were generally victorious without gaining any substantial advantage; the Johannese being driven to great distress by this sort of warfare appealed to the governor of Mauritius, who wrote several letters to Ramanetaka threatening him with the severe displeasure of the English if he did not cease. I question whether he ever comprehended the contents of these letters, for they had been preserved with great care, and were now produced for our inspection, with as complaisant looks as if they had been so many good certificates.

Ramanetaka has been dead a considerable time, leaving the government in the guardianship of the governor of the town (a native of Mozambique) till his daughter (the present queen) becomes of age.

Since Ramanetaka's death the power of these people has considerably declined, and although they still have a respectable shew of muskets, yet their large guns, as well as the walls of the town on which they stand, are fast falling into decay.

Doang is the principal town of Mohilla. It is walled round, and situated close to the beach, similar to Johanna, which it very much resembles in appearance. Along the sea face is a solid rampart or platform for

a battery of guns, but only a few old guns without carriages were here. The queen's house is situated at the north-west corner (nearer the beach) of the town; it is built in the European style, and of respectable dimensions. The principal mosque is situated on the beach outside the town wall. The land near the beach is low, rising very gently till it joins the ridge of moderately elevated land running through the middle of the island. It is thickly clothed with wood, and entirely wanting in that variety of scenery that gives such a charm to Johanna.

The natives say there are several fine harbours formed by the reef on the south-western shore of the island, and the commander of the French schooner told me that the governor of Mayotte intended sending a man-of-war over to survey them. He also informed me that the island is very unhealthy for Europeans; but then similar reports were against Johanna at one time, which subsequent experience has proved without any foundation.

The present queen of Mohilla, being the daughter of Ramanetaka, is said to be the rightful heir to the crown of Madagascar, and I suppose in anticipation that she may one day be recalled to that high station. The French authorities at Mayotte take considerable interest in her education. But notwithstanding this the friendship of the English would be preferred at present. The dying request of Ramanetaka being to endeavour to secure the friendship of the English, should an opportunity ever present itself; and from the great respect they all bear to his memory this will be done, whilst the queen is of such a tender age, but of course, as she grows up under the influence of a French education, it is not unlikely that she may change her policy.

Here our interpreter had the pleasure of meeting "Joseph," one of his Christian countrymen, who escaped with him from Tamatave at the time of the Christian persecution, after the accession of Ranavalona the present queen of Madagascar.

He is employed here as a missionary, and from his serious and sensible conversation and behaviour, I should think well qualified for the task. James was quite delighted to be with his countrymen again, and they were equally pleased to see him. He remained on shore the whole time we were here, and became a general favourite; indeed, if he had not been already married it was rumoured that he might have become king of the Mohilla.

Early on the morning after our arrival, I proceeded to place myself in a position to get a "base" for a survey of the anchorage, from the sound of the guns fired to salute the queen,—this was done at 8 o'clock. The battery on shore returned our salute directly; and considering that most of their guns are rusty old things without carriages they got through it wonderfully well.

As the whole of the day was taken up with the "survey", and we were to sail early on the morrow, I was obliged to land at night for observations.

The night being fine I finished them by 2h. A.M., when finding that

my boat had grounded I had no resource but to wait patiently till the tide rose again. Hearing a noise of revelry in the court yard below the rampart I descended and found James, our interpreter, in the middle of a war dance, to the intense delight of some 60 or 70 Hova women, who were beating time with their hands. Ascending the steps again and entering a room in an old tower attached to the queen's house, I found the little French governess and the missionary Joseph in conversation, in which I joined. Happening to speak of the probability of the Malagasy Christians being permitted to return again to their country, Joseph said with great energy, "I pray to God that it may be so, it would be happiness indeed."

The little governess producing a large accordion enquired if I could play it, fortunately Mr. Jones (my assistant) understood it perfectly, and entertained them with waltzes, polkas, and marches alternately, till near daybreak, to their intense delight, when the tide rising enabled us to return on board.

I found out the next day that the queen and all her attendants had been listening to the music all the time within a few feet of us, but they would not enter the room for fear of disturbing us.

Having furnished ourselves with fresh stock at Johanna we did not make any purchases here, but a fine fat bullock was sent off to the ship from the queen as a present. From the quantity of cattle I saw on shore I should think this island would furnish supplies to any ship putting in here, but the watering place is some distance from the anchorage, and the anchorage itself is more open than at Johanna. It is a great pity that the south-west side of the island is not properly surveyed, as should the report of the natives concerning the harbours to be found there prove correct, this island of all the group would be the most convenient for vessels passing through the Mozambique in the north-east monsoon.

I shall conclude this account of Mohilla with a few remarks on making the anchorage off the town of Doang.

E.S.E., about three miles from the south-east end of Mohilla is a large white rock about 200 feet high, very remarkable, and which cannot fail to be seen by any vessels approaching from this quarter. Doang the principal town of Mohilla, lies N.W. about 14 or 15 miles from this rock. Running towards the anchorage from this quarter I do not think it safe to approach the coast nearer than one mile, until it is better examined. When a ship has approached within the limits of the plan, the bottom can be plainly seen in 9 fathoms. The best anchorage is marked in the plan. Whilst at Mohilla we had light variable winds chiefly from the southward with fine clear weather. Barometer rising to 30.10, temperature 75° to 77°. We have not had a sprinkling of rain since passing Cape Amber.

I ought to mention that the story of Ramanetaka's adventures were furnished me by James, our interpreter.

Left Mohilla on the 12th of September, steaming against a light

S.S. Westerly wind. 13th at noon in lat. $14^{\circ} 30' S.$, long. $44^{\circ} 52' E.$ Barometer steady at 30.12, thermometer 79° , current N.E.b.N. 9.

The rise of the barometer a tenth before leaving Mohilla prepared us for a southerly wind, and as in the passage nothing occurred worthy of notice, I will only remark that the wind veered from S.S.W. to S. on the second day after leaving, then shortly to S.E., falling calm when within 60' of Boyanna Bay. Shortly afterwards springing up again from N.E., it blew pretty fresh, then decreasing in strength it veered to north, falling calm as it veered to the westward.

September 14th we entered Boyanna Bay nearly mid-channel, and met with very irregular soundings, not shewn in Captain Owen's plan of the place; among which were several casts of quarter less four fathoms, but upon getting inside the bay heads it deepened to 9 and 10 fathoms. On mentioning this circumstance to the masters of two merchant ships we found at anchor here, I was told that no danger existed, and that nothing less than $3\frac{1}{2}$ fathoms would be found anywhere at a moderate distance from the shore. However, until better surveyed I should always proceed over these patches with caution.

The *Geyser* anchored in 14 fathoms at low water with the north point of the bay N.b.W., and Sandy point (Bullock point) W.b.S. $\frac{1}{4}$ S., little less than a mile from the shore.

During our stay here land and sea breezes blew regularly, but continually changed their direction with the course of the sun. Thus at daylight, if there was any wind at all it was from the east; by 8 o'clock it would work round to north-east, a nice gentle breeze; now freshening fast it would gradually veer round to north by noon (blowing right in the harbour) its strength now about 5 or 6 bc, and then during the afternoon to north-west, decreasing and veering to west by sunset, then dying away; after a short interval of calm the land wind commences; at midnight it is at its greatest strength, blowing from the southward, and gradually veering round to east by morning. The barometer 29.98, temperature ranging between 74° and 82° . Fine weather, but lightning every evening to the southward.

SKETCHES AT THE NICOBARS.

HAVING recently visited the Nicobar Islands, I shall endeavour in the following pages to give some sketches of the manners of their inhabitants. The first island where we stopped was Car Nicobar, the most northern of the group. At a short distance from shore, we were hailed by a canoe fitted with out-riggers and having from five to six natives in it. In the distance we only saw in the shape of dress two hats amongst the whole party, and nothing else, but when they came nearer

we found each man had a piece of cloth round his loins of about two inches in breadth. On coming on board, these natives showed the most easy coolness and confidence: they took possession of the poop, sat upon our chairs, crossed their legs, and prefaced all their questions with "I say." Their principal demands were for muskets, hatchets, cloth, and *mirabile dictu*, soup ladles. We could not imagine to what use the soup ladles were to be applied, till we found that with silver wire the women adorn their arms and fingers. I told them I was coming on shore and going to make a house, to which they evinced the most strenuous opposition, asking if I was a Padre. We found all this opposition arose from a recent visitor having filled their minds with suspicions of the Daues and other white people, persuading them that the consequence of Europeans, especially missionaries, settling amongst them, would be the ruin, and depopulation of the islands.

The next morning we landed in an open sandy beach, whereon I determined to pitch my tents. I took a walk into the jungle, where some of the trees, the *Barringtonia speciosa*, grow to a most glorious height. I passed through two or three villages. At one where I stopped to drink a cocoa-nut, there issued from one of the houses a young female with a Junonian walk, and not unlike in appearance what I could fancy the Samian goddess, her arms, her thinly clad limbs, and her face were all of the most elegant proportions. The young lady, the next night I was on shore, and when fast asleep, paid me a visit, but alas! for my vanity, which was highly tickled, it was only to beg an empty pot which had held herring paste which she had seen and mightedly coveted! I gave her at the same time a looking-glass. She looked at it and asked its use, to which I replied to see her face, for I never knew a young damsel who did not glory in the reflection of her own charms. Miss Come-again, for that was her name, wound up by asking for a fathom of cloth, which she received.

The natives are insatiable in their demands, they stick at nothing, they have at times asked me for all my instruments, for my dip circle, particularly the needle, which, in flying about, excited their unbounded admiration. On Monday morning I sent my tents on shore to have them set up, and I went on shore about half-past eight. Here I was met by Captain Jim Booth, one of the Patriarchs I presume, who asked me how long I was going to remain. I told him six or seven days, perhaps more. He said "You tell true, no tell lie?" Captain H. came ashore about three hours after, and found the whole campong in a turmoil. They were beginning to show passive resistance by refusing to have any sort of trade with us, and taking me to be a Padre, they had concluded that I was going to build a house and remain there to the destruction of the population. Reports had been spread over the island intimating that a Padre had come, and on Monday there was a general rendezvous at Anong, the village opposite to which we had anchored. Delegates came from all parties, nay, there was an appearance of a Garde Mobile, for two attended from the village of Sawa with fusils, one of

which had lost the hammer, and the other, which was a percussion one, was unprovided with ammunition. This valiant army when they found their services not likely to be called for, returned to the place from whence they came, and as their red cotton night caps were being gradually eclipsed by the increasing density of the foliage, I could not help exclaiming "Begone, brave army, and don't kick up a row."

Near to the place I had pitched my tents, was a shady retreat to which I retired to take my dip; this still more excited their fears, for it was a spot where they throw out the bones of the dead, after they have been buried for about a year. While I was actively employed, a man with the euphonious title of Captain White came to me with his breast all covered over with bits of green, as if he had been bathing in mint sauce, but which he assured me was "black man's medicine", and told me that this was the burial place of his tribe, and then took me to show the spot, holding on to me like grim death. He pointed to a confused mass of human skulls, and thigh bones, and jaw bones of pigs, all heaped together, and remarked "Plenty black devil got there," which considering that these bones belonged to his fathers and grandfathers, was highly complimentary. On returning to the dip circle he became quite enthusiastic at remarking the oscillations of the needle, which he thought were symptomatic of its distaste to those black devils, again pointing with his finger to the osseous remains of his ancestors lying scattered and dishonoured. Captain White was evidently in liquor, as it was unpleasant to be in his immediate vicinity, I therefore gave him his congé.

I may here mention that the horror of the natives for these burial grounds is excessive. No inducement could prevail upon them to go there at night, and during the day they look all about them to see if there are no black devils to terrify them. I found it therefore my safest plan to take up my quarters as much as possible during the day in this burial ground, and by that means I got rid of their ceaseless importunities, which became at last a nuisance perfectly intolerable. On the same day after our dinner we called in John Bull and Jim Booth, two Nicobar Elders. They came into my tent in full Nicobar travelling dress, that is, a black hat and about a fathom of cloth of two inches in breadth; whatever length is superfluous whisks out behind, and I observed that the fast young men and the bloods rather affected the flaunting tail, which when they walk has a majestic effect, but when they run whisks about horizontally in most serpentine waves. Jim Booth and John Bull were accommodated with chairs, and as I had hinted to my servant, an old musselman, who had appeared horribly disgusted with them, and rather looked down on me for tolerating them, that upon his attention to serving them depended his being assassinated or not, he worked away to help them as if they had been most formidable burra sahibs.

As I found that, according to Nicobar etiquette, our two guests did not take off their hats, and as I had seen sundry articles proceeding from mysterious corners, I determined upon having an inspection. I therefore begged Jim Booth most politely to lend me his castor, which

he willingly accorded, and certainly the contents were most extraordinary; a small bottle of salts, two dozen pills, a handful of tobacco, an old seidlitz case containing letters, a roll of pandan leaf for the manufacture of cigars, and a langootie. I then begged John Bull's; his contained the tobacco and the pandan leaf, two langooties, one a very old one, several very suspicious pieces of old cloth, a couple of old books, three or four rusty tenpenny nails, a piece of ambergris, and about half a catty of bird's nest done up in such filthy old duds that I thought, as I unrolled one after another, I should at last develop a mummy. What precious soup this would make, thought I, as I came to the last roll and struck upon the bird's nest. Well, after this who will make use of a carpet bag or a portmanteau, when a man can stow away all this in the crown of his hat! Jim Booth was a remarkable acute character, his quickness in catching up the meaning of words and learning them off was truly extraordinary. A remark was made after the inspection of John Bull's hat that he was very cunning. Jim Booth immediately asked what the meaning of cunning was, which he could not understand as being different from cheating. At last Capt. H., who was sitting at table said "Well, you agree to give me 200 pair of cocoa-nuts, and you give me one half bad, that is cunning," "No," replied Jim Booth immediately, without a moment's hesitation, "that is cheating". Jim Booth's acuteness is most wonderful, and he only requires a little education to make him a superior man, but he is false-hearted; and incapable of friendship. John Bull is really a sterling character, and I would place the greatest confidence in him.

Their desire to learn new English words is unbounded, and their aptitude at seizing the sounds and the facility with which they retain them is astonishing. Our two heroes ate and drank considerably, nothing appeared to satiate them. John Bull after eating a fearful quantity of beef and biscuit, asked for rice, two or three plates full being as nothing, and seeing him like *Oliver Twist* asking for more, I determined to polish him off with a mixture of the most incongruous materials, butter, mustard, pickles, pounded beef, sugar, sardines, tea leaves, anchovy sauce and cayenne pepper; but the heathen smacked his lips, and said it was very good, and asked for a little more wine. I had already helped him very largely to wine, a sour acid stuff bought under the name of *Sauterne*, that tasted like vinegar, which had been kept in a *Hock* cask, and John Bull expressed his sincere admiration thereof, but observing me sticking to *Port*, he startled me by asking for some. I assured him the nastiness he was imbibing was the best of the two, but as he said very justly, what I liked he liked all the same, so with a heavy heart and a reluctant hand I poured him out half a tumbler which he swallowed with infinite gusto, smacking his lips and striking his insatiable paunch, remarked, "Yes, good." Then heaving a sigh "Very good, two all the same"; pointing to the scraggy-necked bottle of wishy-washy which I had had opened for his especial benefit. I could have killed the wretch for instituting such an odious comparison.

I went afterwards to one of their houses for a few minutes, and found three gentlemen with arrack and tobacco keeping it up at a very fast rate. The singing is harsh but not unpleasant, they all three sang in concert, and one had a very rich mellow voice; no instrument accompanies the voice, but there is much greater modulation in the tones than in the monotonous drawl of the Malays and Javannese. It is not very unlike the Chinese.

A few days afterwards Capt. H. and myself went to a grand feast at Kameeoos, about 10 miles away on the south-east extremity of the island. We started about three in the afternoon. John Bull preceded us with a stick on his shoulder with a couple of yams on one end, and a grog bottle at the other, with a reed stuck in it, so that he could take a suck without stopping. We had a tiresome walk of it, the road was over coralline debris which lay scattered in all directions. The land in several parts had not been long reclaimed, for there were still the remains of the mangrove stumps. We arrived close to the village of Kameeoos at about eight o'clock at night, we then had to cross a small inlet of the sea, which we did on a raft of bamboos. When we got to the other side we stopped to refresh ourselves, and lighted our cheroots, whilst Jim Booth and John Bull proceeded to adonize themselves for the dance. They spent about two hours in this before they were ready. The first part which was dressed was the head; for this purpose an old Cocoa-nut was split, and oil was made, with which and a mixture of water the hair was plentifully saturated. They then plunged into the sea, having the head and shoulders only out of the water; and after performing this ablution, they proceeded to complete the rest of their toilet, which was a very tedious matter. I was horribly disgusted at being obliged to wait so long, but it could not be helped. The scene, however, was not without interest. The moon was up, and parties were constantly passing the ford, and repairing to the feast. Enormous pigs strung by their legs to long poles, were carried, some by four, others by six athletic men. The feast appeared to me almost invested with Homeric interest from the vastness of the scale on which I saw the preparations proceeding. These pigs were truly most gigantic animals, and their silence, and passive resistance, as the Nicobar prophet would call it, was edifying in the extreme. Messrs. John Bull and Jim Booth being at last fully equipped for the dance, we moved on to the village of Kameeoos. When we arrived dancing had not yet commenced. We were taken to the house of the headman, where we rested ourselves after our severe fatigues. Our welcome was not at all cordial, and I could hear a prodigious long argument between Jim Booth and mine host. It was evident our company was considered as *de trop*, and Jim Booth got a sharp snubbing for having brought us. However we could not be sent back, but the Patriarch and Elders seemed determined to slight us as much as possible, by taking no notice of us, or may be it was the new democratic mode of reception lately introduced with other republican notions into the Nicobars. It was now eleven o'clock and dancing had commenced. The

ball was opened by five or six of the tallest men, holding each other by the shoulder, and commencing a regular bellow. The effect they produced was truly satanic, for their heads were wreathed round with the pandan leaf, or else with the yellow bark of a tree, of which the extremes, instead of being confined, were allowed to escape, so that in the moonlight they have the appearance of being cornuted, and look for all the world like the devil, agreeably to the imagination of little children. The whole population dances together, men, women and children in the same ring, but the sexes distinct. Sometimes the ring, according to the number of houses, is able to complete the circle, but this is not often the case. The ring is very compact, each person grasping his neighbour by the shoulder at arm's length, by whom he is grasped in return; sometimes males and females all sing together, as they always dance together; at other times they sing alternately. The ring moves round slowly from left to right, and the dance consists of two or three stamps, and a smart gliding pressure of the right heel on the ground, not unlike the way in which Blacky rubs the palm of his hand on the drum of his tom-tom; indeed, when the movement is performed in unison, the sound is agreeable, and the movement rather graceful.

In one of the dancing squares I observed an object by which my mind was visibly transported to mine uncle of the three golden balls. A small pyramid some seven feet high was covered all over with forks and spoons and soup ladles, and to me they even appeared ticketed. I suppose they were placed there for ornament. The scene altogether was sufficiently animated, young damsels and old, young bloods and middle aged men, and little children, all joined in the dance, whilst occasionally a party carrying a huge monster of a pig would cross the path of the dancers, and break for a moment the ring, continuing their headlong course, and passing rapidly into the jungle. Three unfortunate pigs were bound toes up in the dancing circle where I found myself, and really with the effect of the moonlight, the diabolical look of the male dancers, my mind could easily revert to the incantation scenes and sacrifices of the Mexicans. Some of the women were tolerably pretty, and their mode of dress rather enhanced their charms. On their necks the quantity of silver circlets appeared to be only limited by their means, and their fingers were some of them half covered with silver wire. A fathom of blue cloth was wrapped round their loins, but in front it was brought as low as decency required.

The dancing was continued with unmitigated ardour, refreshments were not wanting, a kind of drinking booth was established by the dancers, and whenever a young miss or an exquisite wanted their negus or their ice, they just left the company for an instant, took their mouthful of toddy, and their whiff of tobacco, and speedily regained their place in the circle. Jim Booth did not as yet mix in the dance; as for John Bull, his dancing days were over, and considering his figure, which was rather unwieldy, having a back about twice the length of his legs, I should much doubt if at any time of his career he could have come the

polka. But Jim Booth was the regular pet of the fancy, young ladies would slap him *quam familiariter* on the shoulder, and look at him with glances which told him what a nice young man he was; but there was something in his countenance which betokened that all was not right. His spirit appeared to have deserted him, and I cannot help thinking that he was suffering on our account, although he would not acknowledge it. He evidently had great repute as a doctor, for old ladies afflicted with the stomach ache would crowd around him, bringing a cocoa-nut shell full of water and beg him for a little doctor's stuff, at which Jim with an air of profound wisdom would pull off his hat, take out his bottle of salts, and after taking about enough to have worked a tom-tit slightly, he enclosed the pinch which he had taken between his finger and thumb, sprinkled the contents on the surface of the water, and sent them away with the injunction, I suppose, not to over doze themselves.

About 1 A.M. Jim Booth, John Bull, Capt. H., and myself adjourned to supper, where we had roast pig and kaladie boiled, served up on a leaf. When I saw the pork my stomach rebelled, and I contented myself with a plaintain or two. We again repaired to the dance, but I was now getting drowsy, and we retired for the night. We found some wretched hovels in which we ensconced ourselves. The next morning we returned to the dancing, which was kept up with unabated vigour. All the female population had now turned out, and although they were rather fatigued from over-exertion and too much liquor, they still persevered with unflinching courage. The resort, however, to the toddy stand seemed rather more frequent, but still all appeared to be animated with the most kindly feelings towards one another. In no one instance did I hear an angry word exchanged, and in short, what to an Englishman who has frequented the Crown and Anchor at Greenwich Fair, must appear a most extraordinary fact, the more drunk the more friendly they got. Women, instead of squabbling and indulging in remarks, such as "Tilly dear, your hair is out of curl," fell to slobbering and kissing one another, and vowing, I suppose, eternal friendship. Neither did I see cruel savage man, just as we were going to have such a nice waltz, order an immediate return home. In only one instance did I see authority made use of, and this was I have no doubt to save the character of the spouse. The fascinating creature, redolent of toddy and tobacco, was dancing with a regular we won't go home till morning vigour, when her husband came up to her and begged her to come home; as the poor creature could scarce stand on her legs, he finally induced her to leave, but not ten minutes had elapsed before she staggered back to the scene of all her pleasure, and just invigorating herself with a whiff of tobacco, and a pull at the toddy bottle, she rejoined the ring, and recommenced dancing with a frantic energy that showed she was the girl for mirth and glee. But as she was rapidly becoming a scandal to her sex, two of her fast friends took her in hand and commenced kissing and weeping toddy over her. They appeared if possible, worse than she; however they tried

to persuade her she was very drunk, and they were sober enough to see her to bed. She was, however, invincible; the last time I caught a glimpse of her, she was rearranging her petticoat which was a double one, a coloured one inside and a white one outside, and she could not have managed it, if it had not been for a friend who assisted her.

As I was making my preparations for leaving, and trying to get some one to show us the way back, a middle-aged man, his face painted red, exactly like a clown in the pantomime, came up to me in an old white hat, and remarkably drunk, and said with a voice as husky as a London waterman's, taking continual sucks the while at the toddy bottle with the assistance of a reed, "How you do, sir, very glad to see you sir,—my name is Pompey the Great—very good name—" "And my name," said I, "all the same, very good name—" "What's your name?" said Pompey. "My name," I said with a bow "is Julius Cæsar, and" taking off my hat to Capt. H. "this gentleman's name is Ptolemy, King of Egypt". After this I shook off Pompey, as he smelt abominably of musty toddy, and as we left him I heard him ask me "I say, you no got cutlish, (cutlass,) no got musket, make sell?" As John Bull did not care for dancing he agreed to escort us back, receiving from the Patriarch and Elders a large piece of raw pork. We arrived at about 10 A.M., at our tents, where we had a good breakfast waiting for us. I was thoroughly starved out of Kameeooos, or I should have been glad to have remained there sometime longer.

We subsequently visited Nancowry harbour, where from vessels having been cut off we were much more on our guard. Still, I observed on shore, and went about the country a good deal, but always armed. Capt. H. did, I believe, but little trade here, the natives being suspicious and shy. The harbour is a very noble one, and being open to the East and West is accessible in both monsoons. Having seen in Horsburgh that the women on Bompoho were fairer and more beautiful than on the other islands, I determined to go there, and as I landed my heart palpitated as I thought of the beauty I was to encounter, but I was never more deceived in my life. They were, without exception, the ugliest specimens of the sex I had seen. I saw no young damsels, all those whom I met were engaged in domestic occupation of nursing, and dangling small specimens of humanity of some two feet in length, but their close cropped hair, their mouths filled with tobacco, their huge breasts flapping about like leather bellows, their dirt, filth and uncouthness of dress, filled my mind with disgust, and made me reflect that Capt. Horsburgh might be a very excellent hydrographer, but no judge of women. I felt heart sick and worse than all sold. In the afternoon notwithstanding, I had the madness to walk along the beach under a sultry sun, and the consequence was a fever of a very bad description. We at last of all went to Luxur in the island of Terressa. I liked the people here much, they were eager for trade, but without that disgusting importunity so perceptible in the Car Nicobareans. It was at this village that I met with a man named Gold Mohur, whom I took to amaz-

ingly. He had sent his stick on board to notify to us he was coming. This stick, like the knife and tobacco box of the first Governor of New York, was his emblem of authority. He was a jovial little fellow, in the middle of trade he would fall to singing "We're the lads for mirth and glee," or "Put on your night caps, and keep yourselves warm, jolly companne Englishman." This he would repeat ten or a dozen times. One great favorite of his was "A frog he would a wooing go", distorting it in the most abominable manner. I regretted to part with him, but I am sorry to say he is much addicted to liquor, and is so nervous that he can scarcely lift a glass to his lips.

[The foregoing amusing paper appears in that excellent foreign miscellany, the "Journal of the Indian Archipelago."—Ed.]

NOTES ON A PASSAGE THROUGH THE GRECIAN ARCHIPELAGO.*—*By*
Capt. R. Leighton.

IN the summer the Etesian winds blow in fresh breezes from the north-eastward and north-westward, and in the winter the prevalent winds are from the south-eastward and south-westward, so that the irregular winds in summer are from the north-west, and in the winter they are from the south-westward. There are, however, exceptions, with calms and variable winds that may intervene.

I have gone up here in the fall of the year with light winds generally at S.S.E., as far as Tenedos, but found the current very strong in the Dardanelles, and was thirteen days in getting through, and had also a very tedious time in the Bosphorus.

Again, at nearly the same time of the year we had the winds very indefinite with baffles and calms, particularly in the passages. The first of those passages was made with the winter winds, and the second between the two seasons.

The islands are high and bold, but they afford no shelter against the Etesian winds, and the currents are very irregular, both in force and direction, but the atmosphere is generally clear, although a considerable haze or fog often attends the easterly gales in the winter. There is an apology for a light at Zea harbour, but nothing more of the kind.

The greatest difficulty attending this navigation is getting up against the Etesian winds, as they blow right through the Zea and Doro passages; and the winds blow too fresh for beating against, and the islands not affording any shelter. If you are over about Milo you may hold along the side of Thernia, but will find it difficult to fetch Cape Colonna.

Your first object is to make for the points of the mainland for entering the passages if the winds are moderate, or to find shelter when they are too fresh.

* Capt. Middleton's remarks here alluded to as published in Laurie's Directions are quoted in that Directory from this journal, in which they originally appeared.—Ed.

First, if you cross the gulf from Cape Matapan to the Cerigo passage with the wind to the northward of west, you may expect to find the regular Etesian wind from the north-eastward when you round Cape St. Angelo, and you hold up for that point so as to weather the island of Cerigo, then you meet the north-east wind, and make for Cape Colonna, and hold to the land until you are past the Cape and close up to Macronisi Island, when you stretch across to get hold of Zea on the other side.

Anchorage.—When the wind is too fresh that you cannot get into the passage, there is anchorage between Cape Colonna and the high island called Gairdaronisi or the Isle of Asses. There is a high sharp peak on the distant mainland which you bring open between the island and a low rocky point, and there is a slight curve from this rocky point towards the ruins of a Greek temple. The bank also curves with the land, and is steep, so that care is required in getting hold of it when the wind gets light and variable under the land. Cape Colonna is the site of Falconer's celebrated shipwreck, and the ruined temple is noticed by Byron, and the isles that crown the Ægean deep.

Having weathered Zea you make for the point of the mainland again, (Negropont), and Karysto bay is shelter or anchorage should the wind be too strong right through the passage, or you may work so as to come out close under the small isle of Mandili, then stretch across to get hold of Andro Island on the other side. If you miss Zea or Andro in beating into those passages you may just begin afresh.

On leaving the Doro passage with the Etesian winds if you can weather Ipsara it is a good slant. The Kaloyeri or Monks are barren rocks, appearing like an ice-berg. I have gone between these and Ipsara and fetched into a large bay on the north side of Kios or Scio, and after having a severe thunder storm, with rain and lightning, both forked and chain lightning, got a fine southerly wind, and passing Mytilene hauled up toward Cape Baba and through the Tenedos channel. By this route the mainland is irregular. The island of Lemnos appears broken, and the highest part of Tenedos shows like a peak. Close along shore you have still a strong current, and there is no eddy to get round Cape Janissary.

Routes and currents.—I have seen the impropriety of lying wind bound at Tenedos and Basikia Bay, pointed out by Captain G. Martin, R.N., and that the passage into the Dardanelles is not to be effected by Cape Janissary with adverse winds. You might expect that the great body of the current would pass out between the Rabbit islet and Imbra. But it is found that a strong current runs directly along shore and through the Tenedos channel. However, the winds are often adverse when the current is not so strong, and you will be always upon thorns until you reach the White Cliffs, (or the bay nearest to the castle upon the other side,) as it is possible to reach those places with adverse winds, and you are then fast; but the fair winds are often of such short duration that unless you are at the White Cliffs you may be again baulked. I think Captain Martin's advice to cross the current (when you can fetch or weather

Imbros Island is good, as there is frequently a slant of wind down between that island and the mainland, that will enable you to fetch the European point of the strait, (where you can anchor if baulked by the wind,) and sail up that side as long as you can hold it; and then cross over to the other side, where there is a space of slack water that will enable you to work up to the anchorage, under the village, and thence to the White Cliffs.

Dardanelles.—Upon the European side the patches of anchorage or eddy are very small, and on the other side is the only chance of working up. But there is another inducement to follow Captain Martin's advice for getting into the Strait, that is, that the wind which favours your entrance that way also extends up that side for some distance, and I have been lying at the White Cliffs and seen this wind carry the ships entering that way (or those getting under way at the point) up even to the nearest anchorage to the castle without our feeling it at the White Cliffs. The winds may be stated as blowing right through the Strait either way, but they have two distinct origins, the one from the north-westward alluded to above, and the other from the south-westward, which I shall explain.

The current is impassable without a fair wind. From the low sandy point near the White Cliffs and Cape Abydos, in starting from the White Cliffs you cross over from the low sandy shore to the European side and close round the European Castle, taking care of the spits lying off it, and holding to that side about half way through the reach, and then crossing to the other side, hold close round the spit of Nagara Point. There is a considerable sweep in the European shore opposite to Point Nagara, but it is not available. Indeed, the Asiatic side has the best eddies for working in all the way through.

Spits lying off the different points appear to be generally clay or sand. You are obliged to shave them close, and you should not trust to the lead too much. The colour of the water is the best guide, as it is too steep for the lead.

I have sketched the best way of proceeding either in beating, or with fair winds in the Dardanelles, and much of it applies also to the Bosphorus, but the freshness of the north-east winds is often an obstacle to beating (with heavy ships) and the fair winds often cut you short at the points, not being sufficiently strong to force their way up, so that you may sometimes be unavoidably swept back in attempting to round the points. At other times you will observe that it is quite ahead, and you must either lay by in the eddy until the wind spreads, or anchor again.

Captain Middleton estimates the easterly winds in the Dardanelles and Bosphorus to blow ten months in the year, and that there are frequently westerly winds blowing at the mouth of those Straits that do not force their way through them. And, I think that the Etesian winds may be taken as blowing eight months in the year, and the irregular winds also fail to force their way through the Zea and Doro passages in the Archipelago. Of course it is in the winter that they most frequently force their way from the Archipelago up the Dardanelles and Bosphorus.

Thunderstorms rising in the western horizon are sometimes the fore-runners of westerly or south-westerly winds, but they are, although very threatening, too often abortive, or only produce a wind for a few hours in the Archipelago, and not reaching the Dardanelles; and I have seen the storm coming up from the westward and we had plenty of rain. The wind had probably then forced its way up the Dardanelles, but we had a fresh and squally leading wind up the Sea of Marmora from the northward.

The best indication of a south-westerly wind is Captain Middleton's "*perfectly clear calm night with heavy dew*". This is for the wind which comes from the south-westward, and that from the north-westward sometimes comes rather suddenly. And *white headed clouds rising* over the European shore of the Dardanelles are a certain indication of it. If you are not aware of this indication, this wind may take you unawares. However, I have observed in the eastern horizon, in the early morning, a light horizontal streak (definitely marked by the darker and rather smoky clouds above it) stretched across the Strait about the height of the land, and when this appeared the regular north-east wind freshened up as the day came on; and when it was absent, but no other apparent change in the sky, the wind has been light, and sometimes a fair wind from the north-westward.

Sea of Marmora.—The same winds are prevalent in this sea, but it is a great relief after clearing the difficult passage of the Dardanelles, and threading the Bosphorus to get into it, and no one seems to blazon any faults that it may have.

Constantinople and Bosphorus.—What has already been said may be applied to the Bosphorus as well as the Dardanelles, with respect to the winds, but there is not such a space of slack water, that you have enough to do to keep in the eddy with a fair wind, and to cross from one side to the other to get the shelter of the different points. But there is a great difference in the strength of the current. I have seen when the season (fall of the year) only differed six weeks, that in one voyage the current was very strong, and the next it was scarcely perceptible.

On arrival, if you are stopped by the wind at the back of the town, or at Leander's tower, you may proceed in your boat to the health-office, get pratique and your firman, that you may be ready to proceed. But, should the wind be fair you may proceed on to Bukedere bay, (where you will be past the worst of the current, and may get out at a time when you could not get up there from the town,) or any place short of the Castle, which you are not allowed to pass upwards after sun-set, but at any time downwards, although you are not allowed to land and water either way before going to the health-office. Should you be fortunate enough to run up past Constantinople there are plenty of boats that you may come down in, plying on the Bosphorus. It is best to write from your port of delivery to your broker at Constantinople, stating your cargo or ballast, tonnage, and number of men, that he may order your firman and save a couple of days' detention waiting for it, and the same

from your loading port in the Black Sea. But many ships have latterly run through both the Bosphorus upwards, and the Dardanelles downwards, without landing their wonderful document; and it is to be hoped that such a piece of nonsense will soon be done away with. There is now steam for towing ships through the Bosphorus, but the rate is high, (half dollar per ton,) as they are seldom employed except in the summer when fair winds are much less frequent than in the winter.

Constantinople has a beautiful appearance on approaching when the sun shines upon it, but you are much disappointed when you land. The Bosphorus generally is very picturesque, and travellers may find enough to describe without outraging common sense with their imagination.

Black Sea.

Our directions for the Black Sea (Mr. Laurie's) are chiefly from the remarks of M. de Marigny, and Captain Middleton. I like their accounts of the winds and the currents very well generally, and the remarks which Capt. Middleton makes upon the currents in relation to the different rivers, &c.; but I think that he is wrong where he differs from M. de Marigny in regard to a current setting at times across the entrance of the Bosphorus. However, what Middleton is chiefly blamed for is making the *weather altogether too good in the Black Sea*. I certainly agree that he has done so, and I am sorry that this should have led many traders to that part entirely to disregard much valuable information given by him, and I have heard him much abused about his fine weather. I do not say that such fogs occur here as those of the Newfoundland banks, but, I have found that dark overcast rainy weather occurs frequently, and coming down from Odessa with heavy north-east winds and this kind of weather it is very difficult to ascertain your position, and this weather sometimes clears off suddenly to beautiful clear weather, but leaves a miraged horizon. This, when it occurs at night is very deceptive, as it cannot then be seen, and may mislead you by false altitudes of stars. I have seen it several feet high all round the horizon during the day, appearing like broken water, or the tops of trees upon a low plain just rising above the horizon, that did not disappear until the eye was fifty feet above the sea. I have also observed the land to be affected by this mirage, particularly near Cape Fontane.

The irregular winds, those from the south and south-westward may continue long enough to run you across to Odessa. But that is a good chance. No dependence can be placed on those winds, especially when they begin to veer to west, you may then expect them to fly suddenly to the north or north-eastward, the winds are seldom from the north-westward. On one occasion I observed some black clouds rising in the north-west quarter, but not high nor threatening in appearance. The wind was then southerly and squally, I thought that it would shift to the northward, but did not expect worse weather. However, it came suddenly from the north-west, bearing before it two considerable whirlwinds, driving along at the rate of about twenty miles per hour. Those come too suddenly to

allow sail to be taken in, she was kept off right before the wind and the halyards all let go, and sheets held fast, and they passed harmlessly one on each side. This was the only instance that I have seen of whirlwinds.

The wind then veered to the north and north-eastward, and even when those almost constant winds are moderate they blow in howling gusts, and when they rise to a gale they are commonly accompanied by dark overcast weather and rain, with sudden bursts of clear weather. I have found the currents 16 and 20 miles per day in moderate weather. You might form some idea of their direction by Captain Middleton's remarks, and their general tendency, but not to depend upon. You cannot account for the effect of the wind upon the great mass of the water, it is very long and tedious working up to Odessa, but the greatest danger is in coming down, and here I have found the directions defective.

Running down for the Bosphorus I think it very imprudent to steer direct for the passage. You cannot trust to your position, and if you fall in to the westward you are then upon a lee shore, with the prevalent north-east winds; and I have known ships to have very narrow escapes in getting into the Bosphorus by falling upon the land to the westward. There are few good objects for marks. The "Giant's mount" and "Two Brothers" are too often obscured to be relied upon, and the objects require to be upon the immediate coast. The book says, "there are 7 red cliffs to the westward" and "1 white cliff to the eastward of the Bosphorus". The latter is a much better mark than it here appears to be, it lies about ten miles eastward, and near the False Bosphorus. It may be called "white cliff soiled with red". The line of coast here is level, and immediately behind the white cliff is a large "clump of trees". The land thence to the Bosphorus is generally covered with small trees and brushwood. When you make this land-fall you may steer west along shore and have a fair wind at north-east, and need not be afraid to approach the shore near enough to make out any objects. There are some rugged black points and two or three patches of yellow sandy beach, and in some places where the cliff appears to have fallen away a red clay is seen.

The mark of the "White Cliffs and clump of trees" is well known to most Black Sea traders, and is decidedly the safest way to proceed.

Lights.—The Russian lights are good, and there is also a good revolving light now upon Serpents Island. The Bosphorus lights, in a night favourable for seeing lights, I have seen distant 18 miles. The Asiatic one was distinct, and the European one just dipping. There were formerly great complaints of those lights being neglected. I believe now they are better attended to.

Odessa Mole is too small for the present trade, and nearly half of it is too shallow, and much damage occurs with north-east gales. It will never be safe until another pier is thrown out to shelter you from those winds. Many of us had to load in the roads when I was there in 1847, which are very dangerous from the heavy short sea that gets up so quickly. It is called a free port, though I cannot well tell why, when with a bark 367 tons, I was charged city dues, lights, lastage, British and Russian papers, &c., which with unavoidable presents to the officers amounted to

£20 sterling. But the worst feature of the Russian ports is the abominable quarantine system. The whole Mole is in quarantine, and yet you have to perform observation and go into it, and this system leads to the grossest impositions upon the shipping. You are restricted to one store to get everything you require, and may wait half a day before you can be supplied. Labour also is a monopoly. There are some impracticable permissions given to get stores out of the city, but no private parties are allowed to supply you, and such restrictions are laid on that it is well known your merchants will not take the trouble to surmount; and when you attempt it care is taken that you pay within a fraction of the price in the Mole: although it is well known that generally ship's stores are not more than half the price in the city that you pay in the Mole. But the keeper of the store makes no secret of it that he is bound to keep an Opera in repair, and also to furnish free seats in it to parties in the city, and other items, that ships have to pay for. It is useless complaining there, for it goes no farther than the authorities choose to allow it. These remarks may be taken as applicable to the other Russian ports as well as Odessa, and I think it is high time that those quarantine regulations were revised, especially now that there is a regular health-office established at Constantinople.

Sir, should you think these remarks worthy of a place in your valuable journal, I should feel obliged by their insertion.

I am &c.,

RICHARD LEIGHTON.

To the Editor N.M.

LIGHT HOUSE DUES.—PILOTAGE.—COMMERCIAL MARINE.

[The great importance of the projected measures relating to merchant shipping in the Government Bill brought forward by Mr. Labouchere, induces us to preserve the introduction of it by that gentleman, as containing a general view of the whole subject, in a more satisfactory form than we could otherwise give it.]

The house having gone into committee on the Merchant Seamen and Pilots Bill.

MR. LABOUCHERE said he proposed, in redemption of an engagement made by him in the early part of this session, to call the attention of the committee to various subjects connected with the mercantile marine of this country. In doing so, he felt persuaded it would be wholly unnecessary for him to detain the house by any previous statement of the immense importance of the subject, to dwell upon the magnitude of the capital invested in our mercantile navy, of the extent of the population maintained by it, or the national interests so closely connected with its prosperity. In bringing forward the question of the navigation laws, he had encountered, as he had anticipated he should, the opposition of a great and powerful party, who were of opinion, however erroneously, that the measure

which he proposed for the repeal of those laws would be injurious and even fatal. He had the satisfaction, however, of entertaining the hope that to the subject which he was now about to bring under the consideration of the committee no such hostility would be manifested, but that, on the contrary, the committee would in a calm and dispassionate manner lend its assistance to the government in settling these points in the best possible manner. In proposing to the committee measures for the improvement of our merchant service, and for the relief of our commercial marine, he could not, consistently with the arguments he had used in support of the repeal of the navigation laws, put forward these measures as any sort of compensation for injuries inflicted on the merchant service by such repeal. Had he considered that the merchant service would be injured by that alteration, nothing would have induced him to make or to support the proposition, but his opinions were wholly the other way, and no injury having been occasioned by the repeal of the navigation laws, but the contrary, he had no compensation to propose. At the same time there was no doubt that the attention of the merchant service would now be directed with more clearance of perception to the grievances which they had felt and complained of, more or less, in the days of what they deemed protection; and this was an additional reason why the parliament should lose no time in considering these grievances.

He did not propose, on the present occasion, to make a complete review of all the questions affecting our merchant service. It would be, in fact, impossible, within the compass of a single statement, to enter into a full development of questions of such a complicated and difficult character. There were, however, several points of vast importance to which he had specially applied his attention, with a view to the proposition, in two cases, of what he trusted would be accepted as measures of immediate relief to the merchant service, and, in a third instance, to a statement of a subject, on which, though at such an advanced period of the session he could not hope to propose any measure which could be sufficiently considered to pass into law this year, a proposal might be laid before the house in the shape of a bill, which during the leisure of the recess might receive the mature consideration of all parties more immediately interested and of the public at large.

The first question to which he would solicit the attention of the committee, was the subject of the light dues, a burden, in their present shape, upon the mercantile marine of this country, which had long been the subject of just complaint, as well by reason of its amount, as by reason of its unequal distribution, and for other causes connected with the system upon which it was founded. In other countries the sea-lights were maintained at the public expense, out of the public treasury, but in this kingdom a different system had prevailed. Here the lights were maintained by the tolls levied upon shipping, under the management, not as elsewhere, of a general board, responsible to the government and to the country, but of ancient corporations, which, in England, Scotland, and Ireland exercised separate jurisdictions, under the general control of a most imperfect and inconvenient kind of privy council. He had on former occasions expressed the opinion that there was very much in the system which required amendment; that though it might be impossible to deal with the question as if it were a mere *tabula rasa*, and not an existing institution, yet that it was the duty of the government and of parliament, at the earliest possible moment, to apply themselves to improve the system, and to render

it more in harmony with the wants of the period and with the advanced principles of administration now acknowledged in this country. He had embodied these views in a bill which last session he laid before the house.

The principle of that measure was to place the management of the lights more efficaciously under government control, and to commute the present payment of a toll by each particular vessel for a tonnage duty upon our shipping at large. To this principle he still adhered, and had he considered it desirable, at this period of the session, to lay on the table of the house a bill to regulate the general management of light dues, it would be founded upon that principle, improved as to details by several amendments which had since presented themselves to his mind; but as he felt it would be impossible for the house to legislate satisfactorily upon so large and complicated a subject in the brief space which now remained of the session, he abstained from bringing forward the bill this year. But there were points on which he had turned his attention to the practicability of securing to our mercantile marine an immediate and considerable relief from burdens to which it was now subject; and he had, for this purpose, placed himself in communication with the Trinity-House of London, in whose management the light dues of England were vested.

It was most willingly and gladly that he stated to the committee, that he had found on the part of that corporation an anxious desire to co-operate with the government in affording to the commercial interest an immediate and substantive relief in the matter of the light dues. Without going into minute detail, he would state generally that the great portion of the burden now imposed upon the merchant service of this country by tolls arose from a debt contracted some years ago by the Trinity-House, in buying up certain private lights (the purchase money for which was rather more than a million sterling), at the urgent solicitation of the merchant service itself, aggrieved by the tolls which the private owners of those lights had exacted, the Trinity-House taking on themselves the future receipt and management of the tolls.

The Trinity-House had from that time not only paid interest upon the money raised for the purchase of the tolls, but had, from time to time, by instalments reduced the capital debt, so that, at the present moment, the Trinity-House only owed rather more than £500,000 on this account. There was an arrangement still subsisting with the Bank of England, by which the Trinity-House was bound to pay off this remainder debt at the rate of £50,000 per annum. It was obvious that any material reduction of the light tolls now levied on the shipping of this country could not be effected by spending the repayment of this debt over a great number of years, and in his opinion the merchant service was fully entitled to relief given by such an arrangement.

The Trinity-House had, further, considered various modes of economising and improving the management of the lights under their control. For example, they had adopted the suggestion made to them by the Hon. member for Montrose, of using rape oil for their lights, instead of the more expensive, but not more efficacious material before employed, and a considerable saving would be effected by this alteration. The present gross receipts from the tolls for lighting the English coast—there were not the same complaints in relation to the Scotch and Irish lights—the total gross receipts of the English lighthouses was in 1847, £318,000 in round numbers, being from coasters £145,000. and from over-sea traders £173,000. The Trinity-House proposed to reduce this burden of £318,000 by no less a sum

than £100,000, or one third of the amount. When he had come to consider the comparative manner in which the pressure of light dues fell upon the different classes of our commercial navy, he had found that the pressure weighed far more heavily upon the coasting than upon the over-sea traders. The present system was that every ship should pay for a light as she used it, an arrangement which, at first glance, seemed fair and equal enough, more especially if the receipts were applied wholly and exclusively to the maintenance of the lights; but when it was considered that a portion of the revenue went to particular charities, the burden could scarcely be said to fall with only a fair and equal pressure upon the coasting trade. There was another important consideration which had not been omitted in coming to a judgment on this part of the subject: the value of the cargo constituted certainly not less an element in fairly estimating the dues which should be paid than the tonnage of a ship. Now, the cargoes of vessels engaged in the foreign trade were, generally speaking, far more valuable than the cargoes of colliers or other coasting vessels. All these considerations had induced him to believe that, having this sum to apply to the relief of our merchant navy, it was not just to give the larger share of the relief to our coasting trade. Accordingly, of the £100,000 in question the government proposed to apply £70,000 in reduction of the dues now paid by coasters, being a reduction of nearly 50 per cent. of their present burden—the relief, moreover, being immediate, for it was proposed that the change should come into operation on the 1st of October. There was further, one particular class of lights in relation to which special relief would be effected for this service; upon particular portions of the coast there were lights for which double tolls were now paid; that was to say, a ship not only paid the duty on passing these lights, but had also to pay the due upon repassing it on her return to port. It was proposed in all these cases to abolish the double toll altogether, leaving ships to pay the single reduced duty only on passing them on their voyage, and not on their return to port—this was a relief which would alike affect over-sea traders and coasters. The amount of reduction which over-sea traders would benefit by would be in round numbers £27,000 per annum, or about sixteen per cent. of their present burden. He did not know that he need add anything to the statement, beyond the assurance which the committee would be glad to receive, that, in effecting these arrangements with the Trinity-House there had been, on the part of the government, no compromise of any of the principles upon which they contemplated a general revision of the whole system of light dues; they were still as free to deal with that question as ever, and it was a question which he trusted to see dealt with early in the next session.

The circumstance he was sure would be considered as enhancing the deep debt of gratitude which the country owed to the great corporation in question, for the manner in which they had met the wishes of the mercantile class and the views of the government. The proposed reduction, he would add, could be carried into operation without an act of parliament, it being competent in the Trinity House to effect the change with the consent of the Privy Council. He now came to another question, which was also one of great importance to the shipping interest of this country, the question of pilotage. This was not a question new to the house; frequent attempts had been made to improve the system under which our pilotage was conducted; he remembered that when he had the honor, some years ago, of being President of the Board of Trade, the Right Hon. member for

Oxford the University strongly urged on him the propriety of dealing with this question. He remembered, too, that when the Right Hon. gentleman himself was President of the Board of Trade, he had returned the compliment by exhorting and entreating the Right Hon. gentleman to deal, if possible, with this complicated and difficult subject. Both he and the Right Hon. gentleman, however, had, at the time, good reasons for not making the attempt; they were very much warned by the example of his lamented friend, the late Lord Sydenham, who with great industry and talent had devoted himself to the consideration of this question, and had introduced a bill for the improvement of our pilotage; but on this subject, as on many others, local interests were too strong, and public interests too weakly represented in that house to give much chance at that period, of success to any extensive measure on the subject.

He was not, at the present time, in a condition to propose any great and general scheme, such as was proposed by Lord Sydenham—at this period of the session he could not hope to deal adequately with it, but upon this question, as upon the question of lights, he had directed his attention to the practicability even at this period of the session, of securing for the mercantile interest some relief from a burden which he had always regarded as one of great pressure and injustice. The system of pilotage in England was under the control of three jurisdictions; the Lord Warden of the Cinque Ports had the control of the pilotage of the Cinque Ports; some of the greatest of our sea-ports were under the control of the local and special jurisdictions; and all the rest of the kingdom, comprising the North Foreland, and including a great portion of the shipping coming to London, was under the jurisdiction of the Trinity-House.

In his communication with that corporation upon the subject of lights, he had felt it to be his duty to call their attention also to the subject of pilotage, and upon this question, too, he had found them quite ready to meet the just demands of the shipping interest and the views of the government. Considerable improvements, he was therefore in a position to say, would also be introduced into this branch of the service. The coasting trade, indeed, was now wholly exempt from the system of pilotage, the burden having been found so intolerable, that it was some years ago got rid of by this branch of industry, but the whole of the foreign trade of the country was still obliged to take pilots on board at our ports; let the master or mate of any such vessel be as competent a pilot as could be procured, still the vessel had to take a pilot on board, or at any rate to pay him, and this obligation constituted a severe burden upon many classes of vessels engaged in foreign trade. At the same time that the system was established, there might have been reasons for it, such as the necessity of encouraging pilots at particular ports; but in the present condition of trade he had no hesitation in saying that the system, if not altogether abolished, ought at any rate to be greatly relaxed.

What could be a more marked anomaly than this, which happened now every day: a vessel going from Liverpool to Dublin, and stopping there, was not obliged to take a pilot on board on going into Dublin harbour; but a vessel going from Liverpool to Dublin, and thence to Brest or any other foreign port, was compelled to take a pilot on board, though her master or mate might be thoroughly competent to pilot her. He was most happy to inform the committee, that the Trinity Corporation, had expressed their readiness to allow any over-sea trading vessel, having on board a master or mate, of whose fitness to pilot the vessel they were satisfied, to

dispense with a Trinity pilot. To effect this object it would be necessary to pass a bill through parliament—a bill of a permissive, and not of a compulsory nature, enabling the Trinity-House or any other pilotage jurisdiction, to dispense, in such cases, with the services of a pilot on board over-sea traders. This would be necessary, because at present the pilots had a vested interest in the monopoly, and could bring an action against the Trinity-House for permitting any such exemption. He attached the greatest importance to this concession. The Trinity corporation had distinctly intimated that they did not mean the concession to remain a dead letter, but would *bona fide* carry it into effect, and would in all cases where they were satisfied of the competency of the master, mate, or other person on board a vessel, dispense with the services of a pilot. He had not received any such intimation from the other pilotage jurisdictions, but he entertained a confident hope that if the example of the Trinity board worked well, as it must, the other jurisdictions would adopt it. The bill on this subject, which he now proposed to introduce, would, he trusted, being merely a permissive measure, pass into law this session.

There was another question of the highest importance and of the greatest difficulty, to which, though he did not propose to ask the judgment of the house upon it this year, the limited space now remaining of the session rendering it wholly impossible adequately to consider the subject, he should request the attention of parliament by embodying the views which he entertained respecting it, in a bill which he should lay on the table of the house, that it might be considered during the recess with that care which its importance and difficulty demanded; he referred to the general condition of our mercantile marine—he desired to seek the consideration by the house of this subject, with regard to the character and qualifications of the masters and mates, the discipline of the crews, and the general well being and condition of the seamen. There had been incidental discussions on this subject in the course of the debates on the navigation laws; and he could now only repeat what he had then stated, that while nothing was further from his intention than to cast any sweeping and indiscriminate censure on the officers of our mercantile marine, yet, on the other hand, truth and a sense of duty obliged him to state to the house his opinion—an opinion founded on inquiries of no limited or superficial description—that there was much in the present state of qualification of the officers of our mercantile marine, much in the condition of discipline of their crews, much in the general condition of our merchant seamen, which required serious consideration. In saying this he should be contradicted by no mercantile man of experience, by no captain of the royal navy, whose professional pursuits had led them into distant ports where they found British seamen congregated. These parties, the best qualified to pass an opinion on the subject, would not contradict him that especially with reference to the qualifications, moral and scientific, of the merchant captains of this country, it was most desirable to consider of some way in which to put a stop to evils which had become of a most alarming magnitude, and which he had no hesitation in saying threatened the prosperity and welfare of this country in most vital points. He believed that England had the best and hardiest race of seamen that was to be found amongst nations. He had no doubt that by judicious treatment that race of seamen might again be restored to the pre-eminent position they had formerly held. He viewed the case not despondently but with a severe sense of the duty which devolved upon the legislature to devise some

mode of putting an end to evils, the existence of which all deplored and all admitted.

He would not trouble the house by going into the evidence by which the facts and statements respecting the degenerate condition of the mercantile navy was proved. The most remarkable reports on this subject, furnished by the British consuls in foreign parts, sufficiently proved them. He was inclined to agree in the opinion expressed by Lord Ellenborough respecting these reports, namely, that though there might be some instances in which the consuls had too highly coloured their statements, still, of the general truth of those reports there could be no doubt entertained. There were besides these reports one or two statements made by eminent shipowners before the Lords' committee, which, coming from unbiassed quarters, might be safely relied upon as a corroboration of those consular accounts of the British mercantile seamen. Mr. Money Wigram, who was examined before the Lords' committee, said :—

Are your captains in general as well educated and as trustworthy men as the American captains?—Yes, I believe they are; but I do not mean to apply that to the European trade generally; the reports of the consuls on the continent are too authentic to leave a doubt on that point. Have you seen the reports from the consuls?—I have not read them attentively, but I know their general character, and I am afraid that they are too correct. I dare not challenge their accuracy as respects the continental trade. (Mr. Wigram's ships are principally engaged in the East India and China trade.)

Mr. Richmond, another witness, stated: If I were to say the English captains had improved, I think I should state that which was not the fact; for the last 25 years: respectable people hardly ever send a boy to sea, and the consequence has been that we have had to take the captains of our merchant ships from rather a less educated class of men than they used to be 50 or 60 years ago. I do not think their seamanship is one iota impaired, but perhaps their manners may be a little less refined.

And Mr. G. F. Young, a protectionist, and opponent of the change in the navigation laws, also thus expressed his opinion: Too indiscriminate censure has been thrown upon the commanders of British ships, and not sufficient allowance made for the very large number we require; believes, that taking the whole course of our trade, the captains of many foreign ships are a better class than many in our own ships.

But, in addition to these, he had happened to light upon a paragraph in a book which had been quoted in that house—he meant Mr. MacFarlane's Italian Politics, wherein he found a paragraph eminently illustrative of the position of the British merchant seamen in the Mediterranean. Mr. MacFarlane says:

“It wounded my national pride to see the general run of our skippers cut so mean a figure, not only in dress but in manners, when compared with those smart Italian captains. No farther back than 20 years ago the Italian skipper was mostly a coarse dirty fellow, in an ill-cut weather jacket or grecco, with a greasy hat and a very empty head under it. The change is prodigious. It seemed to me that if there had been any change in the masters of our own common merchant vessels, it had been a change for the worse. This is matter of serious consideration, and especially now that hazardous changes are contemplated in our navigation laws. Statists may make their tables and bewilder us with returns and long arrays of figures, and treat men as ciphers, but if the condition of the merchant captain is getting worse instead of better, it must be seriously doubted whether our mercantile navy is improving; and, without that nursery and treasury, what is to become of our

national navy? Twenty-five years ago in every part of the Mediterranean the preference was given to English bottoms wherever they could be procured, and the rate of insurance was increased upon goods shipped in country vessels. There is no such preference now, nor, as I believe, any difference made in insurances."

And lastly, the Chamber of Commerce of Bombay, in a memorial sent in by them in the year 1842, stated that even in the India trade the same want of scientific knowledge, conduct, and discipline were observable in the mates of East India trading vessels which were noticed in European merchant ships, and that, owing to this cause, if the captain became disabled at sea, most serious consequences frequently resulted from the mates not being qualified to supply his place in taking the command of the ship. He had already referred to the utter want of discipline in the crews of merchant vessels. That arose naturally from the want of qualifications in the captains and officers. It was not possible to enact a system of discipline amongst a crew where it could not be provided that the captain would use the powers entrusted to him for enforcing that discipline otherwise than harshly and tyrannically. He, therefore, must assert that the legislature had a right to ensure the appointment of a properly qualified person for captain before they armed him with power to enforce that discipline which was necessary for the well being of his crew. He would not weary the house with further details respecting the subject of discipline, but he would state that all who were conversant with the state of the merchant service not only knew but lamented the want of it amongst their crews.

The whole fishery had been entirely lost to England owing to this cause, and this prolific source of employment and gain had been transferred to the American whalers purely because of the superior discipline maintained on board their ships. He would now call their attention to the third point—namely, the general condition of the British seaman. This view of the question might properly excite very great alarm if the facts were closely looked at. During the last year there had been, according to the registrar's report, no less than 18,000 desertions from merchant ships. That fact alone showed the sailor's dissatisfaction with his position. It was sufficient in itself to induce the house to turn its attention to the improvement of the seaman's condition. The relation between a seaman and his employer was a very peculiar one, and had always so been dealt by. The sailor had never been left to make his own bargain with his employer, as other labourers were. On this subject he would quote the opinion of a very eminent man, not an Englishman, but one whose opinion was not the less valuable on that account. He meant Chancellor Kent, of the United States, who thus expressed his views:

"We come next to treat of the laws applicable to seamen; and it will appear, for obvious reasons, that in the codes of all commercial nations they are the objects of great solicitude and of paternal care. They are usually a heedless, ignorant, audacious, but most useful class of men, exposed to constant hardships, perils, and oppression. From the nature of their employment and their "home on the deep" they are necessarily excluded in a great degree from the benefits of civilization, and the comforts and charities of domestic life. Upon their native element they are habitually buffeted by wind and waves, and wrestling with tempests; and in time of war they are exposed to the still fiercer elements of the human passions. In port they are the ready and the dreadful victims of temptation, fraud, and vice. It becomes, therefore, a very interesting topic of

inquiry to see what protection the laws have thrown around such a houseless race of beings, and what special provisions have been made for their security and indemnity."

Now, he believed that Chancellor Kent had truly described the real state of British seamen, in attempting to remedy this evil. He was not, therefore, introducing a new or unknown principle in proposing the remedy which he was about to suggest. Experience had already proved that much of the seaman's satisfactory conduct depended on the trustworthiness of the agent by whom he was engaged. The seaman trusted those who were the intermediaries between him and his employers; and experience had proved that his trust and confidence were in many instances misplaced, and that he was not sufficiently protected. In the United States their protection was obtained by the law insisting upon every sailor's contract being signed by a notary. There was no class of persons in England of the rank or condition of a notary to whom these contracts were entrusted. The brokers would not act in the matter, and the sailor was consequently left in the hands of crimps or agents. Practically speaking, therefore, the whole of the merchant seamen were in the hands of the crimps. A bill had, however, been brought in last year, by which some restrictions were placed upon these crimps, by rendering it necessary for them to procure licenses from the Board of Trade. He was not prepared to say that considerable good had not been effected by this regulation; but still it fell very far short of the degree of protection necessary for the sailor; and he felt bound to declare that the legislature was called upon also to have this business transacted in a different way to what it now was. There was another subject on which he must say a few words, namely, on the sanitary condition of the sailor when on board his ship. No one who had read the report which had been printed on this subject, but would admit the just and general dissatisfaction which existed on this score, and also the necessity for doing something to render the sailor less liable to imbibe the seeds of disease than he now was. He thought that he had now stated in a general way the points of the question, and it was now his duty to lay the details of the bill, which he proposed to bring in, before the house. He was fully sensible of the difficulties which environed the subject, and in laying his bill on the table he did so with the hope, and indeed the expectation, that all who felt interested in this momentous subject would examine it in all its details and bearings, and assist him in perfecting it, so that at the beginning of next session he might have the advantage of these suggestions, and thus be prepared to do justice to this subject.

At present there was no department of the government responsible for the condition of the mercantile marine. The Admiralty and the Board of Trade had a sort of divided authority in the matter, but neither of those boards possessed a supremacy. He therefore proposed to give the Board of Trade increased authority, and as a matter of course increased responsibility, in all matters relating to the merchant seaman. He proposed to add a department to that board to be called the Mercantile Marine, which should not be constituted a separate board, but only a branch department of the Board of Trade. He proposed that there should be two persons attached to that board who had been captains of merchant vessels, as it was but fair that merchant-seamen should look for advice and protection to men of their own class. He proposed that there should be issued by this department certificates of qualification divided into three classes, according to the size and tonnage of the ships. At present certificates of qualification were granted after a voluntary examination had been undergone by those seamen who apply for them, and whilst he admitted this had been productive

of much good, he was bound to say that at the out-ports a very lax system of granting certificates prevailed. He must also observe that it was not his intention to make this certificate system retrospective. That would be unjust to the present race of masters and mates. All he should require on their part, therefore, was, that they presented themselves to the Board of Trade and furnished proofs of their having commanded or officered a ship previous to the passing of the act, and that they should be at once entitled to a certificate to that effect, which would qualify them to continue in their present situations. But if a master or mate holding a certificate of that class should misconduct himself, or show himself to be unfit to continue in his position, he should then be deprived of his certificate, as well of command as of qualification. Such a regulation was indispensable for the safety of life and property on board merchant ships. He proposed, also, that in cases of gross misconduct, on the part of the captain and officers, at sea or elsewhere, of a vessel, they should *ipse facto* be deemed to have committed a misdemeanour, and that they should be liable to be tried for such offence before the tribunals of their country. He proposed to substitute for the present agents and crimps a set of men who should be termed shipping officers, and who should be stationed at all the ports of the United Kingdom.

He was not without a precedent for this proposal, namely, the port of Quebec, where the Canadian legislature had appointed such an officer, whose agency had been attended with the happiest results, and had rendered Quebec, from being the pest of shipowners and captains, one of the best regulated ports for seamen in the world. The shipping officers he proposed to establish in the various ports of the United Kingdom would be the instruments whereby the seaman's condition would be improved, and by their means also he hoped to be able to restore that discipline amongst the merchant ships which was so much wanted. He proposed that when a seaman was hired one of these officers should be present to examine and approve of the agreement; and to explain it to the sailor, in the presence of his captain or some of the officers. The shipping agent would state to the seaman the length and nature of the voyage he was about to embark on—and offer the scale of provisions—and regulate the stipulations as to the fines and other matters of internal discipline on board the ship. The latter stipulation would be a voluntary act between the captain and the seaman, and in well conducted ships this system had been found to work well. The Board of Trade would, therefore, regulate the system of fines and other punishments, and when once the sailor had voluntarily given his assent to them the agreement should be held binding.

The dietary would be a fixed one in all cases and compulsory on the captain, as under the present system it was often found that the poor sailors were half-starved. The dietary would be explained to the seaman by the shipping officer when his agreement was signed. A log-book, framed according to a model which would be furnished by the Board of Trade, would be required to be rigidly kept by the captain of every merchant vessel, whereby a check would be maintained over him, and the state of discipline of his crew would be clearly observable, and thereby a protection to the seaman against brutality or ill treatment provided. He was so much impressed with the absolute necessity of strengthening the discipline of the merchant service, that he proposed to give to captains having first class certificates, and commanding vessels of certain amount of tonnage, the power, for specific offences, of a limited period of imprisonment on board ship, although he admitted that it was a power against the abuse of which they must carefully guard. But again, with regard to the exercise of that power, the log-book

would act as a very material check. Any one acquainted with the practice of the American merchant navy would be aware that there was a much more stringent discipline exercised there than anything now proposed would amount to. In that navy corporal punishment was very frequently had recourse to, and public opinion in the United States supported the captains in the exercise of that power. It must be remembered too that the circumstances of our mercantile marine had much altered since the time of the war, for then there was no difficulty in meeting with a vessel of the royal navy; but now a ship of the navy was not to be met with in many voyages that were undertaken.

He proposed also, that when a ship should return to port, her crew should be paid off, not on board ship, as was now the case, but in the presence of the shipping officer before referred to—that the shipping officer should then inspect the log-book—that he should hear anything the crew had to say in the way of complaint—that with regard to disputes between the captain and a sailor, he should have a summary power of jurisdiction under the amount of 40s., and that above that amount, if both parties agreed to refer it to him, he should also have jurisdiction, otherwise the case to be dealt with in the usual way. He attached great importance to this part of the subject; because, by establishing a tribunal of this nature, they would save the sailor from the clutches of low attorneys, they would prevent much squabbling and discontent, and he believed that in the main substantial justice would be done.

With regard to the sanitary condition of the ships, he proposed that a space of not less than eight square feet should be appropriated to each seaman in that part of the vessel where the crew were located.

There was also another matter in which he believed the new functions of the Board of Trade might be exercised with advantage—he meant with regard to the registering of seamen. He believed that the present system of registering had to a great degree disappointed the expectations of those who had proposed it. That system of tickets had been found on the one hand very grievous to the sailor, and on the other hand very ineffectual to prevent the most extensive frauds. He believed now that one could buy in Wapping forged registry tickets as many as he pleased. The only case in which in his opinion the ticket system operated beneficially was that of the apprentices; but apprentices having now been done away with he saw no substantial reason why the system of registered tickets should be continued. He wished to give to the Board of Trade the power of abolishing that system, and he should propose to unite the registry office with that department of the Board of Trade, and to take the power of putting an end to the system of register tickets. He ought perhaps to have stated in a former part of his observations that he proposed that a small fine should be taken on signing agreements between sailors and their employers—and that that fee should not be higher than the sum now paid to the licensed agents for performing the same duties, but from the fees thus paid and the fines levied on the sailor in the matter of discipline there would be a certain fund raised.

It was difficult to form an estimate of what the whole would amount to, but he thought it would probably reach £40,000 a year. In considering the disposal of that sum, it was necessary to observe from whom it came in the first instance; and it was evident that that which arose from agreements came out of the pockets of the owners, and that raised from fines from the sailors. He proposed in the first place that the expense of the shipping officers should be defrayed out of that fund; but he did not estimate that

at ~~above~~ £10,000 a year. There then remained £30,000 which he thought might constitute a fund, by means of which very useful purposes might be effected.

He had no matured scheme, however, to lay before the house with regard to the disposition of that fund, and the bill dealt with it in the most general manner; but he thought if good service pensions and gratuities could be given to the most meritorious masters and mates in the merchant service, an excellent purpose would be answered. In giving, for example, to captains who had obtained first-class certificates, some badge of distinction which would give them an authority in foreign ports, and would raise them in their own estimation, and in the estimation of others, he thought that a portion of that fund would be well applied. With regard to that portion of the fund which came from the fines inflicted on seamen, he thought it was obvious that it should be applied to the benefit of seamen themselves.

There were other things in the bill which he proposed to lay on the table of that house of a minor description, involving some alteration in the system of advance notes and other matters, with which he would not now trouble the house, thinking it better at present to confine himself to the main outlines and general principles of the bill.

In conclusion, he would only say that, he was greatly deceived if there could be any subject of greater interest to this country than that which he had now ventured to bring before the house. He was most anxious that it should obtain from that house and the country that full consideration to which its immense consequence upon the great national interests of this country entitled it. With that view he had brought forward this measure. He was far from supposing that it was not susceptible of great improvements; but still he believed that with regard to the main principle, no measure would adequately meet the necessity of the case, which did not tend directly to improve the character and qualifications of those who commanded the merchant ships of the country, to strengthen the discipline of the crews, and as far as possible to improve the sanitary condition, the moral condition, and the contentment of the great body of the seamen who embarked in that mercantile marine which he had never concealed from the house, was intimately connected not only with the wealth and prosperity, but with the security and national defences of this great country. The Right Hon. gentleman concluded by placing in the hands of the chairman a resolution for leave to bring in a bill to amend the laws relating to pilotage.

NAUTICAL NOTICES.

United States Coast Survey Station, June 18th, 1849.

Sir.—As the ledge referred to in the inclosed report is near the route of the British steamers from Halifax to Boston, I have thought it might interest you to receive at an early date a copy of it, and therefore transmit it with my best regards.

Yours respectfully,

A. D. BACHE,
Superintendent United States Coast Survey.

To Rear Admiral Beaufort, R.N., Hydrographer to the Admiralty.

Coast Survey Station, near Annapolis Ond, June, 12th, 1849.

Sir.—I have the gratification to transmit to you a report from Lieut. Com. Charles H. Davis, U.S.N. assistant in the coast survey, giving the particulars of his recent determination of the position of Cashe's Ledge, off the coast of New England.

This ledge termed "dangerous" in the "American Coast Pilot," was sought for last summer by Passed Midshipman Ammen, under the immediate direction of Lieut.-Com. Davis, but his efforts were not crowned with success. They paved the way, however, for the present successful determination by Lieut. Com.-Davis, in the steamer *Bibb*. My attention was called especially to this subject last year by the Hon. Daniel P. King, of Massachusetts, and the steps which were taken in consequence, are detailed in my report to the Department in November last. They were followed up in the instructions of the present season, and the ability of Lieut.-Com. Davis, has brought them to a successful issue. The difficulties incident to finding this ledge, uncertain in position, nearly ten miles in latitude and in longitude, of small extent and distant from the coast more than seventy-five miles, are easily understood. They may be well appreciated by the fact stated by Mr. Blunt, in the American Coast Pilot, that it has been searched for recently by Capt. Owen, R.N., in the surveying vessel under his command, three times without success, and by the result of one attempt made last year by Mr. Ammen, accompanied by two experienced fishermen from Rock port as pilots.

The determination by Lieut. Com. Davis, places Ammen's Rock of Cashe's ledge in latitude $42^{\circ} 56'$ N., longitude $68^{\circ} 51\frac{1}{2}'$ W. As this differs nearly twelve minutes in latitude, and twelve in longitude from the last previous determinations, and is of great importance to navigators, I would respectfully ask authority to give publicity to this official report.

Very respectfully yours,

(Signed)

A. D. BACHE.

Superintendent United States Coast Survey.

Hon. W. M. Meredith, Secretary of the Treasury.

United States steamer Bibb, Boston, June 8th, 1849.

Dear Sir.—I have the pleasure to inform you, that on Monday the 4th inst., I sailed from Boston to execute that part of my instructions relating to the rock at Cashe's ledge, and that I have found it, and determined its position satisfactorily.

The *Bibb* remained at anchor on the rock from five o'clock on Tuesday, to five o'clock on Wednesday afternoon, during which time the boats were employed in repeated examinations of the surface of the rock. The sea was smooth, the wind west, the weather perfectly clear, and the southern and western horizons well defined.

The latitude was determined.

First, by the meridian altitude of the moon with three observers, whose readings differed from each other less than half a minute. The meridian passage occurred at twelve minutes past midnight; the declination of the moon was $17\frac{3}{4}^{\circ}$ south, which, the night being remarkably cloudless, secured a distinct horizon.

Second, by a meridian observation of the sun, with four sextants, the readings of which differed in the extreme, but one minute. The latitudes given by the sun and moon, differ from each other but one mile. The longitude was determined by three chronometers from Messrs. William Bond

and Son, which were taken on board on Monday, and returned on Thursday, and were proved by the final comparisons of Thursday to have run correctly. Twenty-five observations taken on the 5th and 6th, were used to ascertain this element, the mean of those of the 5th, differing from that of the 6th, by only a second of time. Several sets, not employed in obtaining the reported result, were also taken for confirmation. Not being absolutely required, they were worked out with less care.

The latitude of the rock, by the

Meridian observation of the sun, is . . . 42° 56' N.

The longitude, the mean of both days, is . . . 68° 51½' W.

The latitude and longitude of this rock recently given by the best authorities are 42° 44', and 69° 03', the former differing twelve miles, and the latter twelve miles from the Coast Survey determination. Formerly the latitude and longitude of this spot were laid down, as, 43° 04', and 69° 11', the former 8, and the latter 20 miles in error. These errors, particularly in latitude, give additional value to our determination, and render its early announcement important to navigators. The least water on this rock is twenty-six feet; a less depth has been reported by the fishermen, but they sound with their fishing lines, not accurately marked, and having on them a lead of three and a half pounds only; not heavy enough to press down, or pass through the thick kelp that covers the rock. The extent of rock having 10 or less fathoms on it, is about half a mile, in a N. W. b. W., and S. E. b. E. direction, and very narrow. It is surrounded by deep water at a short distance, particularly on the south-east side where the depth increases suddenly to 60 fathoms.

It is my wish that this should be called Ammens Rock, in compliment to the officer, by whose exertions last summer the means were afforded of discovering, and correctly determining its position at this time.

Yours truly,

(Signed)

CHARLES HENRY DAVIS,
Superintendent United States Survey.

A. D. Bache, L.L.D.

SIRIUS ROCK, Coast of Patagonia, Ship Struck.

(Extract of a letter from the Commander of the *Sirius*.)

Sea Lion Island, Santa Cruz River, Coast of Patagonia,
April 18th, 1849.

Messrs. W. M. L. & Co.

GENTLEMEN,—We arrived on the coast, on the 10th of March, and the same evening had the misfortune to run on a reef of rocks, not laid down on FitzRoy's charts, who with the officers of H.M.S. *Beagle* and others were surveying this coast from 1828 to 1834 and as they could not find them they erased them from the charts. It is the Admiralty charts of those surveys that I am supplied with. I have also gone over the same ground four different times, but never found anything resembling a reef before. The position is about 48° 7' S. and 65° 37' W. nine miles off Spiring Bay. After striking about 20 minutes, by laying all aback, hauling lee tacks forward and weather sheets aft she came off into 4 or 5 fathoms; but before we could get commanding way on her, she struck on her larboard bilge. At the same time we had 7 fathoms under the starboard fore-channels. In about five minutes we got clear off and very fortunately never damaged our rudder, but found her making a great deal of water. I proceeded however to Watchman's Cape where I found eight vessels, &c.

(Signed)

J. WILLIAMS.

The foregoing information was very properly at once forwarded to the Secretary of the Admiralty by Messrs. Wilson and McLachlin, the owners of the *Sirius*, commanded by Capt. Williams, for general information; and we may observe respecting it first; that the portion of the coast off which the rock is situated projects in rocky points, which render it likely that there are more undiscovered dangers off it than the *Sirius* Rock. Next with reference to Capt. Fitz Roy erasing the rock from the chart because he could not find it; we cannot discover any in the old charts at the distance of ten miles from the shore, as the position given of this by Capt. Williams makes it; but we do find the Eddystone at the distance of three miles omitted by Capt. Fitz Roy, possibly because he could not find it; and yet how could this be the *Sirius* Rock which is ten miles from it. We trust, however, that the *Sirius* Rock will be further examined and its position settled beyond all question. The portion of the coast in question should be kept at a respectful distance until these matters be settled.

ARCTIC EXPEDITIONS.

[The *North Star* sent in search of the Expedition under Sir James Ross, for whom she has taken provisions and stores, to enable him to continue his search for Sir John Franklin, left Stromness on the 24th of May, accompanied by the *Stromboli*, Capt. Lord Amelius Beauclerk, which vessel having seen the *North Star* as far as Cape Farewell has returned home. We, therefore, now anxiously look for the return of that vessel as well as the whalers, for intelligence of the fate of our long missing Polar ships. In the mean time the following has been received from Dr. Richardson, and contains, as was anticipated, no intelligence of them.]

Fort Confidence, Great Bear Lake, Sept, 16th, 1848.

Sir.—I have the honor to acquaint you, for the information of my Lords Commissioners of the Admiralty, that with the boats and party under my charge I reached the sea-coast at the outlet of the eastern branch of Mackenzie on the 3rd of August, and having examined the coast line from thence to the Coppermine River, including almost every intervening bay, found no traces of any party of Europeans having passed, nor any indications whatever of shipwrecked vessels. We had interviews with numerous parties of Esquimaux who uniformly declared that they had seen no ships nor any white men, and from the friendly way in which these people met us, I have no doubt of their kindness to any party of Europeans they might see in distress.

From the Mackenzie to Cape Bathurst, which we rounded in 70° 37' N. latitude on the 10th of August. The vegetation indicated a comparatively mild climate, and we saw no ice; the Esquimaux also, who were at this time assembling on the various headlands and islands to chase the black and white whales, informed us, that during their two summer moons they never saw any ice. But after crossing Franklin Bay, and rounding Cape Parry, we had to pass through many streams of drift ice, which greatly depressed the temperature, and we attained Cape Bexley; we found the Dolphin and Union Straits filled with densely packed ice, heaped against the precipitous headlands, and covering the sea as far as we could discern from the heights, entirely across to Wollaston Land.

Winter may be said to have set in with sudden rigour on the 23rd of August, and we had frost and snow, either falling or lying on the ground,

for many days afterwards. From that date up to the 3rd of September, we had to work our way round every bay by cutting passages among the floes of ice, or making overland portages according to circumstances, being occasionally aided in our advance by a little open water, where the shore was shelving. These laborious operations were conducted by Mr. Rae, to whose sound judgment, experience, and personal exertions we were indebted, under Providence, for the progress we were enabled to make.

From the experience of four several visits to Coronation Gulf, by Franklin, Dease and Simpson, and myself, I had expected that on rounding Cape Krusenstern we should find an open sea to the Coppermine, but such is the uncertainty of the navigation in these narrow seas, that we had the disappointment of beholding the whole gulf completely packed; and had to continue our poling, cutting, and carrying operations with slower progress and augmented labour as the frost became more severe, up to the 3rd of September, when we were finally arrested in Icy Cove to the north of Cape Kendall, by the new ice having so glued the floes together, that it was no longer in our power to move them, while the hummocky form of the masses heaped by pressure on the rocky points precluded our launching the boats over them. Seeing that there was no prospect of a speedy change of weather, and that the ground was already covered with snow, I determined reluctantly on quitting the boats, and commencing our overland march to Bear Lake from that place.

Had we reached the Coppermine, as I anticipated we should do under ordinary circumstances, and ascended the Kendall, we should have been, with tents, stores, &c., in comparative comfort within four easy days march of Fort Confidence, but it now became necessary to augment the loads in proportion to the increase of distance.

Each man being supplied with 13 days provisions, and carrying in addition his clothing, spare shoes and bedding, with cooking kettles, the astronomical instruments, ammunition, hatchets, and Lieutenant Halkett's portable boat, with lines and nets, we abandoned the boats and tents, having previously concealed the remaining pemmican; and on the morning of the 3rd September began our march for Back's Inlet, which we reached the same evening.

Here we opportunely found a party of Esquimaux who rendered us very essential assistance on the following morning, by ferrying us across a deep river, between three and four hundred yards wide, which they informed us retained its width far up the country; and without their help we should have lost much time in passing so large a party across with Lieutenant Halkett's boat alone. I have named this river, which was previously unknown to us, in honor of Mr. Rae. On the following day we crossed the Richardson River, which is of less width, by means of Halkett's boat, and encamped in the evening on the banks of the Coppermine.

I had appointed James Hope, a half-caste native, who had formed one of Dease and Simpson's party, to meet us in the beginning of September, with two Indian hunters on the Coppermine, but owing to stormy weather at the time he ought to have set out, he delayed his march a week, and we missed each other altogether, having, we suppose, passed one another in a day of continued fog and snow on the banks of the Kendall.

Yesterday, being the 13th day of our march, we arrived at this place, having for the three last days had the advantage of an Indian guide, who led us by easier paths than the direct route across the country.

The way in which the ice was packed into Coronation Gulf, and Dolphin and Union Straits, so late in the season as the 3rd of September, and glued

together by new ice, rendered it very improbable that it would open again this season to afford a passage for ships, and I have, therefore, no expectation that the Discovery Ships can have made their way in that direction this summer, and hope that they have either found a channel in a higher latitude more directly westward to the open sea off Cape Bathurst, or that they have effected a passage homewards by Lancaster Sound. The circumstances I have mentioned, shew that my boats could not approach Wollaston Land in this unusually untoward season, but this may be done next summer, and I shall endeavour to make arrangements for sending Mr. Rae, with one boat and a select crew of active men, down the Coppermine, next July, to examine the opening between Victoria and Wollaston Lands.

The flood tide, which at full and change runs in Dolphin and Union Straits at the rate of three knots an hour, comes from the eastward out of Coronation Gulf, and must flow primarily down the opening I have mentioned, or by the one between Victoria Land and Boothia, being the only two communications between Coronation Gulf and Lancaster Sound and its continuation. On this account, and also for the purpose of aiding a party which Sir James Ross proposed to send towards the Coppermine over the ice, Mr. Rae's intended expedition may be useful.

As the resources of this post are inadequate to the support of our entire party, and the ice remains fixed in the Lake till near the middle of August, too late for men wintering here to reach York Factory in time for a passage to England, the same season, I have determined on sending 13 of the men from England, up the Mackenzie without delay, together with 6 of Mr. Bell's party, to be supported for the winter at the fishery on Big Island, Slave Lake. I purpose joining them myself in the spring, crossing this Lake on the ice, and ascending the Mackenzie when it opens in May, taking with me the remainder of the English party not required by Mr. Rae, for his summer operations. Mr. Rae will have instructions to return hither by the end of August, so as to close the establishment at that time, and remove the people time enough to ascend the Mackenzie and Slave River before the navigation shuts up.

During our sea voyage we deposited pemmican at Point Separation, Cape Bathurst, Cape Parry, and in Pasley Cove on the north side of Cape Krusenstern, and erected signal-posts as agreed upon with Sir James Ross.

I beg that you will be pleased to express to their Lordships the high sense I entertain of Mr. Rae's valuable services during the whole progress of the party, both on the coast and in leading the men overland, and also my gratification with the orderly conduct of the men.

I have the honor to be,

Sir,

Your most obedient servant,

JOHN RICHARDSON,

Med. Insp. Commanding the Party.

To the Secretary of the Admiralty, &c.

THE LOSS OF THE CHARLES BARTLETT.

(Narrative of a Passenger in the Europa.)

THE Liverpool Shipwreck and Humane Society having presented to Mr. R. B. Forbes, of Boston, United States, a gold medal for his courage and humanity in leaping overboard from the *Europa* on the occasion of the late

fatal collision, Mr. Forbes has acknowledged the compliment in the following interesting account of the accident :—

“To George Johnston, Esq., Chairman of the Liverpool Shipwreck and Humane Society.

“Sir,—In returning you my thanks for the medal of your society, which I received as a token of your kind regard rather than as a reward earned by me, it may not be out of place to narrate briefly the circumstances of the wreck of the *Charles Bartlett*, Captain W. Bartlett, of Plymouth, United States, on the 27th ultimo, so far as my own experience enabled me to judge of the facts.

“At two o'clock of the day named, not being well, I retired to my stateroom, in the forward cabin, and lay down with my clothes on, on the settee, and soon fell asleep. I was suddenly awakened by a crash and a shock which I could not misunderstand. I rushed upon deck, and to the port bow of our ship, where the most appalling spectacle presented itself; the bow of our ship appeared to be half way through the bark, having entered her just abaft the main rigging, on the port side. She had all sail set; one glance at the ill-fated bark satisfied me that she must instantly go down, and that no earthly power could save many of the passengers. The after hatches were obstructed by pieces of broken timbers; the main hatch was entirely clear, and appeared to be filled with women and children, vainly endeavouring to get on deck. I should judge that the ladder had been knocked down in the general crush.

“The water was at this time rushing into the vessel like a mill race. Seeing that the only chance to save any was to lower our boats, I rushed aft, taking off my over-coat and my frock-coat as I went along on my way, and when near the after part of the port paddle-box, I perceived that men were already clearing away the quarter boats. I stopped to endeavour to clear away the life-boat, but being alone, and having nothing but a small knife to cut the lashings, I saw that my efforts would not avail in time. Just as I was abandoning the effort, I perceived a woman and a child, the latter some ten feet from the woman, floating slowly past the paddle-box. I immediately jumped down on the grating or sponson abaft the wheel, crying to the many spectators about the main-rigging for a rope; for God's sake give me a rope! But every one seemed stunned and paralyzed by the sudden and awful scene. A man came floating along alive, and partially sustained by a broken spar, the only rope thrown over, which I should otherwise have got. was thrown to him; he got hold of it, and put the noose over his shoulders, and was hauled up.

“The first part of this act, for the moment, took off our attention from the two floating and apparently insensible persons before alluded to, so that by the time the man was safe, the others had sunk too far to be reached. As the sails on the main-mast had not been backed, and the wind was on the starboard quarter, the ship forged ahead and to leeward, at the rate of one to one and a half knots. Supposing that the wrecked matter must be to starboard, I jumped on deck, and passed immediately over to the starboard paddle-box, as low down on the sponson as I could get, and just in time to see a very stout man drifting along, partly face down, and near the top of the water. Several persons were collected on the rail about the main shrouds, to whom I called loudly for a rope, one was thrown over, about 10 or 12 feet abaft me; I scrambled quickly along the side, and seizing the rope, jumped for the drowning man. The rope was rather short, but luckily the ship, not being steadied by the wheels, rolled towards me; I took ad-

vantage of this, and got the rope round the man's body, and the end up, and twice passed round its own part, before the ship rolled to port again; as I was with the man partly under water, and the time very short, this required a great effort. As the ship rolled to port she jerked us both to the side rather rudely; I cried 'haul up, haul up;' but it appeared, on subsequent examination, that the rope I had used was the main-sheet, a four-inch rope, and that the upper end was fast by a moused hook to the ship's side, several feet below the gunwale, and at least eight feet below the upper or monkey rail. The effect of all this, and the continued rolling of the steamer, was to drag me and my man out of water, and again suddenly immerse us. I could do nothing but cry 'haul up,' and endeavour, at each roll in the water, to shut my mouth in time, and to try to make the rope more secure, as it gave way a little every time we came out of the water. The man weighing at least 200, and myself 175 pounds, when dry, all of which was to be supported by my hands, holding two round turns of a short end passed round its own part, and slipping at each ascension! Finally, some hands succeeded in getting hold of our rope, and hauled us up, so that my burden and myself were above the water, or nearly so. At this time I called to one of the party to come down and help me to jamb the turns, as the man was gradually slipping, in consequence of my weight being partially on him. The individual, mistaking my order, put his foot on my hands, and on the turns and bearing down, caused the man to slip out and go down under-board the second time, and apparently quite lifeless. I ordered the rope to be let go, and went again far under, but did not reach the body. Being now nearly exhausted, I thought it was time to take care of myself, and took advantage of a boat which came to my relief. I got into her, and took the bow oar, the officer (the fourth mate, I think) putting her head towards the pieces of floating wreck. We soon discovered two persons. The first I had the pleasure of reaching with a boot-hook, hauled him up on board, and the officer immediately went to work on him, reporting signs of life. The other person sank out of sight while we were getting the first on board.

"We continued to pull round among the wreck until there appeared no chance of saving any more, and some danger of losing those we had saved, unless proper means were used; it being very foggy, and the ship nearly out of sight, we unwillingly gave up the search for more, and returned on board.

"Several hours elapsed before the man hooked up was brought round, so as to speak; the other boat had, in the meantime, picked up a number; and among them the man I had been trying to save. All recovered, excepting this last one. He had a wound on his head, and it was generally supposed that he received a stunning blow at the time of the collision.

"Although it has taken some time to write these details, only one to one and a half minutes elapsed from the time I first jumped on deck until the ship went down. I was on the port sponson less than that time, and on the other side suspended to the main, perhaps altogether three or four minutes more. Had the poor woman exhibited any signs of life, or the child, I could not have resisted the impulse to go over after them, without a rope or any support, and, being a poor swimmer, I might have perished, amid the confusion and noise, before any aid could have reached us.

"Had I done this, successfully or not, I should have considered that the risk was so imminent, that I should not have felt any delicacy in receiving your reward; as it is, I do not feel that I have earned it by success or by any great risk.

"Being an active member and a trustee of the Massachusetts Humane Society, and having been somewhat prominently engaged in establishing life-boats and other apparatus on the coast of New England, I can the more fully appreciate your kind motives in making me the recipient of your favours.

"I cannot close this subject without making, through you, *an earnest appeal to the Royal Mail Steam-ship Company*, to provide further means to save life in case of such accidents. I attribute no *blame* to Captain Lott, or to his officers, but I think great *praise* might have been due to the company if certain means had been adopted to guard against sudden emergencies, as fire, collision, men falling overboard, &c.

"All sea-going steamers should have some means to make a loud noise very often, by a large bell, arranged to be struck at each turn of the crank—a steam whistle—the discharge of a small gun, or some other means to give warning in foggy weather. There should be life buoys or floats in each boat, and at intervals along the bulwarks inside, ready at all times to be thrown over. Life lines at several prominent places should be suspended—say at the paddle-box rails, the quarter rails, &c. A strong and long painter should be always ready to each boat, led along and made fast to the paddle-boxes. The boats should not be so snugly covered by canvas, and there should be a hatchet to each boat, so that the lashings may be readily cut.

"The ships known as the '*Cunard Line*' are exceedingly well managed and well fitted, but it would be a libel—a cruel libel on the intelligence of the proprietors and the superintendents to say that they are perfect.

"As the route is more travelled, and as increased competition results from rival lines—the dangers will be increased—let the means of averting damage and of saving life in case of accident be the first study of the projectors and managers of these ships. One or two hundred saved in carving, and gilding, and painting, and spent in apparatus for preserving and restoring life, would be much applauded, and give additional popularity to this yet unrivalled line.

"If the *Europa* had struck the *Charles Bartlett* in almost any other way than stem on, the chances are that both ships would have gone down; or had the steamer struck a larger packet-ship, heavily laden, the consequences would have been awful to both. The boats of the steamer could not have been quickly cleared, and the rush to them would have defied all order. In addition to the six very excellent boats they now have, and which are capable of carrying thirty or forty men each, they should have two light cedar boats, fitted with outside floats, and inflated cylinders inside, to be used on sudden and pressing occasions; a few men could lower and hoist and manage them, and if cut away by the run, they would still be useful. Boats should always be provided with brackets to back them out, and with throwing lines. It is very important to have all hands properly stationed, so that in case of accidents, they should know where to go; and they should be frequently drilled for all emergencies. A little discipline of this sort would give confidence to passengers, and render the exertions of men and officers effective.

"Most earnestly would I appeal to you to make interest with this line of steamers, and with all companies within your reach, who are engaged in navigating the ocean, to look a little less to fancy decorations, and a little more to the means of preserving the lives of the passengers and crews.

"I am, very respectfully, your obedient servant,

"R. B. FORBES."

Mr. Forbes is the gentleman who was the means of sending to Ireland and the western islands of Scotland an immense supply of provisions, of the value of £60,000 during the year of famine.—*Liverpool Times*.

EXAMINATION OF MASTERS AND MATES.

A List of the Masters and Mates in the Merchant Service, who have voluntarily passed an Examination, and obtained Certificates of Qualification for the Class against each assigned, under the Regulations issued by the Board of Trade, to the 30th April last.

MASTERS.

April, 2nd.—W. Boulton, class 2nd, age 49, ship *Success*, 331 t., London; W. Dawson, 2nd, 39, *Slains' Castle*, 504 t.; M. Abell, 2nd, 30, *South Stockton*, 288 t.; J. H. Bell, 2nd, 37, *John Renwick*, 403 t.; G. Orton, 3rd, 26, *Cornucopia*, 273 t., 28749; A. Pearson, 3rd, 44, *John Munn*, 637 t.—3rd.—J. Reid, 1st, 28, *Duncan*, 356 t., *Leith*; T. H. Clarke, 1st, 34, *Countess of Westmoreland*, 196 t., *Yarmouth*.—4th.—J. Hasselwood, 2nd, 31, *Ferozepoor*,* 950 t., 99066, *Liverpool*; T. M. Rowles, 2nd, 34, *New Liverpool*, 721 t.—5th.—T. Fyall, 1st, 46, *Midlothian*, 414 t., *Leith*; E. Hight, 1st, 40, *Madagascar*, 951 t., *London*; G. Wilson, 3rd, 35, *Blue Bell*, 221 t.; A. Scott, 2nd, 25, *Palladium*,* 120868, *South Shields*; J. Nicholson, 2nd, 37, *Mersey*.—7th.—G. Sustins, 2nd, 29, *Alice*,* 104 t., 79908, *Yarmouth*.—9th.—G. Tickell, 2nd, 26, *Madagascar*,* 900 t., 323820, *London*; J. M. Cawkitt, 2nd, 32, *Queen of England*, 538 t.; O. May, 3rd, 43, *Senator*,* 277 t.; J. A. Crighton, 3rd, 45, *Heroine*, 240 t., 456154. —10th.—W. T. Nixon, 3rd, 23, *Soudouprooyga*,* 170 t., 25248, *London*.—12th.—W. Mathews, 2nd, 26, *Britain's Queen*,* 130 t., 401438, *Liverpool*; H. Stubington, 2nd, 22, *Cambria*,† 1,400 t., 329174; T. Bowden, 2nd, 27, *Dee*,* 1,900 t., 26453, *London*; G. Williams, 2nd, 27, *Sir E. Parry*,* 575 t., 197277; W. Freeman, 3rd, 24, *Cornwall*,* 580 t., 22701; G. R. Balliston,* 3rd, 28, *Triton*,* 204 t., 4428; T. L. Porteous, 3rd, 29, *Essex*,* 850 t., 17539.—13th.—J. Carphin, 1st, 30, *Victoria*, 588 t., *Liverpool*; R. C. Forbes, 2nd, 31, *Mary*,* 570 t., 30860. —14th.—T. Nourse, 1st, 24, *Barron of Renfrew*, 1126 t., *Liverpool*; T. Hodgkins, 2nd, 25, *Leonard Dobbin*, 611 t., 259409.—16th.—W. Wilson, 2nd, 30, *Emily*, 580 t., *London*; T. Pain, 2nd, 27, *Eliza*, 912 t.; D. Masterton, 3rd, 35, *Ferozepore*, 558 t.; J. Bennett, 3rd, 28, *Ferozepore*,* 558 t., 187695; G. C. D. Carter, 2nd, 22, *Rumbold*,* 94 t., 106963, *Yarmouth*.—17th.—M. Little,* 1st, 28, *Columbine*, 248 t., 1583, *London*; W. Budge, 2nd, 30, *Victoria*,* 588 t., *Liverpool*; L. M. Allan, 2nd, 27, *Bleng*, 205 t., 185399.—18th.—A. Watt, 2nd, 35, *Panama*, 22 t., *Glasgow*.—19th.—J. Meaburn, 2nd, 31, *Seringapatam*,* 872 t., 328761, *London*; W. Dick, 3rd, 26, *Constantine*,* 608 t., 26558; T. Dunn, 2nd, 25, *Johns*,* 153 t., 51890, *South Shields*; J. Ogle, 3rd, 32, *Sarah*,* 245 t., 124387; G. H. Broadhead, 2nd, 28, *Victoria*,* 442 t., 212367, *Hull*; R. P. Priest, 2nd, 27, *Victoria*, 870 t., *London*; W. Burrows, 2nd, 38, *Constantine*, 608 t.; J. Monro, 2nd, 35, *Euphrates*, 557 t.; W. S. Gaman, 2nd, 27, *Nautilus*,* 236 t., 23933; A. B. Collett, 2nd, 31, *Euphrates*,* 557 t., 346651; J. Rippon, 3rd, 28, *Branheu Moor*,* 402 t., 325677; C. R. Lankdown, 3rd, 30, *Duke of Argyle*,* 650 t., 32634; J. P. Scott, 3rd, 50, *Duke of Argyle*, 629 t.; C. Miles, 3rd, 40, *H.M.S. Rodney*,† 195787; H. Wyeth, 3rd, 25, *Emily*,* 580 t., 30569; J. Clark-son, 3rd, 34, *James Gibson*, 148 t.; S. T. Prynne, 3rd, 24, *Cuthbert Young*,* 293 t., 16872.—20th.—C. Johnston, 2nd, 36, *Alexander Baring*,* 505 t., 200302,

Dundee.—21st.—R. Crawford, 2nd, 24, Newcastle, 74 t., 199210, Newcastle.—23rd.—S. Tuttey, 3rd, 37, William Jardine,* 671 t., 329225, London; J. Morris, 2nd, 26, Success,* 331 t., 237304; C. Poole, 2nd, 24, Emily,* 520 t., 279767; W. M. McKay, 3rd, 26, Saxon,* 833 t., 36930; J. Butler, 3rd, 27, Triton,* 258 t., 4412; D. McKenzie, 1st, 35, Euphrates, 380 t., Dundee.—24th.—G. O. Mellin, 1st, 33, Courier, 1060 t., Liverpool; J. Paxton, 1st, 34, George Armstrong, 490; C. S. Knight, 1st, 31, Nithsdale, 295 t., 219372, Hull.—26.—G. J. Briggs, 2nd, 36, Countess of Durham,* 168 t., 5278, London; W. Inglis, 2nd, 24, Norman Morrison,* 564 t., 143970; W. S. Crowdace, extra, 1st, 29, Coquette, 216 t., Dundee.—27th.—J. Terry, 2nd, 54, Kent, 816 t., London; G. Park, 2nd, 31, Elgin,* 550 t., 344730, Liverpool; W. Frain, 2nd, 21, Caroline,* 309 t., 48975, Newcastle.—30th.—L. Hartshorne, 2nd, 26, Pantaloon,* 266 t., 344702, London; W. F. Clarke, 3rd, 29, Giraffe, 500 t., 1819.

* G. R. Ballinston, M. Little, and J. Butler, qualified for Steam Vessels only.

MATES.

April 2nd.—J. Paterson, 2nd, 20, George, ¶ 660 t., 440669, Portsmouth; E. Motley, 3rd, 22, Regulus, 369 t., 20864, London.—5th.—H. R. Cross, 3rd, 21, John Munn, 637 t., 24679, London.—12th.—J. I. Woodcock, 3rd, 29, Eliza, 296 t., 22406, London.—13th.—G. R. Johnston, 1st, 24, Lady McDonald, || 700 t., 391512, Liverpool.—16th.—J. E. Pike, 1st, 26, Scio, 170 t., 445485, Yarmouth.—23rd.—J. Donald, 2nd, 27, Euphrates, 380 t., 35954, Dundee.—26th.—J. Keay, 2nd, 21, Medium, 200 t., 142903, London; R. Montgomerie, 3rd, 27, Panama, 522 t., 150451.—30th.—J. Marshall, 3rd, 31, Halifax, 490 t., 2072, London.

* As Mate. † As Third Mate. ‡ As Seaman. ¶ As A. B.
|| As Second Mate.

RAILWAY ACROSS THE ISTHMUS OF PANAMA.—In a former number we announced the sale of the land for the construction of this railway, we now add the following further particulars of the progress of this vast undertaking. Col. Hughes, the chief engineer of this great undertaking, has published the following particulars respecting it.—The highest point of the road which is to connect the two oceans will have an elevation of only two hundred and sixty English feet above the level of the Pacific, an elevation which may with little difficulty be reduced to two hundred. This highest point will be reached by a gentle inclination of from thirty to thirty-five feet per mile. Till recently it has been supposed that the line from Nicaragua to Realejo on the Pacific offered the lowest level to be found in the whole space comprehended between Behring's and Magellan's Straits; but this conjecture is now discovered to have been ill founded. According to all probability, it is the plateau of Panama which presents the greatest advantages in this respect. The Northern Terminus will be established at that part of Limon Bay which is known as Navy Bay, formed by the island of Manzanilla; and which has an anchorage of thirty feet water at its entrance, and eighteen feet near the land in the direction of Point Cocosolo. The point for the Southern Terminus is not yet decided on; but awaits the completion of the minute hydrographic examination about to be instituted. With this exception, the survey of the line may be said to be finished. The engineers left Chagres on the 31st of May for New York; where the plans and estimates of the works will be offered for contract,—and the works may be commenced about January next. The length of the railway will be about forty-four English miles.—The highest point of elevation is seventy-seven feet lower than that of any other route hitherto surveyed,—and a hundred feet below all those spoken of in his report by M. Garalla the French engineer.

No. 9. Abstract of the passage made by H.M. steam ship *Terrible*, from Madeira to St. Paul de Loanda in 1847.

Date.	Distance.		No. of days and hrs. steaming.	Average.		Sail set.	Course.	Wind.		State of the sea.	Boilers.		Draught.		Immersion of Paddle wheels.	Quantity.	Coal Expended.		Expended.						
	By the Log.	By obser- vation.		Speed per hour.	Rev. per m.			Direction.	Strength.		No. in use.	Step of cam.	Pressure—steam.	Mean.			By stern.	ft in. tns cwt. c. q. lb tns. cwt. Knt.	Hourly.	Daily.	Dist. run with 1 ton	Oil.	Oakum.	Tallow.	
Aug.	Knts.	Knts.	h. m.	Knts																					
3... 4	111	...	15 07 40	8½		none	SbW½W.	South	12 hswl	26th	6½	18	10	77	2	26	171	7	1	932	165	41			
4... 5	171	...	24 07 10	8½		none	do.	SSW.	25 hswl	2 do	6	18	8	97	0	34	191	9	0	1434	194	87			
5... 6	155	...	21 157 30	8½		none	SSW.	SWbS.	2 hswl	2 do	6	18	6	106	10	34	101	13	1	2234	104	36			
18... 19	173	...	20 56 8 27	9		Gaff fore sail	SbE.	do.	4 m. sl. 2 ssaw.	2 do	6	18	1	176	5	30	131	6	3	1730	136	15			
19... 20	203	...	23 36 8 61	10		do.	SSE.	do.	4 do. 2 do	2 do	6	17	11	196	3	35	51	9	1	1435	55	86			
20... 21	186	...	22 2 8 46	9½		Fre & aft occasionally	do.	do.	3 hysl 2 do	2 do	6½	17	9	216	2	35	191	9	2	535	19	72			
21... 22	207	...	23 30 8 80	10½		do.	do.	South	2 swel 2 do	2 do	6	17	7	236	0	84	91	8	2	2334	9	13			
22... 23	99	...	10 15 9 70	11½		none	do.	do.	2 do. 2 do.	2 do.	5 & 6	17	5	265	10	19	141	10	2	2236	163	6			
Totals	1305		d. h. 6 16½													252	6						4334	290	
Averages.....			8 13 9½																	1	9	1	1435	55	56

†† hswl. head swell.—hy swl. heavy swell.—Coal used.—Welsh and Newcastle of middling quality.
N.B.—In this passage 2497 miles were made under sail only in 20 days 22 hours.

STRAIN ON RIGGING.

SIB.—In Mr. Timmouth's valuable work on Rigging he regrets that no certain rule exists, by which we may determine the strain upon rigging when set up, so as to enable an officer to proportion the tension to the capabilities of the rope. I fear the following method may not be so practicable as it appears on paper, but it is at least worth investigation. Many of your readers may have observed that on shaking any stretched rope (one without ratlines) a wave is formed which moves rapidly to the other extremity, and then returns continuing this alternate motion until it is absorbed by the stiffness of the rope. This may easily be tried on the signal halliards, and if they are belayed tauter, it will be found that this velocity is increased in a certain proportion to the strain.

If a rope be under a certain tension t , and if l be such a length of the rope that its weight is equal to the tension, then v being the velocity of the wave $v = \sqrt{gl}$ where g is 32.2.

If n be the No. of yarns in a rope, w its weight, and l its length, $l = a \frac{w}{n}$ where a is a constant for the same description of rope,

$$\therefore v = \sqrt{gl} = \sqrt{ga} \frac{t}{n}.$$

But $\frac{t}{n}$ expresses the tension on each yarn, and if t is the most advantageous strain it should be a constant, therefore the velocity of the wave should also be a constant for the same description of rope whatever its size may be.

For cable laid rope $a = 150$

For hawser laid $a = 220$

$$t = \frac{nv^2}{ag} = \frac{nv^2}{4830}$$

$$t = \frac{nv^2}{7084}$$

Example.—On shaking a backstay, $5\frac{1}{2}$ inch hawser laid 120 feet long, the vibration descended 3 times in 10 seconds:—Required the tension of the rope.

$$\text{velocity} = \frac{3 \times 2 \times 120}{10} = 72 \text{ feet per second.}$$

$$t = \frac{nv^2}{7084} = \frac{249 \times 72^2}{7084} = 182.2 \text{ lbs.}$$

Required the velocity of the wave when the tension is 1 lb. per yarn.

In this case $\frac{t}{n} = 1$

$$v = \sqrt{ga} = \sqrt{4830} = 69.5 \text{ for cable laid.}$$

$$= \sqrt{7084} = 84.2 \text{ " hawser.}$$

The value of a would however alter when the rope is much stretched, and cause considerable error. The following will be an approximation for hawser laid rope.

$$\text{If } c \text{ be the actual circumference of the rope } t = \left\{ \frac{cv}{30} \right\}^2$$

In the former case $t = \left\{ \frac{5.5 \times 72^2}{30} \right\} = 174$ lbs.

There are probably many sources of error arising from the stiffness of the rope, and other causes: indeed, no dependence can be placed on these results, but if associated with a series of careful experiments, rules might be obtained which would be of considerable value on many occasions.

Your obedient servant,

To the Editor N.M.

K.

PETERMANN'S MAPS.—Those of our readers who approve of conveying useful information in a condensed form will be pleased with Mr. Petermann's maps of Great Britain. We have inspected two. The density of the population in different districts is expressed by shading, and that of the different towns, &c. by a little circle of colour, varying this according to the magnitude: Again the other expresses the five principal rivers—basin of Great Britain and the average proportion of rain at different parts. All this is shewn readily and without confusion at a glance, and forms a highly interesting and useful reference, giving comparative results without wading through masses of figures, &c., for them.

THE BRITANNIA BRIDGE OVER THE MENAI STRAIT.—We have to record a feat of engineering success, unsurpassed, and probably unequalled in the annals of any country, that of floating the gigantic tube to its place between the piers, whence it is to be raised across the Strait. To give an idea of the *ensemble* of the undertaking, we annex the dimensions of the several parts of the works.

The abutments on either side of the Strait are huge piles of masonry. That on the Anglesea side is 143 feet high and 173 feet long. The wing walls of both terminate in splendid pedestals, and on each are two colossal lions, couchant, of Egyptian design, 25 feet long, 12 feet high though crouched, 9 feet abaft the body, and each paw 2 feet 4 inches, each weighs 30 tons. They contain 8,000 cubic feet of stone. There is some intention of surmounting the central towers with a colossal figure of Britannia, in stone, 60 feet high.

The Great Britannia tower in the centre of the Strait is 62 feet by 52 feet at its base upon the rock; its total height from the bottom 230 feet; it contains 148,625 cubic feet of limestone, and 144,625 of sandstone; it weighs 20,000 tons, and there are 387 tons of cast iron, built into it in the shape of beams and girders. It will sustain the four ends of the four long iron tubes which will span the Strait from shore to shore. The total quantity of stone contained in the bridge is 1,500,000 cubic feet. The side towers stand at a clear distance of 460 feet from the great central tower, and again the abutments stand at a distance from the side towers of 230 feet, giving the entire bridge a total length of 1840 feet. The side or land towers are each 62 feet by 52 feet at the base, and 190 feet high. They contain 210 tons of cast iron.

The length of the great tube transported is exactly 470 feet, being the greatest span as yet attempted. Its greatest height is in the centre 30 feet, and diminishing towards the end to 22 feet. The rivets, of which each tube contains 327,000, are more than an inch in diameter. The total weight of wrought iron in the tube floated in one day is 1600 tons. The trains will pass through them, over the Straits, at 100 feet above high water.

DREADFUL SHIPWRECK.—THIRTEEN PERSONS STARVED TO DEATH.

By the *Emma Sherratt*, which arrived yesterday from Sydney, particulars have been received relative to the loss of the British ship *Sarah Crisp*, John Taylor, master, and the appalling sufferings of the crew, thirteen of whom perished from starvation. The *Emma Sherratt*, on her outward voyage to Hong-

Kong, perceiving a vessel in distress, bore down to her assistance, and she proved to be the unfortunate vessel in question. She was leak-laden and water-logged, almost a perfect wreck. Her masts were gone, as well as everything on deck. With much care 19 persons, in a most shocking state of exhaustion, were taken off the wreck by the *Emma Sherratt's* boats. They proved to be John Taylor, the master, the chief mate, and 17 seamen. Their sufferings had been truly awful, having been 27 nights and days on the wreck with nothing to subsist on excepting a monkey and two fishes. All the water they had was about a couple of buckets, which they caught by some old canvas. The second mate and twelve men had died from exhaustion. The ship's loss was attributed to a plank starting, as she filled in a very short time, and turned over on her side. The crew jumped on her beam as she went over, and there held on until daylight, when they succeeded in righting the wreck by cutting away the masts. The vessel and cargo were insured to the amount of £20,000.

UNITED STATES COAST SURVEY.

Report of the Superintendent of the Coast Survey, to the Secretary of the Treasury, relating to Hatteras Cove, Hatteras Inlet, and Bull Bay, on the coast of North and South Carolina.

*Coast Survey Station, Near Annapolis, Maryland,
June 11th, 1849.*

SIR.—I have received from Lieut. Commanding J. N. Maffit, U. S. N., assistant in the coast survey, information in regard to the results, of reconnoissances made by him, which are of considerable importance to navigators, and which I have the honor to lay before you, with a view to their republication. They relate to a cove which has been formed since 1845, by the extension of Cape Hatteras, to the inlet southward and westward of Cape Hatteras, formed in 1846, and to the use of Bull Bay on the coast of South Carolina as a harbour of refuge. Sketches of these reconnoissances will be at once published.

1.—Hatteras Cove lies to the westward of the extreme point of Cape Hatteras, is sheltered from the north-east, and affords good anchorage in four or five fathoms water with a bottom of soft blue mud. From the anchorage Hatteras light bears N.N.E., distant about one mile and a half. Since 1845 the S.W. spit of Hatteras has made out nearly three-eighths of a mile.

2.—Hatteras inlet is twelve miles to southward and westward of the Cape. Twelve feet can be carried over the bar on the ocean side, and there is secure anchorage in five fathoms water. The entrance with a pilot is easy. Lieut. Maffit's statements refer only to the use of the inlet as a harbour of refuge.

3.—Bull Bay is about twenty-three miles north of Charleston, on the coast of south Carolina. Thirteen feet can be carried across the bar, at low water spring tides, the rise and fall of which is six and three-quarters feet: To enter, bring the north-east bluff, a point of Bull island to bear N.W. b.W. (by compass,) and run for it. When within three-quarters of a mile of the point, steer N. $\frac{3}{4}$ W., until it is passed, Then follow around the shore and anchor at pleasure in soft bottom. In leaving the bay, keep away until the outer spit is cleared, which bears S.E. b.S., from the bluff part of Bull Island, distant three and a quarter miles.

Very respectfully, yours,

A. B. BACHE,
Superintendent U. S. Coast Survey.

Hon. W. M. Meredith, Secretary of the Treasury.

DIFFERENCE OF LONGITUDE BETWEEN BOSTON AND LIVERPOOL.

It being considered interesting and important to the commercial marine of the United States and of the United Kingdom, to ascertain with correctness the difference of longitude between the observatory at Cambridge, Boston, and that at Liverpool, it is proposed by the United States government to accomplish this object by means of marine chronometers, to be transported across the Atlantic, to and from Boston, in the British and North American Royal Mail steamers; and for this to be effected, arrangements have been made with the authorities in this country, that when the chronometers arrive at Liverpool, on their return from Boston, they may be transmitted with all possible care and despatch to the Liverpool observatory for the intended purpose.

NEW BOOKS.

THE PROGRESS OF THE DEVELOPMENT OF THE LAW OF STORMS *and the variable winds, &c.*—By Lieut. Colonel W. Reid, C.B., F.R.S.—Weale, London.

With unwearied zeal Col. Reid has again followed up the subject of storms, to the elucidation of which he has already contributed so largely, with another volume, the title of which is the foregoing. A cursory glance, for as yet we have not had an opportunity to look closely into it, enables us to say that the Colonel has collected much interesting, and to the seaman, most useful information, from all quarters of the globe, from whence information was to be had; and this he has abundantly illustrated with little charts of the localities of which he treats. The subject of hurricanes we have long ago said is one with which the commanders of ships should be well acquainted, and the repetition of these books leaves him less chance of escaping from blame, which might attach to his ignorance of it. We shall return to this important volume in another number.

NEW CHARTS.

Published and Corrected in the Admiralty, and Sold by R. B. Bate, 21, Poultry, July, 1849.

AZORES OR WESTERN ISLANDS, <i>Capt. A. T. E. Vidal, R.N., 1844.</i>	Price	1	6
CORVO AND FLORES <i>Ditto, Ditto,</i>	"	1	6
TERCEIRA AND GRACIOSA, with views and plans <i>Ditto,</i>	"	2	0
FAYAL, PICO AND SAN JORGE, with views <i>Ditto,</i>	"	2	0
FAYAL CHANNEL, HORTA AND PINE BAYS, with views <i>Ditto,</i>	"	2	0
SAN MIGUEL, with plans and views <i>Ditto,</i>	"	2	0
SANTA MARIA AND THE FORMIGAS <i>Ditto,</i>	"	1	6
NIKARIA ISLAND, ARCHIPELAGO, <i>Capt. Graves, R.N., 1845.</i>	"	1	6
KARABAGHLA, KAPPARI, AND KOS CHANNELS <i>Ditto,</i>	"	1	6
AMORGO ISLAND, <i>Capt. S. Brock, R.N., 1845.</i>	"	1	6
SOCORRO, CLARION, CLIPPERTON AND COCOS ISLANDS, (<i>Pacific Ocean</i>) } <i>Capt. Sir E. Belcher, C.B., R.N., Colnett, & M. De Tassan, to 1840.</i> }	"	1	0
ACAPULCO HARBOUR, <i>Capt. Sir E. Belcher, C.B., R.N., 1847.</i>	"	1	6
VANCOUVER ISLAND, with views by various persons corrected to 1847	"	2	0
SANDA ISLAND (<i>S.W. Coast of Scotland</i>) <i>Capt. C. G. Robinson, R.N., 1848.</i>	0	6	
OSTEND, corrected to 1849.	"	1	0
PORT ALBANY, (<i>N.E. Coast of Australia</i>) <i>Capt. O. Stanley, R.N., 4848.</i>	"	1	6
WANGARURN HARBOUR (<i>New Zealand</i>) <i>Mr. J. G. Nops, Master R.N., 1845</i>	1	6	

LAUNCH OF THE GENERAL SCREW STEAM SHIPPING COMPANY'S VESSEL,
"BOSPHORUS."

Exchange Buildings, July 11th, 1849.

On Saturday afternoon last, another Screw Steam Iron Vessel destined to run between Liverpool and Constantinople, was launched from the extensive building and iron works of Messrs. Mare and Co., of Blackwall. There were a number of distinguished persons present, amongst whom we noticed the Turkish Ambassador and suite; Edward Zohrab, Esq., the Ottoman Consul General; Capt. Ford, of the Ottoman Steam Navy; Jas. Laming, Esq., Managing Director; Mr. Clarke, and Mr. Lang; Mr. Josh. Maudslay, the eminent Engineer; Mr. White, of Cowes; Mr. Campbell, C.E.; Colonel Wilson and Lady; the Marquis of Lisbon; Viscount and Viscountess Moncorva, with the Baron and Miss Moncorva; Lady Morgan; Lady Blake; Mr. Milner Gibson; B. Balfour, Esq. Director, and Ladies; W. H. Howes, Esq.; and John Margetson, Esq. a Director; and a large party of Ladies and Gentlemen.

Miss S. Zohrab, niece of the Turkish Consul, performed the ceremony of naming the vessel, by throwing the customary bottle of wine at her bows, and naming her the "*Bosphorus*," as she glided slowly and smoothly into her native element amidst the cheers of all present. She rose most buoyantly, and as she settled on the water a little by the stern, she drew forth general admiration for her beauty and symmetrical proportions, which are length between the perpendiculars 175 feet, breadth 25 feet, and depth 16 feet, making her burthen in tons of 530.

Subsequently, the Company adjourned to the Mould Loft, where they were very handsomely entertained by the principal of the firm. In drinking success to the "*Bosphorus*" a compliment was paid to his Excellency the Turkish Ambassador, who in reply expressed his satisfaction at what he had witnessed, and said he should feel much pleasure in promoting the interest of the Company to the utmost of his power. The health of the pretty Sponsor of the *Bosphorus* was then drank, and in succession those of Mr. Zohrab; the Chairman of the General Screw Steam Shipping Company; Mr. Jas Laming, the Managing Director; Capt. Ford, the Superintendent; Mr. Maudslay, the Engineer; and Mr. Waterman, the Architect.

A very interesting conversation then took place, on the merits of Commercial Screw Vessels, and a meed of justice was rendered to Mr. Laming, for his invaluable labors in working out the success of the Screw Propeller, as applied to Merchant vessels in an economical point of view. It was then stated that by his extraordinary indefatigability he fully realised the most sanguine expectations of those connected with him in his enterprise.

Upon these grounds it was anticipated, that under the patronage and support of the Ottoman Government, the new undertaking of the General Screw Steam Shipping Company, would prove a remunerative investment.

The "*Bosphorus*," after she was launched, was immediately towed round to the East India Docks, there to receive her engines, which are of 80 horse power.

She is to be fitted with all despatch, and two sister ships, the "*Hellespont*" which will be launched shortly, and another, are building by Messrs. Mare, and Co., for the same service, the Company being satisfied that in the "*Bosphorus*" they have an excellent model for Screw Steaming, as they have also a strong and well built ship for the purpose required.

TESTIMONIAL TO THE MEMORY OF THE LATE SIR JOHN BARROW, BART.

THE friends of the late Secretary of the Admiralty are engaged in the good work of doing honor to his name by designing a column to be erected near his birth place, at Ulverstone in Lancashire. This mark of respect and esteem is patronised by Her Majesty, the Queen Dowager, and well seconded by many of our Noblemen and Gentlemen to whom the good qualities of the late Secretary were well known. We perceive that it is intended to be used as a Sea Mark for some part of Morecambe Bay, and its position to be approved by the Trinity-House. We cordially wish success to this doubly useful design.

METEOROLOGICAL REGISTER.

Kept at Croom's Hill Greenwich, by Mr. W. Rogerson, of the Royal Observatory. From the 21st of June to the 20th of July, 1849.

Month Day.	Week Day.	Barometer		In the shade				Wind.				Weather.	
		In Inches and Decimals.						Quarter.		Strength.			
		9 A.M.	3 P.M.	9 A.M.	3 P.M.	Min	Max	A.M.	P.M.	A.M.	P.M.	A. M.	P. M.
21	Th.	30.12	30.13	64	72	53	73	W	W	3	4	bc	
22	F.	30.20	30.18	60	71	50	72	N	NW	3	2	bc	bm
23	S.	30.00	29.92	65	78	53	79	SW	NW	2	4	bc	bc
24	Su.	29.93	29.93	63	72	56	73	N	NW	2	2	b	b
25	M.	30.04	30.00	64	73	50	72	SE	SE	1	1	bc	op [3
26	Tu.	29.97	30.02	65	73	58	74	NW	NW	3	3	bc	bc
27	W.	30.01	30.00	66	73	56	74	W	SW	3	4	bc	bc
28	Th.	30.03	30.06	62	66	54	66	NW	N	5	4	qbc	bc
29	F.	30.12	30.07	64	66	52	68	S	S	3	3	bc	o
30	S.	29.24	30.14	58	61	54	62	N	NE	5	4	qbc p 1)	bc
1	Su.	30.18	30.10	56	72	43	73	N	NW	2	3	b	bc
2	M.	30.00	30.04	62	68	57	69	NW	NW	4	5	bc	qbc
3	Tu.	29.79	29.72	65	72	57	73	W	SW	6	7	qo	qbc
4	W.	29.74	29.74	62	66	58	67	W	W	5	4	qbcm	om
5	Th.	29.84	29.97	58	70	50	70	NW	NW	4	4	bc	bc
6	F.	30.13	30.16	63	73	57	74	SW	SW	3	2	bc	b
7	S.	30.13	30.09	70	78	57	79	S	S	4	4	b	b
8	Su.	30.10	30.14	69	63	62	84	SW	SW	4	4	b	bc
9	M.	30.29	30.30	67	75	60	76	NW	N	2	3	bcm	bcm
10	Tu.	30.42	30.39	62	75	53	26	NE	NE	2	3	b	bc
11	W.	30.41	30.40	64	74	51	75	NE	E	2	3	b	bc
12	Th.	30.39	30.35	66	76	53	77	NE	E	3	4	bc	bc
13	F.	30.29	30.25	68	75	55	77	E	NE	3	3	bc	bc
14	S.	30.25	30.21	63	73	52	74	NE	NE	3	3	b	bc
15	Su.	30.17	30.17	62	72	55	73	NE	NE	3	2	o	bc
16	M.	30.11	30.09	65	75	53	76	NE	NE	4	2	bc	bcm
17	Tu.	29.92	29.87	68	65	57	71	SW	SW	4	2	bc	op [3 [4
18	W.	29.78	29.73	63	64	51	68	SW	SW	2	4	bc	bcp 3]
19	Th.	29.60	29.62	58	62	52	64	W	NW	4	4	bcp 2]	bctlr [3]
20	F.	29.56	29.61	55	66	50	67	SW	NW	2	2	bc	bctlr [3]

JUNE 1849—Mean height of the barometer=30.103 inches; mean temperature=59.5 degrees; depth of rain fallen=0.32 inches.

TO CORRESPONDENTS.

CAPT. LEIGHTON's further papers are reserved for our next. We have received several Books too late for notice in our present number, and have been obliged besides, to reserve the notice of others on hand. They shall not be neglected.

A press of matter has driven our usual register of Births, &c., from its place; and as our space is so extremely limited, we shall not replace them except by special request.

Hunt, Printer, Old Church Street, Edgware Road.

THE
NAUTICAL MAGAZINE

AND

Naval Chronicle.

SEPTEMBER 1849.

NOTES AMONG THE ISLANDS OF THE PACIFIC.—*Extract from the Remarks of H.M.S. North Star: Capt. Sir E. Home, R.N.*

THE *North Star* left Sydney on the morning of July the 6th, 1844, the breeze moderate from south-west and freshening at W.b.S., and was in the evening off Port Stephens. The directions for this port are accurately given by Capt. P. P. King. The land at the entrance is moderately high, and may be known by two small barren islands which lie off it: working in, the wind fell light and then calm. From the southern point or head a reef extends in a northerly direction two-thirds of the distance across. Being furnished with Capt. King's sailing directions the different points were easily recognised.

Having passed about two miles above Nelson's Head, which is the most prominent head in the harbour on the port hand going in, the tide of ebb being down and the ship having scarcely steerage way, she took the ground, which was sand. The deepest water in the channel at that time was four fathoms, a kedge was laid out, and as the tide rose she was hauled into deep water, and having gone back into the proper anchorage just above Nelson's Head, anchored in little Salamander Bay in $8\frac{1}{2}$ fathoms. It had been intended to have gone to the usual anchorage up the harbour near a small island, but as the passage, which could be seen through the shoal water, appeared to be very narrow, and having already touched the ground, I did not think it prudent to proceed farther up until I had seen Capt. King. His recommendation was to remain where we were, and not to venture further. I had seen enough of this har-

hour to be of the same opinion, and further I should not recommend any vessel of more than 200 tons, or drawing more than twelve feet water to enter here. Wood is abundant, but water is found only in holes dug in the sand and is brackish.

The *North Star* attempted to leave Port Stephens on the 10th, but a light breeze coming in, and soon falling calm off Nelson's Head, she again anchored; and on the 11th left the port with a light air from N.N.E. In the evening it was cloudy with lightning all round the compass, and at midnight blew a gale from the north-west. At noon on the 12th it moderated, but blew very fresh with squalls and rain: at 8 A.M. Balls Pyramid, the only island of Howes Group which we saw, bore S.S.E. $\frac{1}{2}$ E. twenty miles. Sights were taken, the ship was steered south-east, and the patent log was put over: at noon the observed lat. was $31^{\circ} 8' S.$, the longitude by chronometer $159^{\circ} 32' E.$, and the distance run eastward since 8h. was twenty-two miles one fathom. Howes Island then out of sight.

The northern island is high and barren, and appears to be double: at 1h. P.M. New Island, as it is called, was seen for an instant through the haze bearing E. $\frac{3}{4}$ S.

The fly of the patent log was found to have parted from the machine, which was for the future rendered useless. It would be very desirable that some more simple contrivance were adopted so that the old line when worn might be cut away and a new one spliced in without difficulty. The weather continued squally, with rain and strong breezes, until the evening of the following day, when it moderated; and the heavy sea which had attended us since our departure from Port Stephens gradually went down.

Norfolk Island was seen on the morning of the 16th. The winds having been more moderate, blowing from S.W. and W.S.W. since leaving Howes Group, and the weather fine with occasional squalls and rain: the island bore E.N.E., and Philip Island E. $\frac{3}{4}$ S. Sights were got off the south-west side of the island. The ship then passed between Norfolk and Philip Islands for Cascade Bay; a red ensign was hoisted at the settlement, a signal that boats could land: when landing is dangerous or impracticable, a blue flag is hoisted. At noon the sun's meridian altitude was observed off the eastern side of the island: in the afternoon sights were again taken, the ship then being on the northern side of Cascade Bay. The latitude observed was $29^{\circ} 2' S.$, long. $167^{\circ} 51' E.$; the day gradually cleared and was very fine.

Norfolk Island rises by a gradual ascent to a considerable height. The ground rises near the northern extremity to its greatest elevation, which is called Mount Pitt, and cannot be called a mountain; the rest of the island is of moderate height, a large portion of it is level: the soil extremely rich. Approaching the island the appearances produced by the pines, for which it is celebrated, are very curious, some resembling columns and ancient ruins, some groups resembling churches, cathedrals, and various other forms: the greater part of the island appears to be

covered with them. The land which is cleared and cultivated is remarkably green, forming a strong contrast with Nepean Island, a small barren island upon which nothing appears excepting the dead trunks of four or five old pines. This island is in front of the settlement, which is called Kingston; so named after a former governor, Captain Philip King, after whom Philip Island is also named.

Philip Island is of considerable height, on the north and west side it is very rugged, having large fragments of detached rocks upon its surface. The soil is very red and appears to be rich—a large portion is bare; but where there is grass it is most beautifully green. There are but few trees upon the island; they are much bent by the south-easterly winds. I saw only one Norfolk Island pine (*Aurocaria excelsa*,) upon the west side of the island. The stratum of rock is slightly curved, and is close together, resembling the gills of a mushroom: the soil on the east side is more red than anything of the sort I ever saw before. The rocks, which appear to be extremely hard, are of the same colour, in some parts they are of a lightish brown, and everywhere very rugged: on this side there are a few pine trees; a long low point runs off eastward. The south side I am informed is perpendicular.

The landing at Cascade Bay is not easy, and requires some management not to stove the boat, which must be backed in towards the rock on which you land. The cascade exists only in name, the stream of water is small, and spreads over the surface of the rock, giving it the appearance of a cascade when at a distance. There is no landing upon the island with any degree of safety, excepting here or at the settlement; and when it is bad on one side of the island it is generally good on the other. The distance from one to the other is three miles. The view from Mount Pitt extends all over the island, which is most fertile and beautiful, the vegetation entirely tropical. Between Cascade Bay and the settlement there is a garden kept under the direction of the government, it is large and well conducted: pine-apples, strawberries, sugarcane, and the usual European and tropical fruits grow together and succeed well. In the garden is the largest specimen of the *Aurocaria excelsa* which is believed to exist upon the island. It is hollow for 16 feet above ground, yet is in good health; the extreme height is 187 feet, the girth (at five feet from the ground) 54 feet, and at twenty feet above the ground it is 51 feet round.

This island formerly had vast numbers of orange trees upon it. It being believed that the fruit furnished food upon which absconders could subsist, they were all destroyed in the year 1827, excepting a very few which have since died, and although every means have been taken since that time to re-establish them, they will not succeed. There is at present only one tree upon the island, and that is in an unhealthy state. The number of convicts upon the island are 953, and there are two companies of the 99th regiment to guard them—200 men. The jail is small; the barracks for the prisoners are well built, and well kept; but want draining. The buildings in the settlement are all very good. The

latitude of the garden of the government-house in the settlement, as found by observations of the sun's meridian altitude by two observers in the artificial horizon was $29^{\circ} 3' 6''$ S.; the variation of the compass $11^{\circ} 18' E.$; the dip of the needle in the same place was found to be $54^{\circ} 53'$.

There is no safe anchorage off the island, moorings have been laid down for the government brig belonging to the colony of New South Wales, but they have been washed away; and she and other vessels have lost their anchors.

Upon the 19th of July a departure was taken from Norfolk Island, and as it was my intention to visit as many of the islands in the South Seas as I was able, regulations were made for a constant look out by day and night, beyond what was usually kept, and proper trustworthy persons selected for the purpose—the hand-lead was kept constantly going. On the 26th of July the ship was off Pylstarts Island, and on the 29th anchored at Tongataboo, between which day and making Norfolk Island the weather was fine with fresh and moderate breezes from S.W., W., and N.W., W., W.S.W., S.W., N.W., and W., W.S.W., S.W.b.W., and S., W.S.W., and S.W., S., and on the 26th S.E. and E.b.S., going round on the day following to E.N.E. and N.E.; on the 28th to N.N.E., and N.b.W.; and on the 29th from N.N.E., and S.S.W. The barometer varied from 29.72 to 30.08; the thermometer between 78° and 60° , and the surface water of the sea from 66° to 77° , a long swell constantly from south-west. The tropic was crossed upon the 25th, in longitude $176^{\circ} 30'$ east. Pylstarts Island was observed at daylight on the morning of 26th bearing W. $\frac{1}{2}$ N. eighteen or twenty miles; we had not yet got the trade wind, nor were any birds seen. Approaching the island from the east it has somewhat the appearance of a saddle, the north extreme bluff, the southern point slopes with a more gradual descent; off it there is a detached perpendicular white rock, which at a distance much resembles a ship. At a distance the outline of the island is irregular and rugged; for some distance below the summit the ground is bare, below which the level ground appears to be well cultivated and regularly enclosed; trees of considerable size fill the valleys. The island is bounded by a steep rocky precipice, the stratum horizontal and well defined; the sea breaks high upon the shore which appears to be of boulders. The enclosures are square and nearly of an equal size, separated from each other by wide hedge rows of uncleared ground.

The sea appears clear of danger, and the island to be steep to; when it bore west about two miles or less we had 95 fathoms sand and shells; when at that distance eleven canoes came off to the ship, each had four men or boys in them. The canoe bailers and paddles are the same in form as those of New Zealand. When they got near the ship they called in English that the ship sailed too fast, and desired that we should shorten sail and heave to. They were on board in an instant from all parts, they brought green bananas, cocoa-nuts, yams, sweet potatoes, papaw ap-

ples, sugar-canes, and kava root. The original legitimate dress appeared to be a cloth round the middle, but most of them had remnants of red frocks or cotten clothes which they seemed to desire most. Their hair was long and bushy as worn in Timor, and sometimes in New Zealand; two were stained about the neck and temples with blood which appeared to have been newly shed, they gave as a reason for it that they were mourning for a friend that was dead; by the quantity of blood wasted their mourning must have been sincere and deep. Some wore things in their ears, pieces of tobacco-pipe &c., and pieces of mother-of-pearl round their necks, but it was not good; some were tattoed in patches, without design or meaning, some had round spots marked round their necks, resembling a necklace. Their loins also were tattoed in the same manner. In exchange for what they brought they asked for hoes, which were the first things called for on coming on board, or long knives; but they took fish hooks, pipes, tobacco, and old clothes very readily, and I think they made the best bargains.

The chief was pointed out; he was a modest handsome man, six feet three inches: he was in want of a coat and pretended to be very cold. Hearing that we were going to Tonga, asked if we were going to war, as war was expected there. They took a great fancy to the cutlasses with which the men had been exercising. I believe they wanted them for agricultural rather than warlike purposes. They counted the guns: appeared to be perfectly independent, strong active and fit for war or work of any kind. Their canoes are made from a single tree having a piece of timber of nearly the same length, projecting from the larboard side two feet, and parallel with the keel, supported by two upright pieces, one at each extremity; they were extremely noisy. One of the canoes being upset a great piece of work was made about it, but finding no attention paid to them she was soon righted and bailed out: the people going to dinner, they took a great fancy to the boiled pork and potatoes, the latter they preferred raw that they might be enabled to plant them, shewing us upon the deck how they intended to do it, cutting them into pieces as is practised in England,—in four months they said they would be fit for use. The number of inhabitants upon the island are about 150 as we were informed. Those on shore appeared to be all clothed. Having taken bearings of the remarkable points of land and rocks and observed the sun's meridian altitude, stood round to the lee or north-east side of the island. The natives on board seeing us as they thought, leaving the island, hastened to their canoes and cast off from the ship, following under sail. By the time we had distanced the canoes rather more than a mile, three natives who were below, finding themselves left behind, jumped over board and swam towards them.

The north side of the island appears to be perfectly barren and uncultivated, no water was seen falling from the rocks, nor did any place appear where a boat could conveniently land, or having landed, where they could walk; all is a rough black rock, there is no appearance of sand. On the northern side there is a very remarkable white pyramidal

rock; it is high, and the apex sharp and very regularly formed: there are two others on the north-west extremity. No houses or huts were seen; a large fire had been lighted on the north-west extremity of the island, from which issued a vast quantity of smoke.

A second set of sights were taken on the northern side of the island with sketches and bearings, and we stood on towards Tonga Taboo, the weather extremely cool and clear. The highest peak of this island is about 700 feet. In a north and south direction the island is about one mile in length, and east and west about three-quarters of a mile. It slopes from south-west to north-east, the south-west end being the highest. The mean longitude was by sights over the sea horizon about $176^{\circ} 1' 47''$ E., the latitude $23^{\circ} 33' 50''$ S., and the variation $9^{\circ} 30'$ E. The course for Tonga Taboo was N.b.E. $\frac{1}{2}$ E., the weather fine, rather hazy, and very little swell: the variation by amplitude at sunset was $9^{\circ} 5'$ E. At night the ship was put under easy sail and her way through the water reduced to four knots per hour. At 10h. 40m. on the following morning, 27th, the land was observed north-east showing like two hummocks; these were the Honga and Hapaa Islands; the latitude at noon was $20^{\circ} 49'$ S., the longitude by chronometer $175^{\circ} 57'$ E. We tacked and stood for the land. At sunset it bore north-east twenty miles, and at half past nine in the evening the land of Tonga Taboo was seen upon the weather bow, the wind N.E.b.E., a moderate breeze and very fine. This land the officer of the watch and myself had been looking at for some time before it was reported by the look-out man, it was so low and regular as to be scarcely perceptible; it was moonlight. Between the land and the ship there appeared to be a long sand bank or sandy beach, breakers were presently after seen rising very high, and we tacked half an hour before the time at first intended, and at daylight on the 28th, were to windward of the point we last night tacked from. We stood along the land E.N.E., the land generally low, with one hill upon it. It was at a considerable distance. Several islands between us and the island of Tonga, that to which we were the nearest at 9 A.M., was called Attata; it is the largest, and north-westernmost of them: the islands are low and covered with cocoa-nut trees and palms; the sea breaks heavily upon them, and a line of breakers almost uninterrupted extends along the whole line of coast. Within this barrier a barque was seen at anchor, and we endeavoured to weather the eastern extremity of the line and bear up round it to the anchorage. A small schooner was seen ahead, we believed that she was coming to pilot us; we made the pilot signal, and stood towards her, but she altered her course: towards evening the master came on board, he was a stranger to the place, and was looking for a passage through the reef: by attending to this vessel the day was lost,—the night was fine with little wind N.b.W. At 10 tacked and stood along the land, and when she had gone five miles hove to.

At daylight, 29th, no land was to be seen, but the schooner was

near: as soon as the light was good we stood in and made the land and the line of breakers. Standing in for the opening seen yesterday a canoe was observed coming out, tacked and hove to for her; she was soon alongside, and two natives came on board over the taffrail, their favorite way. The canoe then left the ship and stood in to the opening we had intended to enter by, they took charge of the ship; and one of them who was named Henry, and was son to the king of the island, went to the fore-yard, and from thence conned the ship. The course steered for the opening was W.b.S., the passage formerly proposed to be taken is only fit for boats, which when we altered course as above, then bore south. Passing along the line of breakers at a distance of about half a mile, and leaving the small island of Mallenoah on the larboard hand, and Attata on the starboard hand, the passage is between them, keeping on the side nearest the latter island at a distance of about a quarter of a mile from the reef which extends from it in a north-easterly direction, the course S.b.W. $\frac{1}{2}$ W. The depth of water varying from 5 to 9 fathoms. Having passed within the outer reef the passage leads between two patches of coral which are covered at high-water, inside which anchor about two miles east of the village of Neckalofa in 12 fathoms.

On the 30th the day after full moon, it was high-water at 2h. 40m. P.M., the strength of tide per hour 4 fathoms; the general strength was 2 fathoms: the tide rises from four feet to eight feet. The *North Star* remained at this anchorage until the 6th of August, in which time the winds were moderate and often light from N.W., S.S.W., N.E., S.S.W., and N., S.W., S.E., S., E., S.b.W., N.E., S.E., S.S.W., once it blew strong (August 3rd) with heavy rain. The barometer ranged from 29.85 to 30.13, and the thermometer between 68° and 83°. It was not until the 28th that it was necessary to change the clothing from blue to white, and it has been generally remarked that the temperature within the tropic of Cancer is lower than in that of Capricorn in parallel seasons.

The latitude as found on shore by meridian altitudes of sun and stars north and south, was 21° 8' 27" S., the variation 10° 43' E.; and the dip of the needle by four sets of observations 39° 30'. No birds had been seen since leaving Pylstarts island, and these only close to the rocks, not flying from the island. There is no water to be obtained at Touga Taboo. The springs may be said to be upon the tops of the trees, that which is used for drinking being the produce of the cocoa-nut, it is so scarce that rain-water is saved in cloths spread out to receive it when it falls, or a cocoa-nut tree which does not stand erect has frequently a groove cut in the upper side of the trunk, to conduct the rain-water into a small hollow, which is cut in the tree near its base. Wood is plentiful, the purser got a large quantity for an old jacket; money is not used. The most valuable articles for barter are quart bottles, white calico, and old clothes; the supplies to be got consist of pigs and yams. A good pig weighing 70lbs. is to be had for eight or

nine wine bottles, or an old shirt and a pair of old duck trousers; a good fowl is to be had for a bottle; one bottle also was the price of about 20lbs. of yams; Muscovy ducks were three times the price of fowls.

A CRUIZE THROUGH THE MOZAMBIQUE CHANNEL, *in H.M.S. Geysler.*

By J. Richards, Master, R.N.

(Concluded from 402.)

AT Boyanna Bay we found a French ship loading with cattle, and a Dutch barque, trading with the natives for hides, rosewood, ebony, &c.

We anchored abreast of a small river on the western side of the bay, on the banks of which is situated the principal town of the province, of which Rabouki is king. On the sandy point at the entrance of this river a Frenchman, named M. Sumat, had taken up his residence, to trade with the natives. He was living in a wretched little hut, surrounded by cattle pens, and stacks of ebony and rosewood; but, in the present unsettled state of the country, I suppose it would not be worth while to build a decent house. We here learnt that the English barque *Ariel*, of Mauritius, had sailed with a cargo of bullocks for that place, about fourteen days ago, and that, one of her mates was now up the country purchasing another cargo against her return.

All this part of Madagascar is inhabited by Sacalavas, a fine athletic generous race of people, hospitable to strangers, but very dangerous and troublesome enemies: in this respect very much resembling the Arabs of the Deserts of Northern Africa, roving over the country in bands of fifties or sixties for the purpose of stealing cattle from their more civilized neighbours, the Hovas; which, when obtained, are bartered away to the European and Arab traders of the West Coast.

Since the ports on the eastern side of Madagascar have been shut up, the cattle trade of Madagascar has been thrown entirely into the hands of these people, and as muskets, powder, and shot is the usual medium of exchange they find no difficulty in stealing enough cattle from their natural enemies, the Hovas, to supply the Mauritius market.

Two days before we arrived a band of two hundred Sacalavas had started for the Hova country to plunder cattle, and at this time other expeditions are fitting out for the same purpose, so that the Hovas still supply us with cattle, with the only difference, that instead of peaceably getting dollars and manufactured goods from us in exchange, they are repaid by bullets from Sacalava muskets. It is some consolation to know that the Queen Ranavalona (through whose arbitrary measures the trade on the Eastern Coast has been stopped,) has been the greatest sufferer in these plundering expeditions, as our interpreter recognized a great many cattle on shore with the queen's mark.

Since the accession of the present queen, the whole Sacalava race have suffered dreadfully from repeated incursions of the Hovas, who from their superior knowledge in the art of war have generally succeeded in their expeditions against their less civilized neighbours, and practice the most atrocious cruelties on their prisoners. This is much to be lamented, for those who have resided long with the Sacalavas say that, notwithstanding their superior stature and strength they are a mild inoffensive race, of an open and generous disposition,—qualities for which the Hovas have never been celebrated. The bullock trade being now transferred from the East to the West Coast, and the consequent probability of enterprising Europeans residing among them may tend to better their condition, for they have great respect for white men, and will doubtless make apt pupils.

At an interview with King Rabouki, he said, “I am, and always will be, a friend to white men. I wish them to come and live in my country, so that my subjects may gain knowledge. I want powder, shot, and large guns, and to be a great king like my friend Radama was.”

The Arabs have managed to establish themselves in this country, and from their superior knowledge are gradually acquiring considerable power. At present they monopolize the whole trade of the place. The governor of the town is an Arab; but, notwithstanding this they do not seem to be in particular favour with the king.

It appears that one of Rabouki's sons has been educated in the Mahometan religion and manners, and in consequence assumes a superiority over the old gentleman and his children, highly offensive to him. His second son, Prince Tsimatahotra, is his favorite. He is a fine young man of about twenty-five years of age, of an open pleasing countenance and address; a crack shot, and one of the most popular warriors of the place. His principal failing (one rather common in Madagascar) is too great a partiality to spirituous liquors.

The last expedition the Hovas made to this part of the country, they lost so many men from sickness that the natives say, they will not be in a hurry to come again. They attribute this to a tree producing a yellow flower of such noxious quality, that Hovas cannot exist in their neighbourhood: they further say that it does not affect themselves at all; but, I suspect that much of this is invention, and that the real cause of the sickness in the Hova camp is the malaria or marsh fever, from which it is well known their troops sent to the sea coast suffer dreadfully.

A Dutch trader I met assured me that this part of the coast was healthy for Europeans at all seasons; that he had been trading on different parts of it between this and Nosh Beh nearly two years, and during that time frequently sleeping in open air and on shore, in the woods with a party of men, none of whom had ever been sick, but this must be a rare exception and I should be sorry to advise any one to try it. The same gentleman assured me that the coasting trade mostly carried on by Arabs is very remunerative, and to Europeans of course it would be still more so, but for this purpose, small schooners of fifty to seventy tons would

be the best. A company possessing three or four such vessels might command the entire trade of the coast which is now carried on by Arab dows.

Old Rabouki would not come on board without going through the Sacalava ceremony of friendship with Capt. Brown; this consists of drawing a little blood from the breasts of each and mixing them together, both partaking of it in the presence of the Sacalava priests, who invoke curses on the head of the party neglecting to fulfil the duties required by this ceremony. As it could not be expected that the captain would go through such an ordeal with a man whose acquaintance he had made so recently, it was declined, and the Prince Tsimatahotra came off instead, accompanied by an old chief and some followers. They were shewn round the vessel and on coming to the engine-room the prince held up his hands in great astonishment at the ponderous masses of iron, and afterwards when he arrived on deck again, and had apparently well digested what he had seen, he compared us to certain spirits inhabiting the regions of darkness.

After they had been entertained in the cabin, presents were made to them, and some sent to the king through his son; they then left for the shore apparently at the summit of human happiness.

On the 19th a schooner yacht (*Nancy Dawson*) arrived from Rio de Janeiro, the owner and captain (a Mr. Shedden) said he had come out partly for pastime, and partly to explore the seas in the neighbourhood of Behring's Strait in the course of his intended voyage round the world. He had put in here for water, and we left him at anchor on the 23rd, the day we left.

23rd September—leaving Boyanna Bay yesterday with a fine northerly wind we passed outside the Chesterfield bank in the night at the distance of twenty-five miles. At ten A.M. (to-day) we saw Juan de Nova, angles and bearings were taken to test its position, but we did not pass near enough to make anything of its outline. The result gives its centre in lat. $17^{\circ} 4' 50''$ S., long. $42^{\circ} 53' 9''$ E., from yesterday noon the current gives S. 38° W. 15 miles; light airs from W.S.W., with occasional calms. Very fine weather and sea perfectly smooth.

24th September, at noon, in lat. $22^{\circ} 55'$ S., long. $43^{\circ} 5'$, barometer 29.90, temperature from 73 to 80 degrees, current N. 12° W. 14' very smooth sea and a fine fresh north-easterly wind, so that we made 210 miles the last twenty-four hours.

At 6 P.M. arrived at St. Augustine Bay where we found a French ship and schooner engaged in salting beef.

Directly we anchored several natives visited the ship and chattered away in broken English. They were all Sacalavas, nearly naked, with their hair plaited, and each armed with a spear. One of these dark gentry introduced himself as John Stross, Pooser (Purser) to Prince Green, who it appears is the head man at Tent Rock, abreast of which we are anchored. He said that he was ready to contract for the sale of bullocks, sheep, goats, and fowls to any amount, and he also volunteered

his services to procure some wood for steaming: then there were three of Prince Green's sons, who were very careful to make themselves known to every one they met. About dark they all left saying, that they would be off again early on the morrow.

25th September, early this morning we were awakened by the bawling and shouting of the natives who to the number of several hundreds had surrounded the ship in canoes to sell various articles, among which I noticed a great variety of shells, consisting of several sorts of murex, triton shells, conchs, a great variety of olives, cones, cowries and leopards. These were principally bought with wine bottles. Other canoes contained sheep, goats, fowls, eggs and milk for which we bartered bottles, hatchets, knives, cloth and wearing apparel.

Whilst contemplating this novel scene, two natives came over the side and on being introduced to the captain, reported themselves, one as Prince Will's secretary, and the other as Capt. Long. They were attired much the same as the rest of the people, a piece of common cloth thrown over one shoulder and confined by a sash to the waist; a skull cap, and spear in their hands completed their costume. Capt. Long professing to speak English opened the conversation with "Good mornin cappen. What you call dis ship—Man wa? Me sabby, Prince Will, spik mi. Cappen Long go down—cappen man wa, spik him, what he want?" He then launched out in praise of Prince Will, who from Capt. Long's description I imagined to be somebody indeed.

On finding out the Prince Greens had been on board the evening before, he launched out against them in no measured terms, and I noticed that he became more violent when I told him that we had presents on board for the chiefs of St. Augustine bay. As soon as he found out that we had been speaking with Prince Green's purser about wood, stock, &c., he introduced himself as Prince Will's purser, and bawled out in such a loud imperious tone in praise of himself and goods, that we were glad to get rid of him as quick as possible: over and over again we were entertained with "Me spik the pooser, How many cloute (cloth) one bullock, One bullock you take? Plenty bullock you take? Spose good friend you takee all! Me Prince Will's pooser—big chief; No, all de same boy! No! No! Lookee! Spose you wantee wata. Spose you wantee wood, Spose you wantee bullock—me sabby eberyting, Looke, Prince Green one blackman—Prince Green no prince. He one fool, he one tief (thief,) he one lieman. Spose Prince Green come Dartmouth river, mi fighty him spose you give powder. You got present for good friend—mi good friend for you—what you give? Mi no all de same boy; oh no! big chief." This repeated praise of himself naturally excited our laughter, at which he said with all the severity he could muster "I spik Mr. Liftenant! What for you laugh? Me no spik lie. Spose you no sabby mi what for I spik".

On landing at the Tent Rock for observations I was met on the beach by a party of Green's people, who launched out pretty nearly in the same strain of invective against Prince Will and his people, as I had

been before entertained with on board. In addition to this talent for abusing each other, they are the greatest beggars I ever met with, there is no satisfying them, one present only seems to increase their desire for more.

They will never leave you so long as they fancy you have anything to give, and their incessant importunity becomes quite unbearable. How traders manage to get through their business with such a set I do not understand; yet the fact of the French vessels being here and having nearly completed their cargo, is a proof that it can be done. On enquiring of the proprietor of the concern, I find he gives Prince Will and his people the preference, as not being such great rogues as the Tent Rock party. He tells me that generally, Prince Green and his people have very little respect for *meum* and *tuum*, and when he purchases any bullocks from them he is obliged to slaughter and take them off before nightfall or they would assuredly be stolen. He admits that the cattle is generally finer at Tent Rock than Dartmouth river, but that the rascality of the people themselves prevented him from taking advantage of it. In consequence, he has fixed his abode at Dartmouth river, where he slaughters from five to twenty bullocks daily. The bones are taken out and the meat salted and pressed, when it is said to keep a considerable time. He employs a large number of natives in this work, who are quite content to take the bones of the slaughtered cattle in lieu of pay. From the little I learnt at Boyanna Bay and this place, I should think this trade very profitable, and capable of great extension, but of course it could only be carried on in the winter (from June to September).

It appears that the whole of this part of Madagascar was nominally under the dominion of a man known to Europeans under the name of King Baba who generally resided at Tuller Bay. We here learnt that he had died a few days before our arrival and that his successor had not yet been fixed on. This may probably occasion a visit from the Hovas of Tannareivo who will settle the question of sovereignty in the same way they did a few years back by driving the people off Madagascar altogether. On that occasion those who escaped the slaughter took shelter on a small sandy island in the bay were they would have perished for want of water, had it not been for two whale ships which supplied them with that necessary article.

It appears that Prince Will is tributary to the king of this part of the island, and claims sovereignty of the land in the neighbourhood of Dartmouth River.

Prince Green is considered by the Dartmouth people as very far below their own chief in rank, and they affect to hold him and his people in great contempt, calling them "Blackmen"; they are doubtless a different people and belong to the real Sacalava race, whereas the Dartmouth people seem more to resemble the Hovas. This difference was more apparent at this time than usual, as the heads of all the Dartmouth people were shaven (in mourning for their deceased king).

Whereas the wild Sacalavas of Prince Green's party not acknowledging King Baba's authority kept their crisp locks plaited according to the fashion of the rest of their race on the coast, neither do they seem to like any covering for their bodies, excepting only a piece of cloth tied round the middle, in which they differ from the Dartmouth people, who generally wear a mantle similar to the Hovas (when they can get it.) They are all armed with spears which they carry with them on all occasions, and most of them have muskets, which are seldom seen unless in time of war, notwithstanding, however, they are mostly good shots. I could not see any difference in the houses of these two tribes, they are small miserable thatched sheds pretty much alike.

Many of the women have very good features and some are even pretty, but the abominable custom of loading their grease and smearing their faces with dabs of yellow earth disfigures them. Here as in most uncivilized countries the greatest part of the work falls on the women. I have seen a great strapping fellow loading his little daughter as if she had been a donkey; but as use is said to be second nature, they seem to bear up under it wonderfully well. They are just as great beggars as the men. Whilst observing on the Tent Rock, a pretty girl of about thirteen years of age, sat down by me and in the most confidential way whispered "I sister of Johnny Green", then pointing to different articles of dress wished to have them. My buttons she seemed to regard with particular favour, and made signs that I ought to cut them off for her. On pointing out the unreasonableness of such demands as well as I could by signs, &c., she went poutingly away, apparently very much disappointed.

The land about St. Augustine Bay is all of a sandy arid nature, thinly covered with scrubby trees and bushes. In the neighbourhood of Tent Rock, I only know of one spring of fresh water; this flows out of a crevice in the cliffs about 200 yards east of the Tent Rock, it is of an inferior quality, covered by the tide at three-quarters flood, and very difficult to embark, on account of the surf. South-west of the Tent Rock is a large sandy plain, scantily covered with samphire, lean grass, and clumps of scrubby trees and bushes. The trees are nearly all of a soft spongy nature, and when wounded either in the bark or leaves produce a yellow liquor said to make an excellent gum. There is no wood fit for timber in this neighbourhood (as indeed might be expected from the nature of the soil).

These plains are the resort of numerous coveys of Guinea fowl and grouse, besides a great variety of small birds. The Guinea fowl are shy, and with the grouse, are only to be got at from daylight till about 8 A.M., and from 5 P.M. till sunset, at which times they cover the plain in great numbers to feed. They afford capital sport, for it is only necessary to land at the Tent Rock and walk about 400 yards before you come to the plain where they abound.

28th Sept.—To day a party went with the Purser to purchase bullocks at Dartmouth river, and returned at sunset with such an in-

rior lot, as would have put to shame Pharoah's lean kine, for some of which he paid thirteen dollars. It might naturally be supposed that those chiefs who had received presents from us would endeavour to assist us in procuring supplies of a good quality, as a sign of their good will, but as they did not, I suppose we must attribute it to their extreme laziness. After a vast deal of trouble, purchasing a bullock from one man, and a pumpkin from another, and a fowl from a third, the required quantity was at length made up. On enquiring about the wood it was found that there was not a boat load cut, and as the little they had cut they were too lazy to bring down to the boat, we came away without it. They took care, however, to repay themselves for the trouble they had been put to by not returning the axes lent to cut it.

Prince Will and his chiefs came on board to day, accompanied by Duke Baba, brother to the late king. The prince is a poor meagre miserable looking man worn down to skin and bone, from the effects of hard drinking. Hearing that we had a doctor on board, he asked for and opened his case to that gentleman, complaining chiefly of lassitude and loss of appetite. Directly the prince had finished his catalogue of woes, many of his chiefs complained that they were similarly affected. Our imperfect means of communication prevented advice being properly given or understood, although from habitual intoxication it is very doubtful if good advice would not have been thrown away on them. There is nothing either about the person or dress of Prince Will, that would distinguish him from his subjects, and this is saying very little for either. He wore an old loose robe over one shoulder confined to the waist by a sash, and his shaven head was covered with a skull cap resembling a course basket. He has all the begging propensities of his subjects, and notwithstanding the number of presents made to him and his chiefs, they all continued begging with unblushing countenances to the last. Early in the morning on landing at Tent Rock, I told Johnny Green that the purser intended visiting the village in the afternoon to purchase stock, &c. Even with this short notice they contrived to have a good shew of cattle for our inspection, and in such good condition as to cause us regret at having purchased of Prince Will's people. Sheep and goats were also plentiful, but fowls very scarce; vegetables were of course out of the question. The sheep at this place have large tails like the Cape sheep, and are generally spotted brown and white like some of the Asiatic breeds. The goats are of a middling quality only, but as there is no pasturage within forty or fifty miles of the coast, stock cannot be expected in very fine condition.

I was anxious to see Prince Green, but one of his sons being very sick kept him in the country.

John Stross having volunteered to cut wood we told him to send it down to the beach for embarkation; he accordingly did so, and we thus got two fathoms (or equal to about half a ton of coals) for 18s. 6d.

The day before I saw him at work with all his family, poor people, although they worked hard they made very slow progress. But their

willingness to work at all is a great point in their favour. We changed John Stross's name to Straus, from his partiality for music: nothing delighted him so much as my accordion, at which he would grind away with a perseverance truly creditable whenever I gave him an opportunity, but as his notes were none of the sweetest, it may be easily imagined this was not often. He is certainly the best fellow in the place, and if honesty is to be found among these people, I should say he has it.

In taking leave of St. Augustine Bay, it is but fair to state that, I only know of one case of theft, and then the culprit was never found out, and this although the ship was crowded with them every day. It is necessary to observe, however, that we kept a pretty sharp look out on them. I shall conclude this hasty sketch with a list of articles in greatest request for trade, at this place,—they are beads of all sorts, blue Dungaree, Indian tony red, coarse gunpowder, rum, muskets, &c.; a musket being exchanged for an inferior bullock, and one piece of Dungaree for four dozen fowls. In cash we paid nine dollars for a bullock, pumpkins five for a dollar, sweet potatoes 100 lbs. for a dollar, large beans (like broad beans) 150 lbs. for a dollar, fodder for oxen, two loads for one dollar, sheep weighing about 30 lbs. to 50 lbs. two dollars, goats two dollars each.

I intended making a close survey of the anchorage off the Tent Rock, but the cloudy weather, causing me more trouble in securing the rates of the chronometers for the meridian distances than I expected, I was compelled to give up the idea of it, so on the morning of the 30th we put to sea under steam against half a gale from the southward, and as we could not make head against it, we set fore and aft sails, and ran off to the south-westward; as we drew out from the land it moderated, and we again steered to the southward.

The owner of the French ship and schooner, we left anchored in St. Augustine Bay, solicited and obtained a passage to Mauritius with us, an elderly fine gentlemanly Frenchman. He told us a story which may raise some curiosity,—that last year when at Port Leven the natives brought an egg alongside his vessel, so large that it held thirteen wine bottles of water; he said that not being a naturalist he did not then appreciate its value, and that since then he had tried but could not obtain another. All this coming out after we had left the island, prevented our making any enquiry about it of the natives themselves. I asked him if he might not have been deceived by a gourd, but he said that he had it in his hand, and could not possibly be deceived. His name is Monsieur Dumarel, a fine gentlemanly man, now living at Bourbon, or (Isle de la Reunion,) and he is well known at Mauritius.

- 1st. October, in lat. $25^{\circ} 59'$ S., long. $43^{\circ} 3'$ E., wind S.E. 5, veering to the eastward and moderating as we draw out from the land.
 2nd. " in " $26^{\circ} 25'$ S., long. $44^{\circ} 52'$ E., wind E.S.E. 5, still veering to the eastward.
 3rd. " in " $26^{\circ} 10'$ S., long. $46^{\circ} 53'$ E., wind N.E. 5, still veering to the northward.
 4th. " in " $24^{\circ} 59'$ S., long. $49^{\circ} 35'$ E., wind north 4 to 6, and from N. to N.N.E.

5th. October, in lat. $23^{\circ} 34' S.$, long $52^{\circ} 9' E.$, wind E.N.E. to N.E. from 4 to 2.

6th. " in " $21^{\circ} 55' S.$, long $54^{\circ} 31' E.$, wind from E. to E.S.E. 5bc.

This evening we made Bourbon Island and found the current running very strong to the W.S. Westward near the island. The volcano was burning fiercely, and as the night was very dark had a fine effect.

All this passage the current set W.N.W. from 20 to 50 miles daily.

7th October at 8 P.M. arrived at Mauritius and anchored in Port Louis after traversing the distance of 2,976 miles, of which 2,280 was under steam.

As before starting I thought this would be a good opportunity of correctly measuring meridian distances between the different places we might touch at, I have taken pains to render this part of the work as correct as three chronometers would allow.

Out of the forty-three days we were absent from Port Louis I rated (by equal altitudes) three times, using five days interval on each occasion. These places were, S.W. angle of the town wall at Johanna, west side of Boyanna Bay and Tent Rock, St Augustine Bay. The other observations for latitude and variation were numerous and most satisfactory, and with the plans and remarks will, I trust be found of some little service to a stranger touching at any of those places.

Date.	Name of Place.	Latitude.	Longitude.	Variation	Remarks.
1848.		° ' "	° ' "	° ' "	
3rd Sept.	S.W. angle of town wall, Johanna.	} 12 10 07 S.	} 44 26 46 E.	} 5 50 W	} Merid. dist. 9 days inter. 00h. 52m. 19s. 39 W. of Cooper's Island, Mauritius
1st —	S.E. angle of Geyser Reef.				
11th —	Queen's house near the beach Doang, Mohila	} 12 17 43 S.	} 43 47 37 E.	} By one set of altitudes.	
15th —	Frenchman's hut on Bullock Point, W. side Boyanna Bay.				} 16 03 56 S.
22nd —	At sea for the position of the centre Juan de Nova.	} 17 04 50 S.	} 42 53 9 E.	} 13 5 W	
25th —	Tent Rock, St. Augustine Bay				} 23 35 59 S.
20th June,	N.W. end of Prune Island, Madagascar.	} 18 2 26	} 49 30 58 E.	} 9 50 W	

NOTES ON THE RIVERS AND INTERNAL COMMERCE OF SOUTH AMERICA.

By Lieut. S. Osborne, R.N.

THE most important by far of the three vast networks of rivers by which the western lands of South America are traversed, is that comprised under the general name of Rio de la Plata. Not that in the extent of its navigable waters it exceeds the mighty Amazon and its tributaries; but that the lands to which access may be had by the Rio de la Plata, are the richest in products of trade, and populated by the half civilized descendants of Europeans, and consequently likely to be the first to open up that system of internal commerce which 'ere long will flow through the wide regions east of the Andes from Rio Negro in 40° S. to the Gulf of Triste in 10° N.

From the united testimonies of Spanish and English authors and travellers, from Juan de Solis to Capt. Mackinnon, I have taken the liberty of gleaning the following geographical and statistical facts, and have condensed them as much as circumstances will admit of.

In A.D. 1517 or 18, Juan Dias de Solis, grand pilot of Castile, first discovered the mouth of a great river, in lat. 38° S., but found it so full of shoals that being anxious for the safety of his vessel he hoisted out his pinnace, and coasted along its banks, until falling in with some natives, he and the majority of his men landed, and were immediately slain and eaten in sight of the horrified people left in the boat, who returned to the ship with their sad intelligence, and she sailed for Spain. Some hills on the northern shore of the River Plata, still called Sierra de Solis, point out the spot where the luckless navigator perished; and form the only monument in existence to the memory of the discoverer of the river. The Portuguese in Rio Janeiro anxious to share in the wealth of Peru, of which the news was startling all the world, sent an expedition under the brave De Garcia to reach, if possible, the countries at the eastern base of the Andes. How far he travelled is not accurately known, but returning homeward with considerable wealth, he was murdered with all his party, as well as a body of men sent from Brazil to reinforce him, by the natives in the neighbourhood of the Paraguay river.

In 1526, Sebastian Cabot, a Venetian, who had taken service under the English crown, quitted it in disgust, and embarked as commander of an expedition fitted out under the auspices of the Spanish government. His directions were of that quaint nature for which the age was remarkable, and as much to the purpose as the more voluminous ones of the present day. He was "To sail through the newly discovered Straits of Magellan across the South Sea to the Moluccas, and thence to proceed on a voyage of discovery to Tharsis, Ophir, and Cipango, there to load his ships with gold, silver, and other precious commodities, and then return to Europe!" Cabot, like a wise man, accepted any amount of orders, and once at sea used his own judgment. Leaving others to work out the course and distance from Cadiz to Ophir, he steered for Rio

Solis, as the stream was then called; and anchoring the larger vessels at some islands, opposite the present town of Buenos Ayres, he ascended the river in some small craft, discovered the Uruguay at the cost of some lives, and then sailed up the Parana: not far beyond the confluence of the Paraguay and Parana, he fell in with hostile natives, and after one repulse he defeated them, and captured a large booty in gold and silver! which Cabot imagined to be the produce of the neighbouring country, and christened the stream, the Rio de la Plata accordingly, the name it has since retained, though it was afterwards discovered they had merely recaptured from the natives the plunder of Peru which Garcia had perished in attempting to convey to Brazil.

With the further history of the States of La Plata, a geographical sketch has little to do, further than, it is worthy of notice that, it was this fortunate capture of silver, which drew the attention and ambition of Spain to this extraordinary agricultural country, which otherwise would have remained like the regions of the upper waters of the Orinoco, a desert and a wilderness to the present day. In proof of which we find in August 1535, a large fleet leaving Cadiz for Rio de la Plata, containing 1200 men, amongst whom were thirty noblemen of the most illustrious names in Spain; and their descendants are still to be found in the States of La Plata. The progeny of 100 horses carried out in this fleet, now cover in countless numbers the Pampas and Llanos of America.

Two hundred miles within the headlands of that immense estuary, called the Rio de la Plata, by which the united streams of the Parana, and Uruguay flow into the sea, we find the city of Buenos Ayres, where the river has a mean breadth of thirty miles expanding to 150 at the Capes S. Antonio and Maldonado. Unfortunately the great extent of comparatively level country through which this volume of water rolls imparts too small a velocity to it, to enable the current to cut out deep channels, and the alluvial nature of the banks facilitate an unlimited increase of breadth. Consequently there is no river of a similar size in the world so badly adapted for navigation by sailing vessels. Eighteen miles above Buenos Ayres the confluence of the Uruguay and the Parana takes place. To the latter we will first turn our attention.

The Parana as it debouches into the Plata, is composed of the united streams of the Paraguay and Parana, two first class rivers, and three second-class ones as large as any we have in Europe, such as the Salado, Vermejo, and Rilcomayo, and a multitude of others too numerous to mention. By a wonderful arraignment of Nature, and bountiful provision of Providence, at least one-half of these streams are throwing the lowest amount of water into the main arteries, when the other half are overflowing. The eastern tributaries, such as the Parana and Cuyaba, having their source in the tropical ranges of the Brazils, and others, as the Rilcomayo, Vermejo, &c. in the frozen regions of the Cordilleras, consequently the summer heat which melt the snows on the Andes, and cause the latter to pour forth their broadest

volume, dries up the sources of the former, whilst the winter of the Andes is the rainy season of the Brazils: and again the Parana and its eastern confederates bear down in their turbid bosoms the mass of virgin soil riddled from the rich slopes of Minas Geraes in Brazil to be deposited in the thousand alluvial isles of fairylike beauty, which the wanton stream forms, and sweeps away at will, between Santa Fe and the Bocas.

Ascending the Parana, the Salado is the first large stream from the westward: it is so called from its waters being strongly impregnated with salt; by means of its native vessels can bring down the hides and tallow, which form, together with cattle and horses, the endless wealth of the province of Tucuman. The town of Santa Fe is situated at the mouth of this stream, and of the wealth to be realized we have the following evidence by a late writer. He saw, in one establishment 1,500 head of cattle transferred in five days into the staple produce of the country—hides, tallow, jerked beef, and hair; and the following calculation of the profit to be derived from such a transaction gives in a clear light the capabilities for commerce possessed by this country. In Santa Fe at the very worst time cattle are to be bought at 10s. per head, and horses and mares taken together, at 5s. per head. Then at the Buenos Ayrean market prices for exportation:—Wet hide of 45lbs. average weight at 4½d. per lb., 16s. 10d; the meat salted, say weighs one cwt. £1. 6s.; the tallow, say ½ cwt. £1. 5s.; the three items yield a return on each animal of £3. 7s. 10d., and deducting 10s. for first cost, and 10s. expenses, we have an enormous profit of £2. 7s. 10d.; and on the five days labour of the speculator, a net return of £3,625.

Now, I will ask those who are longing for the treasures of the Sacramento, if it would not be wiser to follow the sapient example of Sebastian Cabot, and turn aside from the gold and silver of Tharsis and Cipango for tangible wealth in the beeves and horses of the Pampas of Buenos Ayres and Haciendas of Tucuman.

That the above is not an overdrawn estimate of the extraordinary wealth of this country is proved by reference to M'Culloch's Commercial Dictionary, wherein it will be seen that some years back we imported from Russia into England 3,600,000 poods of tallow, valued at £35, a ton; each pood is equal to 36 lbs. avordupois, and we have thus a fraction under 4d. per lb. as the London price of St. Petersburg tallow, which invariably in the market is considered inferior to that of South America; and I do not hesitate to affirm from a comparison of the relative price of cattle in Russia and La Plata, that in hides, horn, and tallow the latter could, by the aid of steam, undersell the former in the London market, and yield large profits. Ten years ago Great Britain imported £2,306,000 worth of tallow, and the demand for it ever increases, and the uses for which it is required admit of no substitutes, that we know of; and of raw hides England alone imports annually 329,773 cwt. or 16,988 tons, of which, the states bordering on the river Plata contribute the large share of 8,721½ tons, valued at about £350,000 sterling.

Thus, in these two articles (apart from the horns, bone, and hair likewise yielded by the cattle,) we have a sure and steady return for commerce without ascending farther than Santa Fe. The wool of the sheep from the Sierras of Tucuman serves for the coarse manufactures of the country, and forms with wax, and fossil salt, which abound over a large extent of country west of Santa Fe, the best return for the manufactures and luxuries of other parts of the globe.

Proceeding up the stream of the Parana until at a distance of nigh upon 1000 miles according to late naval writers, but only 750 by the estimate of Robertson, we reach the town of Corrientes placed at the junction of the river Paraguay with the Parana, the former coming almost direct from the north, and the latter from the north-east and east, enclosing between them a rich and wonderfully favoured land called Paraguay. Situated on the verge of the tropic Paraguay produces tobacco, sugar-cane, rice, and the far-famed yerba or Paraguay tea, whilst at the same time it is as capable as the southern states of rearing vast herds of cattle, (the most tangible wealth men can possess,) in proof of which we find that when the Jesuits were harshly expelled from their missions in that country, the following was the number of their stock seized by the Spanish government, after a great deal of speculation and robbery had been committed by individuals :

Horned cattle	769,353	head ;
Horses	94,983	
Sheep	221,537	

1,085 873

Or one million, eighty-five thousand animals, their quota as the Lords of the manor.

Mons. Bonpland, as likewise the clear headed and intelligent Messrs. Robertson, bear evidence to the fact of the great natural resources of Paraguay. Under the frightful terrorism of Francia, its commerce though languid, still showed by slight and gallant efforts what a rich field would some day be thrown open to the navies of Europe. In its worst day the exports of Paraguay in yerba, tobacco and sundries reached as high as one million, two hundred thousand dollars.

Mr. Robertson gives one instance of the profits to be realized by the Paraguayan trade, he, in 1820 sent a vessel up from Buenos Ayres laden with salt, the prime cost of which was 200 dollars. At Assumpcion, the capital of Paraguay he was paid in yerba, &c. for it at a market value of 4,000 dollars, and on reaching Buenos Ayres the return cargo sold for 260,000 dollars, the net profit on the salt being eventually 60,000 dollars!

The authority here is unquestionable, and yerba as an export and salt as an import are still as important articles as they were twenty years ago. In a late account of the naval operations against Rosas in the neighbourhood of Corrientes, the wasteful purposes to which so valuable an article as raw hide is constantly applied on the very banks of the

river, are often remarked by the writer, and naturally enough if I remember rightly, he enumerates a long list of uses to which hides are applied, such as walls, roofs, fences, sails, lashings, gratings, &c.; and wonders why when at Buenos Ayres the said hides fetch 4½ per lb., some spirited individuals do not attempt to buy up the millions he has seen rotting for want of a market. And, again, I would ask when the increased demand of large timber for shipbuilding purposes, and the small supply, obliges us to seek it from the teak forests of Birman, or the cowrie spars of New Zealand, why is not some attention directed to the forests of Paraguay, where sixteen different valuable sorts of wood fit for all purposes grow on the banks of a stream which would carry it down to Buenos Ayres in twenty days? Of one of these, the Lapacho, there can be little doubt but that for size and durability it equals our own English oak, yet I do not remember having ever heard of it in England. To convey some idea of this noble monarch of the Paraguayan forests to the reader, I will tell him of a canoe descending the Parana, formed of one tree, with 22,500 lbs. of yerba, several hides of molasses, a load of deals, 70 packages of tobacco leaf, and a crew of eight men, with their provisions! and ask if he knows of any other hard wood tree of equal dimensions?

Thus the port of Corrientes might easily form the dept of a great inland commerce. The streams of the Parana, Paraguay, and Vermejo, bringing down the produce of the East, North, and West, there to be exchanged for many of the very necessaries of life, which the inhabitants lack; and by inhabitants, I do not mean the tribes of Aborigines that are here, and there located; but the descendants of the Spanish and Portuguese, who although spread over a great extent of country, nevertheless form on the aggregate a numerous population, and all possess in herds and native produce wealth to a large amount. For instance, the Vermejo, or Red River, has its source at the southern base of the table land of South Bolivia, and communicates with the following provincial towns—Salta, population 9,000 souls, the centre of a considerable transit-trade with Upper Bolivia, Peru, and Buenos Ayres; Jujui, population 4,000, engaged in mining, the neighbourhood rich in ores; Rioja, remarkable for its wine; the rich vales of Tariga, and town of the same name, of which an old traveller says, “wheat, maize, cocoa, grapes, flax, yerba, &c. are produced spontaneously. Large herds of cattle, swine, and sheep are reared: the annual exportation of black cattle alone is computed at 10,000 head, each valued at eight dollars; and the demand for European merchandize in Tariga exceeds 60,000 dollars annually.” On the Sierra from whence run down the feeders of the Vermejo, large herds of vicunas, lamas, and pacos are reared, and the valuable wool they yield would alone form no very contemptible source of commerce.

On the other hand, Paraguay possesses a population of 120,000 souls, and in their inexhaustible forests of Paraguayan tea, a beverage by-the-by equally as refreshing as the tea of China, they have a ready fund wherewith to pay us for our woollen and cotton manufactures; for although on the tropic, they have in the winter cold sharp winds with

the thermometer below 50°, which precludes even the inhabitants of the plains from being independent of the luxuries of warm clothing.

We will now leave Corrientes and ascend the Paraguay to Assumption, the capital, with its population of 10,000 souls, and opposite to which the Rilcomayo falls into the main stream after a long course of 900 miles from the province of Los Charcos, Potosi, and Bolivia. The course of the Rilcomayo is from the north-west, and generally parallel to the Vermejo, its features are much the same as the latter. The upper portion communicating by numerous feeders with various elevated and rich valleys, the majority abounding in mineral as well as agricultural produce, whilst in the lower portion of its course it flows through a level tract called the Llanos de Manso, which in the season of the inundation of the western streams hardly serves to bar the waters of these two rivers from uniting. The Vermejo is considered the most easily navigable, the current being gentle, and an almost constant southerly breeze assisting vessels in the ascent. The Rilcomayo, however, though equally unobstructed by cataracts, is subject in the winter to almost a perfect failure of its stream. The Rilcomayo is remarkable in its upper waters for two peculiarities, that of holding in solution a poison, (some salt I presume, formed in the amalgamation of quicksilver with silver ore, washed down by the torrents of the Bolivian Cordillera,) which salt, or whatever it may be, is so destructive to life that no fish is found in the river until it has passed into the Llanos, where they as well as alligators abound.

EUROPEAN LIFE IN BANKA.

AT Batavia I received very unsatisfactory accounts of this island. It was generally described as an unhealthy place; a great number of persons confounded it with the penal settlement Banda, (in the Moluccas,) and deemed the fate of the Europeans destined for that place as deplorable as the French do that of those who are sent in exile to Cayenne. The most inconsistent rumours were spread through Batavia respecting Banka, some maintained that the water there was impregnated with tin particles so much as to affect the bowels, and to form concretions from which the unfortunate wretches invariably perished. Others painted the country as low, swampy, and burnt up by the sun's rays, where one could not stay long without contracting jaundice, or at least fever. No supplies were to be found not even a cocoa-nut. Our notions of Banka, therefore, were not the most favourable, and our astonishment was great at the sight of an evergreen country with the most luxuriant vegetation, and ornamented with hills instead of finding a barren melancholy and parched ground. My travelling companion was no less surprised on hearing after my return from Pankal-pinang, where I had landed first, my account of the pure rivulets, of the palm groves, from which Pankal-pinang de-

rived its name, of the fair women, and of the large fowls and cats, which I had met with.

The time of my stay at Banka was the happiest period of my life in the East Indies, and often have I wished myself back in this country during my subsequent stay in Sumatra. Even now I remember those days with pleasure. My stay in Muntok where the presence of the civil and military officers, the lively Kampong, and the delightful situation close to the Banka street, contribute towards the enjoyment of life, was but too short. I chose the east coast for my domicile, where I lived it is true, entirely isolated in that tedious place Baturussak, but independently, and in a sphere which roused my activity in the various occupations as superintendent of Marawak, which office the first functionary of Sungie-lint and Marawang conferred upon me as physician and apothecary. Being at the same time the first civil officer of that place, my life was that of a petty prince. The several offices of president of judicature, superintendent of police, administrator of the tin mines of Marawang, overseer of the government buildings at Baturussak, superintendent of public roads, inspector of the garrison at that place, and of the equipment of the coast vessels, were united in my person; and I was beloved and cherished by my Malay and Chinese subjects. The vessels arriving and departing were consigned to me.

The Resident and other functionaries on their circuit through the place always lodged with me during the time of their stay, as did the commanders of vessels. It was necessary for this reason to be always supplied with sufficient provisions for the purpose of exercising the hospitality which is still a virtue of this country. The supplies I received twice a year from vessels coming to anchor. They consisted generally of a great quantity of port, Rhenish, Madeira, Cape, and red French wines, ale and Dutch beer, liquors, gin, and Seltzer-water; some casks of butter, herrings, some dozen cases with salmon, sardines, European flesh meat, broths and preserves, hams, potatoes, Provence oil, &c. The country furnished venison, poultry, fish, yam roots, melons, cucumbers, pine apples, and other fruits. Only the water was in the dry season scarce and of a bad quality, since for want of a well, it was to be taken from an open pit about 500 feet distant from my house.

The days during which I had guests with me, were feast days, and we lived then in jubilee, notwithstanding the effect produced thereby, viz. a great breach in my provisions. When my guests were departed, and had left me solitary, my life was the following:—in the morning at the beat of the drum, I enjoyed the cool air of the early hour, before the open verandah of my house, after which I took a bath, consisting of some buckets of water poured over my head by a servant, which is called by the Malays siram. However, a bath in the river would have been better, had not the alligators already established themselves in possession, and also for the uncleanliness of the water. This bath restored to the body its elasticity much weakened by the nightly perspiration. After that I dressed, took some refreshments, and went to see my pati-

ents: then I attended to other business, and at 11 o'clock breakfasted *a la fourchette*. The remaining trifling affair I concluded during a few hours, and took at twelve o'clock my siesta, from which I usually rose again at three o'clock, taking then some refreshing fruits, as pine-apples, oranges, or any of this kind, used some lemonade mixed with wine or Seltzer-water, revisited my patients, and then went hunting till evening, when I returned usually tired and torn, but with an excellent appetite; which latter is the best thing in the East Indies one can wish for. I then took a bath again and dined at 7 or 8 o'clock. The remainder of the evening was spent in reading, or, if I happened to have guests with me, in playing or conversing.

My house was situated in the centre of the palisated beating, and constructed of wood. It enclosed a verandah in front, twelve feet broad, four apartments, and a sort of drawing-room, used commonly as a sitting or dining-room. The front gallery was furnished with two easy couches, the same were placed in the dining-room beside a large table. The other rooms were fitted with a dozen of chairs, with tables, chests of drawers, and bed couches, the latter were covered with a gauze curtain for protection against the mosquitoes. Stables, lodging for servants, kitchen, godowns, and other buildings appertaining to the house were detached; each was covered with a separate roof. I had nine servants; a cook, a washerwoman, a syce, a domestic servant, and one employed in the dispensary; a gardener and two police peons. Besides board they received from 6 to 15 guilders monthly wages. It is difficult to procure good servants at Banka, and therefore advisable to take them along with you from Java, especially cooks and washerwomen. The latter employed by me was a Bengalee, who washed very well, but soon tore my clothes in pieces by twisting in the air and dashing them against a flat stone. For smoothing the linen a goose is used, filled with red hot coals, instead of an iron.

In Batavia, as in other places, two servants are sufficient, since the different work may be done in the town. For my pleasure and profit I laid out a garden, in which besides pisangs, pine-apples and other fine tropical fruits, I planted European vegetables, among which beans and cucumbers prospered the best. The potatoes never arrived at their blossoming, when they reached a certain height they withered and died. The cabbage which I obtained from shoots, suffered much from ring-tails, against which my gardener applied the juice of certain plants, mixed with water. A single cabbage plant often costs here one guilder.

If, after a solitude of weeks and months I experienced a deadly *enroui*, and neither studies in drawing and collecting of natural curiosities proved a remedy for it, then I made an excursion into the country alone, or accompanied by a servant. My passion for hunting often seduced me to penetrate into the thickest jungle, in which I a few times lost my way, and was embarrassed by the approach of night. Several times also snakes passed close to my head between the boughs of the trees, to

which they climb with great agility. I often passed the branches of the Baturussak stream thickly covered and overhung by the bushes, in a small sampan, when neither the overturning of the boat by submerged trunks, nor the fearful proximity of the alligator frightened me back. I felt satisfied if the heart was beating in such jeopardies; only the unspeakable charms of the wilderness and its dangers, could compensate me for such solitude.

One morning I passed with the English Captain Nash, up the stream in a boat, in order to enjoy the prospect of Maras, which was visible in the next reach of the river, gigantically towering to the sky in the distance. The weather was fine, the fogs of the morning air covering the forest were pressed down by the pure luminous light of the sun, which cast its rays through the blue ether. The bright green of the trees was animated by monkeys which we chased as we passed along. Suddenly I perceived a black and yellow snake rolled up and clinging to a forked bough which hung over our way. The boatmen tried to avoid passing close by the animal, however, I desired the captain to direct the course of the boat towards the spot, and discharged the contents of my gun, consisting of small shot, at the snake, which rapidly unrolling made a furious spring in the air, clinging with the tail to the tree, and searching with flashing eyes for the enemy, while from her open mouth the blood gushed. Availing myself of this moment, I gave her a second charge, which precipitated her into the water. We caught her with a sling and triumphantly carried her home; she measured six feet in length.

At another time the soldiers brought a living snake, 14 feet long, which they had caught in the kitchen; I stripped her of her skin, which I filled with sand and dried it in the sun. The administrator of Sungieliat who visited me shortly afterwards, regretted much that I had not spared her life, and locked her up in the godown, where she might have been of great service in destroying rats: however such a rat-catcher appeared to me too horrible.

It is not advisable to have pine-apples and other shrubs growing near the house, since they attract vermin of the above description. The place close before the house ought to be kept clear and stripped of every plant. In the fissures of old wood centipedes and scorpions frequently nestle, of which the large black ones are less dangerous from their size, by which they are easily discovered; the small yellow ones cause painful bites, which I myself experienced several times. I was also bitten by a centipede, when carelessly in the morning wiping myself with a towel, in the folds of which this loathsome animal lay hidden. Clothes and shoes ought therefore to be carefully examined before putting them on. The black scorpions are the size of large river crawfish.

The lizards covering the walls of the room are also alarming to the newly arrived European. The gekko especially is generally feared, and believed to be poisonous. It is maintained that if it accidentally comes in contact with the human skin, it will cling to it with such obstinacy

as to suffer itself to be torn into pieces rather than let go its hold. It clings tightly to the smoothest ceiling, with its humid warty toes. In shape it resembles the salamander. Its cry is similar to the sound of its name, and may be heard often all night long.

The small lizards inhabiting the houses and rooms are held in much favor, since they destroy the insects, and nobody thinks of killing them.

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The management of the company is in the hands of 21 directors, 8 of whom belong to the city corporation. Four directors go out in each year, except the fifth, when five go out of office. Only share-holders above £500 are entitled to a vote.

The nature of West Indian produce has rendered necessary the construction of the sheds and warehouses on the most careful principle. The pillars of the whole, and the framework of the roof of some of the sheds, are of cast iron, most ingeniously constructed. The great difficulty is to guard against contraction or dilation by cold or heat. To remedy this, the iron beams which run from one pillar to another, are not actually in contact, and a longitudinal play is thus allowed to the structure

which prevents any mischief from the alteration of temperature. The pavement is partly of iron and partly of granite, and the mechanical contrivances are of the most excellent kind.

The docks are in two divisions, the export and the import. The import dock is 2,600 feet long, and 500 feet broad, and estimated to hold 204 vessels of 300 tons each. The export dock is of the same length, and 400 feet broad; it holds 195 vessels. There have been deposited in the sheds and warehouses at the same time 148,563 casks of sugar, 70,875 barrels and 433,648 bags of coffee, 35,158 pipes of rum and Madeira, 14,021 logs of mahogany, and 21,350 tons of logwood. The reader may conceive the economy of room necessary for the reception of such a mass.

The city canal enables vessels to enter the docks without making the circuit of the Isle of Dogs, but in most instances the captains save the charge, and go round the bend. The canal serves as a receptacle for ships laid up in ordinary; its long range of a mile presents a magnificent spectacle of masts and shipping, when viewed from the river. The depth of water in the docks at high tide is 24 feet. The area of the import dock is above 30 acres; that of the export about 25 acres. The docks, basins, and locks altogether include an area of 68 acres, and the total superficies, if we include quays and warehouses, amounts to 140 acres. The 68 acres of excavation form a work in its way unrivalled by any in existence.

The East India Docks were not commenced until 1805, though their act passed in 1803. The first ship entered them in August 1806, 17 months after their commencement. Their capital originally £200,000. was subsequently doubled. The number of directors is thirteen, who must each hold twenty shares in the stock of the company, and four of them must be directors of the India Company. This forms the only connexion which the East India Company has with the docks. The possession of five shares gives a right of voting.

The immense value of East Indian produce, and of the cargoes of the vessels engaged in the trade, causes a different arrangement in these docks from either the London or West Indian. The docks, in the first place, are much smaller: as fewer vessels are engaged in the oriental commerce, and as they are much longer on the voyage, they will be in dock a proportionably shorter time to the period they spend at sea. Then the value of the property prevents its being allowed to remain on the spot. The warehouses are four miles off, and the cargoes are delivered to the merchants. The company subscribed £10,000 to the Commercial-road, which was originally constructed as a thoroughfare from the docks to the city. There is, likewise, much greater restriction to the admission of visitors to these docks than to any of the others. Business commences later in the day, and the doors are punctually closed at three in the winter and four in the summer months. The depth of the East India Docks is greater than that of the rest, on account of the size of the vessels in trade, which draw more water than any merchant

grants, moreover, besides a little money, seldom take more with them than a bowie knife, a revolver, and a good deal of expectation, their principal stock in trade; which a lively imagination and buoyant spirits consider as a very small capital with a whole wilderness of interest *en perspective*. But the press, and public opinion, which by-the-by, are in this country not as identical as in America, look here on everything Californian with the other end of the telescope, and probably misjudge the real state, as everybody is liable of doing who does not look on it with the "naked eye."

The principal cause of this morbidity undoubtedly, is the celebrity which California has acquired, since she has become part and parcel of the Union. Mexico is afraid of becoming the laughing-stock of the whole world, for having sold for fifteen millions, a tract of thirty thousand square miles, paved with gold, worth, one cannot tell how many times, the purchase money. They maintain that the existence of the mines was known to many of the missionaries, especially Padre —, who kept this knowledge a profound mystery for fear of corrupting the inhabitants. Nay, they go as far as to maintain, that government was fully aware of what it was doing, and ceded the mines with a vengeance, *as a means of undermining the health and morals of the United States, using gold instead of powder*. But it is useless to go to any length in giving or refuting their statements; for even when San Francisco shall have become another New York or London, and the shores of the Sacramento as fertile as those of the Mississippi, Mexicans will always wait, like the Millerites, for the end of the world.

The placers are, as I have told you, at the foot of the Snowy Mountains, that run in the direction of N.E.W. Nobody can form any idea of the immense trouble and labour it requires to dig the gold. At an average, not more than two out of a hundred find anything; and, even if found, you cannot get it with the facility as was generally supposed, viz., with a point of a knife. It is necessary to make excavations two or three yards (*varas*) broad, and one vara or more deep, working with crowbars on a hard soil, and sometimes in water till up to the knees, shivering with cold, just as in any other mine. Only strong men, who are accustomed to this kind of labour, are able to bear it, and if lucky, it does not pay them for the labour, as the largest piece I have seen did not contain more than about 12 dollars worth of gold, and that out of an immense heap of earth. Nor can I describe the sufferings and privations of those who go to the placers.

If you leave Stockton by water, you pay passage 30 dollars, and a hundred weight of luggage, 6 dollars; and then, for the rest of the route, a distance twenty-five leagues (75 miles), you have to pay 75 cents a pound. By the Sacramento the passage is 35 dollars, and luggage 14 dollars a hundred weight, besides 1 dollar a pound till you reach the placers. This is a heavy charge for many, and particularly for parties of fifty or sixty, who have to take with them food for six weeks.

Those who go by land have to buy, for the transport of luggage, heavy cars, at a cost of 500 or 600 dollars each, which require each three pair (*yunta*) of oxen, that cost from 200 to 250 dollars a pair. Horses worth at home 14 dollars each, bring here easily 150 to 200 dollars. From Yerba Buena to San Francisco, and the placers of Stanislaus, it is 80 leagues (240 miles). Not a rancho is to be found during the whole way, except the Rancho de los Positos, nor water and food for men and cattle, who both have to pick their way, between frequent patches of deep sand. Many horses and oxen are drowned in the rivers of San Joaquin and Stanislaus, and I have seen men of considerable wealth in the greatest despair at the

where they are doing their best to shut them out or mitigate their rigour, unless we write about the weather, about what are we to write ?

We have already told our readers over and over again all about the wet and the dry season, the north-west monsoon, when it never rains, and the south-east when it never fails ; about the sea and land breezes, which cool the air during the day and night by turns, the Trade Winds ; and all the most prominent meteorological peculiarities which distinguish our climate. But, besides the general characteristics of each of our seasons there are minor peculiarities by which they are distinguished, quite as worthy of notice though not so prominent as the things we have already enumerated ; and though in a general way we may speak of our rainy and fair seasons, there is no month throughout the year when we have not occasionally rain even in the fair season—none in the wet weather when it is not occasionally fair for days on end. Setting aside the south-east monsoon, of which we shall presently have more than enough, we come shortly to consider the wet and stormy periods which occur during the comparatively fair and tranquil season. One remarkable feature in a large number of these is the simultaneousness of their appearance over vast districts of country ; tracts occasionally intervening where nothing unusual is experienced. A thunder-storm bursts over Ceylon or Madras, or knocks down a house or two and kills half a dozen people or so, when on the self-same day a like storm, accompanied by similar results, makes its appearance in Lower and in Upper Bengal, stretching away up to Simla, awaking alike the echoes of the Himalayahs and those of Cape Comorin and Adam's Needle, an interval of 3000 miles ! The wind shifts to a quarter the opposite of that from which it is wont to blow, and the barometer falls : the sky becomes cloudy, and the rain descends : or one or other, or all, these phenomena occur from the Coromandel Coast to Cape Aden, from Attock to Ootacamund, over an area of nearly a million of square miles.

At home there are about forty or fifty days during the year when a score or two of places might be pointed out at which it was raining simultaneously, because at home rain falls at an average once in three days or so throughout the year, sometimes every day for weeks on end, so that on the mere doctrine of chances, incidents such as those referred to must occur coincidentally. Here, storms of coincident occurrence nearly exhaust our atmospheric perturbations, isolated showers, or casual falls of rain appearing at one or two places only at any given time, are things of very rare occurrence. Let us take a few examples of what is here stated from the present year. On the 13th, 14th, and 15th January the barometer fell, and the sky threatened at Bombay. No sooner does the mercury fall here than far away across the Arabian Ocean, 400 miles to the south, and 1500 to the west of us, down it plumps on the volcanic promontory of Cape Aden, where for years on end no storm blows nor rain descends ; while heavy rains fall at Mooltan, on the Jhelum, in the Jetch Doab, at Lahore, at Umballa, Delhi, Agra, Gwalior, Allyghur, and all over the north-west Provinces ; all over Candeish, at Deesa, Jaulna, and Aurungabad ; and so to Poona and the Mahabuleshwar Hills.

At Jaulna and Deesa it was accompanied with a furious hail and thunder-storm : the hailstones were as large as billiard balls, and they penetrated houses, broke down trees, and destroyed sheep, cattle, and human beings. A week after this a second fall of rain occurred over nearly the same district—not, however, raging quite so far to the south. (On this occasion the mercury in our barometers, in place of descending, everywhere sprung up,

on the same day, and at nearly the same hour, over thousands of miles of area.

At Calcutta there was an earthquake, but no perturbation: at Ceylon a terrific tempest: in the Arabian sea towards Aden, squalls and variable winds. On the same day, 22nd January, furious storms raged at Malta, Gibraltar, and all over the north of Europe. Betwixt the 19th and 24th February we had another great crisis. A hailstorm occurred on the 23rd on the Chenaub, and our troops near Goojrat were deluged with rain. A storm raged in the upper part of the Bay of Bengal so severe that it was feared the monsoon, which seldom appears till the middle of May, was at hand.

At Chittagong a severe gale of wind blew from south on the 19th, 20th, and 21st, and a violent storm of thunder and rain followed. At Tipperah, betwixt Chittagong and Calcutta, a furious squall blew on the 19th, uprooting trees and destroying houses. The wind blew from south-west. On the 21st a storm occurred at Madras; on the 20th it blew half a gale at Hoshungabad; and at Bombay and again at Aden the mercury fell. Betwixt the 6th and 7th March we had a period of great depression and very general perturbation. At Calcutta, Bombay, and Aden; the first and last nearly 3000 miles apart, the first 600 miles to the northward of the last, Bombay half way between; the barometers plumped down simultaneously.

At Hoshungabad on the upper Nurbudda a violent thunderstorm occurred. This perturbation was at most places discoverable only from the depression of the barometer: the aspect of the sky and barometric returns in India are at all times unfortunately difficult to be come by. On the 22nd of March, again, a disturbance of a much more severe description was experienced over most of the vast tract here referred to. It was experienced at Calcutta on the 23rd; at Ahmedabad, 1000 miles to the westward, on the 25th; at Poona and Bombay on the 26th. At Ceylon and on the Upper Indus there were showers on the 22nd. On the south-western coast we had heavy showers at Cochin on the 24th, and the following day the weather changed at Bombay. The 6th and 20th of April, or within a day or two of these dates, have for a long period of years furnished us with two of the most regularly recurring series of perturbations we possess. We had this season a considerable diminution of pressure at Bombay on the 4th and 5th, and on the latter day a notable perturbation occurred. Three men-of-war ships were detained forty hours in harbour before they could find an offing—the air was charged with moisture. From Aden to Calcutta we have no barometric returns. There was a furious dust-storm at Kurrachee on the 6th, and another of longer duration near Hyderabad in the Deccan on the 7th. On the 4th a furious hailstorm occurred in Lower Bengal, the hail as large as eggs. At Attock, on the Upper Indus, violent rain fell on the 6th. On the 21st April a sudden change took place in the weather. Thunder clouds appeared over the Ghauts, and lightning was seen in abundance. The wind got round to south, and threatened rain. At Madras, and across the peninsula at Cochin, about 300 miles off, violent thunderstorms prevailed, and heavy rain fell; showers were abundant at Ceylon: and on the same day a violent thunderstorm occurred at Simla, three people being killed by lightning. A desperate storm occurred at Bhoolooa in Lower Bengal, above twenty people having been killed by the lightning or hail. At Deesa, and near Calcutta, a thunderstorm occurred on the 14th; and rain fell at Colombo and at the Mahabuleshwar Hills on the 17th. Were

we in possession of a large number of returns, we have no doubt that hundreds of places might be named for every one we have mentioned were storms of simultaneous occurrence appeared.

The law here laid down is not altogether without exceptions,—we have occasionally isolated storms and falls of rain, or have these occurring in succession on different days at different places,—but the rule as laid down is so uniform and general that it is not materially invaded by the exceptions: it is, we should think, peculiar to tropical climates, and in no quarter of the world can it be so satisfactorily investigated as in India. The paths of our great revolving hurricanes have been traced and mapped by Mr. Piddington, and we have before us a series of weather maps now in process of construction, in which our lesser perturbations are laid down, exhibiting at once to the eye all the most remarkable phenomena of the year. One map gives the rainy season, the Malabar monsoon being marked in yellow, the Coromandel rains in blue; the region visited by both is green: the depth of tint in all cases giving some idea of the amount of the fall, which on the coast is from 70 to 80 inches, on the mountain range from 240 to 320, and few miles inland on the table-land from 15 to 25. The regions where casual rains only occur, and which are without any regular rainy season, are left uncoloured. The storms of simultaneous occurrence are coloured green,—dots of a deeper tint indicating those points from which returns have been received, the rest being the space over which the storm has in all likelihood extended. All showers of casual and irregular occurrence are indicated by patches of colours of different tints on the same map,—the dates due to each being indicated: the two sets together at once illustrate the doctrine and the facts already laid down. Hail is indicated by blue dots; thunder by orange or vermilion zigzags; the region of the land and sea breezes, and the general direction of the wind at a given locality in different seasons, by arrow heads. A separate map shows at a glance the whole of the most remarkable thunderstorms of the year, for both sets of maps refer to a single season only, the storms of different dates being denoted by various tints of vermilion, red lead, orange, chrome, yellow, and so forth: the dates are denoted in the margin. So is it with hail and dust storms and hurricanes, where the whole phenomena within the year are not too complex or numerous to confuse the map. The lower margin is divided to a depth corresponding to four inches on the barometer, into tenths and hundredths of an inch, and into four days of time horizontally, each hour being noted; and here the state of barometric pressure is indicated by curves at all the stations from which returns can be obtained during the continuance or progress of the storm,—for which the time allotted seems sufficient. First attempts of this sort must always be crude and imperfect, but it is something even to have broken ground: each succeeding year will insure improvements and bring assistants into the field, where the concerted exertions of a multitude are indispensable. The first thing requisite in the maps themselves is to have good copper-plate, or transfers from copper-plate, maps substituted for the filthy lithographs Bombay supplies; and we have no doubt that in a case where thousands of copies are indispensable, and economy more important than recency or precision in geographical details, the English map-dealers will be ready to do the needful.

We have been led into this digression to show the means by which anything that might be imagined fanciful or speculative in these remarks may be got rid of; the map at once indicates the rarity of casual and irregular

storms compared to those which are well pronounced in character and contemporaneous in their occurrence. When the work, in which the years 1848 and 1849 is at present being treated of, extends over a sufficient expanse of time, the correspondence betwixt our storms of uniform occurrence in point of date will be manifest at once. Could it be shown that for the last ten years, as it can for the past two, storms had occurred on the 7th and 22nd March, and on the 6th and 20th of April, or within a day or two of these dates respectively, over the same tracts of country, we shall have well nigh the elements of meteorological prognostication in our hands.

The hailstorms of the present year, so far as it has gone, will, we feel satisfied, strike the European reader as not a little remarkable: we have noticed them casually above, we may now enumerate them in detail. Though common around Calcutta, hailstorms are almost unknown on the western shores of India: in the interior they are plentiful enough.

The first in point of time we have to notice is that which occurred at and around Jaulna and Aurungabad on the 14th January. At Jaulna the pieces of ice were mostly flattened spheres, or lenticular, being from $1\frac{1}{2}$ to $2\frac{1}{4}$ inches in diameter, some of them filling the mouth of a claret glass: they weighed from one to two ounces. Gardens were destroyed, houses penetrated, and branches of trees broken off, by them; and several people, with many sheep and oxen, were killed by them in the field. The storm prevailed, though with less violence, at Aurungabad, all over Cadeish, and on to Deesa and the borders of Cutch, the extreme points being above 300 miles apart. On the 22nd February hail fell on the Chenaub, and the lover of coincidences may observe the fact, that at the battle of Chillianwalla, the surrender of Mooltan, and victory of Goojrat, we had heavy falls of rain with fair weather between. On the 26th March a hailstorm occurred at Tipperah, about 100 miles from Calcutta; the pieces were gathered in heaps, and many birds were killed by them. At Purneah, some one hundred miles further up, there was a hailstorm on the 4th of April, when the hailstones are said to have been as large as oranges. A second hailstorm occurred at Tipperah on the 14th, when the Rajah of the place and an attendant were killed by lightning. A hailstorm occurred at Bhoooloa a week afterwards, in which many lives were lost—the ground was covered with masses of ice.

This for India is a tolerable catalogue for the first half of the year, when it is remembered that where the hail fell the temperature in the sun was above 120° , and in the shade seldom under 80° or 90° .

As to hurricanes, whirlwinds, and the like, they are so common as scarcely to be worthy of notice: our Bengal friends keep them mainly to themselves, and they are welcome. On the 14th April several lives were lost by lightning near Calcutta; and on the 20th at Madras and at Simla.

We have given this fragmentary notice partly for the reason assigned at the outset, and in part because we are desirous of drawing the attention of friends at home to the progress of meteorological researches in India. We have here an unusually favourable field, but we have many difficulties to contend with, and we stand greatly in need especially of countenance and aid from home.

We have for years been in the hope of seeing some dozen of local observatories established at the cost of H.M.'s Lords of the Admiralty in our neighbourhood, but hitherto we have hoped in vain. The harvest is large, the reapers numerous, but the implements are wanting.

CRUIZE OF THE MÆANDER.

OUR first visit after leaving Labaun, was to Kimanis Bay, where we left the ship and ascended the river to procure fresh provisions at a village about five miles from its mouth. Nothing could exceed the civility of the people. On our arrival we went straight to the house of the Orang Kaya (Chuli) and were soon surrounded by the villagers, who expressed the greatest delight when they heard the "Tuan Besar" (as they designate the Rajah) was so near them. The Orang Kaya of the place immediately ordered his boats to be prepared to take him on board, to pay his respects and convey presents. I was delighted with this village and its inhabitants, so thoroughly secluded, surrounded by such magnificent scenery, and the people apparently so happy amid their poverty and ignorance. The houses all appeared substantial and cleanly, surrounded by gardens and fruit trees. It was here that the murderous Pangeran Usop was overtaken and put to death, after the traitrous massacre of Muda Hassin and his brothers at Bruni. We saw his grave. The scenery here is very magnificent. While lying at Kimanis we were boarded by the boat of an English schooner wrecked at Balambangan; the boat contained the master, mate, and part of the crew, the poor fellows had been at sea for upwards of a week, and had suffered hardships, although kindly treated by the natives of the coast. How different would have been the case had they been thrown on the coast a few years since; their heads would have been dangling at the roof of some native head house.

Captain Keppel weighed, and stood over to Balambangan, where we found the remains of the schooner burned to the water's edge, and, of course plundered. Next day we started for Cagayan-Sooloo, a pretty little island about the size of Labuan. The people are a warlike race, armed with *krisses*, long spears, and were much inclined at first to oppose our landing. The island is clear of jungle to a considerable extent, and presents a beautiful green, park-like appearance. We discovered a very curious fresh-water lake forty feet above the level of the sea, from which it is divided by only a narrow wall of sandstone. The natives imagine this lake to be haunted by a huge dragon and told us nothing would induce them to venture upon it; we hauled the jolly boat over the rocks and launched her in haunted waters, for the purpose of sounding; the depth was upwards of forty fathoms. The scenery around is most picturesque. This island of Cagayan-Sooloo, would have made an admirable British settlement, being so well situated for concentrating the native Proa trade. It is little out of the way, of the China-bound ships on the north-east monsoon, possesses a delicious climate, and apparently a fertile soil. The island is nominally subject to the sultan of Sooloo, who, as he possesses no real authority over it would, no doubt, be too happy to make it over to us for a few thousand dollars. Sooloo which we visited after leaving Cagayan-Sooloo, is another "Gem of Ocean," but ruined, like Bruni, by a vicious Government and grasping nobility. It is not difficult to foresee that these beautiful countries are not doomed to remain long in the hands of their present rulers. The great rival nations to these seas (England, Holland, and Spain) have all a jealous eye on them, our recent operations on the Borneo coast have roused the energies as well as the jealousy of the two latter Powers. The Spanish attack upon the Illanuns some little time ago has given a death blow to piracy there. The Dutch have chastised the Sultan of Soolo, and we are about to give a second drubbing to the Sakkaran and Sarebas horde of pirates.

The ratifications of the treaty of friendship and commerce between Her

Majesty and the republic of Liberia were exchanged on the 1st instant. Art. 2, provides that there shall be reciprocal freedom of commerce, full protection to person and property, and liberty to reside in their respective dominions, &c. Art. 3, stipulates for the same rates of tonnage dues, import or other entires or charges on goods imported or exported under either flags in both countries. Art. 4, allows the import of all goods from Great Britain in any vessel, and of goods in British vessels from any other country. Art. 5. Private merchants are not prohibited from importing any article in which the government of the Republic may see fit to trade, nor shall the duties thereon exceed the difference between the cost and the selling prices, &c. Art. 6, provides for protection to all British vessels, their officers, and crews. Art 7, and 8. The contracting parties bind themselves to treat each other on the footing of the most favoured nation in matters of commerce and navigation; and to permit the appointment of consuls for the protection of trade to reside in the dominions of the other. Art. article 9 and 10, declares that slavery and the slave trade are perpetually abolished, and that law shall be passed in Liberia declaring it to be piracy for any Liberian citizen or vessel to be engaged or concerned in the slave trade. Further, it is permitted to any British vessel of war having special instructions for that purpose, to visit on the coast or in ports of the republic any vessel, under any flag whatever, which may be suspected of being engaged in the slave trade, and to detain such vessel, if necessary, for the purpose of being proceeded against by law, &c.

THE WEST COAST OF MEXICO.

This is considered highly dangerous in the bad season, viz. from June to 5th November, and all the vessels obliged to remain in the neighbourhood lie up, either in the secure harbour of Guaymas, or at Pichiligue, in the Bay of La Paz, both in the Gulf of California.

The hurricanes that occasionally visit this coast, are so much dreaded, that in the months of July, August, September, and October, the ports are deserted, and trade ceases. I believe the Frolic is the first vessel of any nation, whether man-of-war or merchant ship, that ever remained the whole bad season on the coast. And, that off the two most dangerous ports, viz. San Blas and Mazatlan. I shall therefore, give all the information I can relative to the bad season.

The hurricane so much dreaded on this coast, is called the Cordonazo de San Francisco, a name given by the Spaniards on account of the hurricane prevailing about the time of San Francisco's day, the 4th of October, the word Cordonazo signifying a heavy lash with a rope or whip; but from my own experience, and all I can learn, these Cordonazos may be expected any time from the middle of June to the 5th of November; the worst ones that have been experienced of late years having occurred on the 1st of November, although the weather usually clears up about the 20th of October, and sometimes even sooner; and as soon as the weather does begin to clear up, a ship may with common precautions venture into the anchorages again, for this reason, as soon as the weather has cleared up the change in the appearance of the sky and weather, will give ample warning of a coming hurricane, whereas in the previous four months before the weather has cleared up, the

thing that adds to the danger of this coast is, that owing to the threatening appearance of the sky every evening, and the violent thunderstorms and squalls at night, accompanied by heavy rain and lightning, the wind veering about, you are at first led to believe that the hurricane is coming every night, and latterly you see it is utterly hopeless to foresee the coming of it, as every night appearances were as bad as they could be; the barometer here being of little or no use, and a tremendous sea occasionally setting in. Thus the remaining off this coast during the hurricane season will cause great anxiety.

The squalls and gales usually commence about S.E. and quickly fly round to the southward and S.W.: you have generally time to get to sea when it commences at S.E.; but, as I have before shewn, you must go to sea every night, if you can, if you would be free from the danger of the Cordonazos coming on. But a tremendous swell frequently sets in, whilst the weather is in this threatening state, and the wind still light, which makes it impossible to get out. Moreover, if our boats happened to be out, and on shore when the swell came, it was impossible to hoist them in, and for this reason we have frequently been obliged to send our boats from the ship, with their crews, to be hauled up on shore, and remain there until the swell went down, that I might be ready to slip and go to sea.

It appears that the Cordonazos come on an average once in six or eight years, and we experienced none during our stay, although we had a gale on the night of the 21st of September. I was fortunately underweigh, and had plenty of room, when it came on, having stood out to sea on the evening of the 19th, on account of the weather being bad, and fearing the full of the moon on the 20th.

It commenced about 9h. 30m. P.M., from S.E., flying round to S.W.; heavy rain, thunder, and lightning, with a very heavy sea, reducing us to close reefed main-topsail, and fore-staysail, washing away a boat, and obliging us to batten down. The squalls come on very suddenly, the prevailing winds being in the bad season from S.E. to S. and S.W., and the heavy swell usually before and after the full and change of the moon. The swell is such as is seen in the bay of Biscay in a heavy gale, and unfortunately usually sets into the bays before the wind comes.

I therefore think that a ship caught at anchor off San Blas or Mazatlan by a Cordonazo, would have small chance of escape, especially off the former, as she would either go on shore or go down at her anchors; to slip and stand out the instant it commences from S.E., is her best course.

The range of the thermometer for June was 77° to 86°; July 80° to 87°; August 81° to 89°; September 83° to 92°; October 83° to 90°.

The barometer appeared to be of little service, usually remaining at 30 inches: seldom varying above a tenth except during a heavy squall, when it rose considerably.

Our anchorage off San Blas during the bad season was usually in 12½ fathoms soft mud,—Piedra de Mar N. 53° W., Piedra de Sierra just open to southward of bluff to the southward of San Blas river N. 47° E.; Point, off watering place N. 72° E.

Off Mazatlan during the same season in 23 fathoms, soft mud, Centre of Creston Isle N. 18° E., North-west extreme of North Venade Isle N. 28° W. Southernmost rock on South side of Mazatlan N. 30° E., Small black rock nearly covered N. 28° E.

I should not recommend a ship to lay closer than this, which is the best berth to get out from in case of bad weather.

Excellent biscuit can be procured at Guaymas, at a very moderate price;

and a most superior spirit, not inferior to the best whiskey, called Tequilla Mascal, can be procured in any quantity at San Blas, at a very reasonable price, by applying to the Consul at Tepic.

After the 4th of November the coasting and other vessels again make their appearance on the west coast of Mexico. San Blas is very sickly during the bad season. Guaymas is healthy, although the thermometer stands there at the astonishing height of 106° in July, August and September, and owing to the extreme dryness of the atmosphere ships receive much injury by the wood opening. Furniture apparently well seasoned, there cracks and falls to pieces.

On this coast there are some immense fish of the ray species. I caught two of them, and with difficulty hoisted one on board, it measured 19 feet in breadth across the back, the mouth was 3 feet 5 inches wide, and the flesh was 3 feet 6 inches in depth in the centre. I had no means of ascertaining the weight, but found I could not lift it with the yard tackles and 60 men, it requiring 130 men with the heaviest purchases in the ship to hoist it in.

These fish are common on the west coast of Mexico and Gulf of California, where they are more dreaded by the pearl divers, than sharks, or any other fish.

C. B. HAMILTON, *Commander.*

GOOD MANAGEMENT OF A HURRICANE.

We have been favoured with permission to print the following extracts of a letter written by a scientific military officer of rank, who was a passenger on board the ship *Sir Robert Seppings* to Ceylon from the Mauritius, and the letter is addressed to an officer of the government of that island. The extracts relate to two very different subjects; the one a beautiful instance of the truth and importance of the Law of Storms, and the other to the life led by the coolies on board ships, where they are kindly treated, when returning with their handsome fortunes, for such to them must be the sums they bring back. We have reasons to know that both pictures can be perfectly depended upon as we have seen the writer's chart, which was brought on, and the Log of the *Sir Robert Seppings*, whose able Commander, Capt. Stuart, by his masterly and scientific management of his ship, in crossing boldly in front of the storm circle (a manœuvre which must often be adopted,) has added another proof to the many now existing, how an able mariner can, in the words of the writer, who is one who has seen not a few of the Mauritius hurricanes, "bend even this demon power to his purposes" for we know here, and now, what he could only know then by the aid of the new science, that the storm really was raging at no great distance from him, and devastating the Island of Rodrigues as only these frightful visitations can devastate.

We have reason to believe also that there is nothing in the least overcharged in the sketch given of the coolies. It would be curious to know the effect produced by the arrival of a few of these millionaire coolies in a village. Mauritius must be thought by the "home-keeping youths" amongst them to be a sort of silver California.

"MY DEAR —, I said I would write to you from Ceylon; I think in doing so I cannot do better than make my subject a history of our first few days

adventures at sea. They will I think go far to illustrate the perfect truth and beauty of the theory of Circular Storms. As you know, we sailed in our excellent ship the *Sir Robert Seppings* on Wednesday afternoon the 4th of April. The gentle breeze just served to waft us clear of the shores, when it so far failed us that even at noon of the next day we yet discerned Round Island.

"Excepting our lack of wind, (which we had not long to complain of,) the weather was most lovely and serene, but very sultry, and our next day, Friday, was ushered in with a most magnificent sunrise, very calm but a heavy swell from the south-east. The day was passed in listless apathy, when at dark a clear moon and a fine and fair breeze gave us some energy, and gratified our best wishes. Our sturdy ship increased her speed to our heart's content, and we were congratulating ourselves that, April having been so fairly begun, we were about to enjoy the first good results of the trades of the season. I am a bad sailor, sea sickness and an unsteady head prompted misgivings, and I fear unthankfulness, so at least it was with me. The increase from a gentle whisper to a rapid gurgle of the water, and from that rather suddenly to a continuous roar beneath my stern windows, the increased motion, and the clank of the tiller chains, spoiled my slumbers. I looked out on the lovely and apparently mild night, but I saw enough in the haze of the moon, and the "burr" of the planets, with a fleetly passing scud, to convince me that my dreams of mortal discomfort were about to be realized, and I had that night partaken of the last meal for some time. I had left an excellent barometer with our friend Col. Robe on shore, how I now wished for it. However Saturday's light appeared with a spanking breeze, and our worthy commander in good spirits, close hauled however, and nothing to spare. Whatever might be our inward thoughts we all appeared extremely lively in having so unexpectedly found the trades.

"It would not do: the increasing gale, the heavy clouds, and the murky gloom to the south-east, the onward and hurried, and even furious, career of the scud, told us that we must prepare. These were no signs of the trades, and the tremendous and irregular sea, the inexplicable heaping up of the troubled waves, the roar and whistling through the rigging, and the labouring of the ship, spoke to all our perilous position. It was becoming so at least, for although we were to windward of the Island of Cargados Garajs, and the intricate banks, we had run on sufficiently to make the heart of them a lee shore; not so close as to make it an immediate cause of anxiety, but sufficiently near to leave us little choice for shaping our course in an approaching hurricane, which, by the direction of the wind, we knew we were then steering for the centre of.

"The beautiful precision of Col. Reid's theory, so well worked up and supported by Messrs. Thom's and Piddington's labours, was now about to undergo a severe and practical test through the very means they have so anxiously desired and invited, namely, the judgment and intelligence of a daring English sailor. We consulted the Horn card on the chart, and, with a radius of 400 miles for the hurricane, asked him advice. He gave it to us nobly. Our commander, Capt. Stuart, saw his position and the approaching peril, and that he would be "hobbled." He knew his ship too, and, after consulting the elements, computing the time he required to get a clear sea way, and asking his barometer leave, away he stood boldly on. All precautions were in the mean time taken, hatches down, dead-lights, &c., in, masts and yards housed, and all made snug, and the lower rigging of the heavy masts secured by preventers and frapped, (swifted). So passed Sunday; we could keep

grants, moreover, besides a little money, seldom take more with them than a bowie knife, a revolver, and a good deal of expectation, their principal stock in trade; which a lively imagination and buoyant spirits consider as a very small capital with a whole wilderness of interest *en perspective*. But the press, and public opinion, which by-the-by, are in this country not as identical as in America, look here on everything Californian with the other end of the telescope, and probably misjudge the real state, as everybody is liable of doing who does not look on it with the "naked eye."

The principal cause of this morbidity undoubtedly, is the celebrity which California has acquired, since she has become part and parcel of the Union. Mexico is afraid of becoming the laughing-stock of the whole world, for having sold for fifteen millions, a tract of thirty thousand square miles, paved with gold, worth, one cannot tell how many times, the purchase money. They maintain that the existence of the mines was known to many of the missionaries, especially Padre —, who kept this knowledge a profound mystery for fear of corrupting the inhabitants. Nay, they go as far as to maintain, that government was fully aware of what it was doing, and ceded the mines with a vengeance, as a means of *undermining the health and morals of the United States, using gold instead of powder*. But it is useless to go to any length in giving or refuting their statements; for even when San Francisco shall have become another New York or London, and the shores of the Sacramento as fertile as those of the Mississippi, Mexicans will always wait, like the Millerites, for the end of the world.

The placers are, as I have told you, at the foot of the Snowy Mountains, that run in the direction of N.E.W. Nobody can form any idea of the immense trouble and labour it requires to dig the gold. At an average, not more than two out of a hundred find anything; and, even if found, you cannot get it with the facility as was generally supposed, viz., with a point of a knife. It is necessary to make excavations two or three yards (varas) broad, and one vara or more deep, working with crowbars on a hard soil, and sometimes in water till up to the knees, shivering with cold, just as in any other uine. Only strong men, who are accustomed to this kind of labour, are able to bear it, and if lucky, it does not pay them for the labour, as the largest piece I have seen did not contain more than about 12 dollars worth of gold, and that out of an immense heap of earth. Nor can I describe the sufferings and privations of those who go to the placers.

If you leave Stockton by water, you pay passage 30 dollars, and a hundred weight of luggage, 6 dollars; and then, for the rest of the route, a distance twenty-five leagues (75 miles), you have to pay 75 cents a pound. By the Sacramento the passage is 35 dollars, and luggage 14 dollars a hundred weight, besides 1 dollar a pound till you reach the placers. This is a heavy charge for many, and particularly for parties of fifty or sixty, who have to take with them food for six weeks.

Those who go by land have to buy, for the transport of luggage, heavy cars, at a cost of 500 or 600 dollars each, which require each three pair (yunta) of oxen, that cost from 200 to 250 dollars a pair. Horses worth at home 14 dollars each, bring here easily 150 to 200 dollars. From Yerba Buena to San Francisco, and the placers of Stanislaus, it is 80 leagues (240 miles). Not a rancho is to be found during the whole way, except the Rancho de los Positos, nor water and food for men and cattle, who both have to pick their way, between frequent patches of deep sand. Many horses and oxen are drowned in the rivers of San Joaquin and Stanislaus, and I have seen men of considerable wealth in the greatest despair at the

dents connected with them that attend a sea-life, he confers a benefit on the rising youth of his profession, who would do well to avail themselves of it. There is perhaps no subject in which officers differ more in opinion upon, than in that of seamanship, and the plan of Capt. Liardet appears to take each portion of the whole duty of the officer in this important branch of his profession, and give him the benefit of his own experience, with the proper way of executing it. We will for the present illustrate Capt. Liardet's method with the following extracts. The first, is *on the best sail to bring a Ship to anchor under.*

"It has appeared to me, that with a commanding breeze, the three top-sails, jib, and driver, are the most seamanlike sails to bring a ship to anchor under. I advance this opinion with the greatest deference to many good officers who continually bring their ships to an anchor under a heavy press of sail, with the view of shortening all sail at once. No one can doubt the beauty of this evolution; it is one that astonishes all but the initiated; in reality it is frequently a manœuvre of the greatest trickery, such as singling top-sail sheets, clewing the top-sails up to the caps with burtons, stopping the hauling parts of the top-sail buntlines to the yards, so as to make the weight of the top-sail yards haul up the buntlines at the same time; and in this way the top-gallant yards clew up the royals, and the top-sail yards clew up the top-gallant sails, the clewlines being previously marked before being stopped, to allow for the different lengths of the masts, &c.

"If a ship take in all sail in the manner I have described, I ask any sailor, is it possible for that ship, with all her unnecessary gear, single top-sail sheets, &c. to make sail again as quickly, if required, as the ship which comes to an anchor under manageable sail, without the aid of trickery?

"If you add to the above, studding-sails lying about the deck, with the frequent occurrence of carrying away anchors or cables, torn sails, and sometimes loss of life, &c. I have observed that ships which practised this manœuvre most, were generally those that were the most out of their station, and often obliged to unmoor to take up a fresh berth. A ship should take in her studding-sails, royals, and flying jib well together, and have her studding-sails quickly in their places; next take in courses and top-gallant sails with a good clear run, furling the top-gallant sails immediately, then take up your berth under the three top-sails, jib, and driver, and, if you can, run your cable out without the assistance of your sails; take them all in together, to the word "Lower away," or "Square away;" minding to have the squaring marks of your lifts and braces in at the same moment.

"From what I have said, I do not infer that in single ships the men should not frequently be practised in taking in all possible sail together. I only mean to observe, that in a fleet, with a commanding breeze, ships will take up their stations better under three top-sails, jib, and driver, and if they get into danger, they will be more manageable, and more ready to make sail to get out of it. In ships where they are in the habit of making running moors with fresh way on the ship (though the defects in this mode of mooring a ship may not be observed in the anchors, cables, or on the copper at the time of weighing,) still we think, that if this subject were closely analyzed, that it would be found that those vessels which continually practise this evolution, have had more casualties with their anchors or cables, than other ships not following this manœuvre. It must be remembered that snubbing a vessel with a chain cable brings the strain more directly on the anchor, and that the chain cables are more liable to injury from sudden jerks, than rope cables, more particularly when snubbed at a short scope with the force of ship's fresh way.

"When a ship is making a running moor, and happens from some accident to be brought up all standing, or greatly checked in running out her cables, it would, perhaps, be well to take an early opportunity of sighting the anchor and examining the cable."

The foregoing is a seaman's view of the subject, and so is the following of saving a vessel's crew at the last extremity.

Meeting a wreck at Sea, and blowing too hard for any boat to live on the water.

"Her Majesty's ship *Cleopatra* was placed in the above situation off Flamboro' Head, October 26th, 1835. At noon latitude 55° 30' N., longitude 0° 5' W.; Flamboro' Head S. $\frac{1}{2}$ E., distance 82 miles; wind S.W., with strong gales, and very heavy squalls. At 5 P.M. observed a brig to windward in a distressed state, with her mainmast gone by the board, her foresail and fore-topsail flying away in pieces. We immediately took in the storm stay-sails, and try-sails, and prepared to render her every assistance in our power. 5h. 20m. brig passed under the stern, and hailed for a boat to be sent, being in a sinking state, brig about 200 tons, *Fisher* painted on her quarter, deck nearly flush with the water, sea making a clear breach over her decks, boats all washed away and several men on deck. Though it was next to impossible that any boat could swim, yet, from the highest sense of duty and humanity, Capt. the Hon. George Grey, was determined to leave nothing untried that could give the slightest shadow of hope; the lee quarter boat was manned, and the end of a good hawser placed in her, ready to render the brig assistance. The steadiest time was watched, and the boat lowered, but sad to relate, she was hardly in the water before she was swamped, and several times heavily struck by the lee quarter, consequently stove and lost; fortunately no lives were lost, but several of the boat's crew severely hurt. The stern boat was next tried, but she could not be lowered from the heavy sea, and the pitching of the ship. It was found impossible to send a boat; veered a buoy astern, and wore several times to place the buoy in a position for being picked up by the brig, but she was unable to do so. Coming on dark, we hailed the brig, to say that we would keep by her during the night: wore occasionally, to keep close to the distressed vessel, in hopes of taking the first opportunity of the earliest hull to render her crew all possible assistance. Hoisted a light about 6h. 40m. P.M., strong gales with very heavy sea, much to the sorrow of every one on board, the brig suddenly disappeared, which left not the least doubt of her having sunk, and every soul on board having found a watery grave.

"As the gale and heavy sea continued during most of the night, it would have been impossible for a boat to live, to render her any assistance, had she not unfortunately sunk when she did. Nothing could exceed the extreme anxiety of every one on board the *Cleopatra* to do his best to render all possible assistance to the crew of the unfortunate brig *Fisher*. I have often reflected on this painful and melancholy subject, and the result has been, that under similar circumstances, in my humble opinion, I think it would be desirable to lay your ship to windward of the wrecked vessel, placing ropes in every direction fore and aft on the lee side, then hail, or make some sign to the disabled vessel, informing her crew of your intention of drifting over her, and that the ropes are put over the side, yards, &c., with the hope of saving the crew. I think this desirable object might often be effected, when the disabled vessel is much smaller than the one rendering assistance."

[We shall return in another number to this useful work of Capt. Liardet.]

PIRACY IN THE CHINA SEA.—On the evening of June 6th, a large fast boat having on board, of crew and passengers, 40 souls (including four Portuguese) started for Macao. Before reaching the Cap-sing-moon passage, and in full view of the town and shipping, she was overtaken by two piratical boats, which ranged alongside. Firepots and other missiles were thrown on board, by which one man was wounded. The pirates then boarded, driving some of the crew and passengers into the water. After plundering the vessel of 200 dollars and some goods, they sailed away, leaving the fast-boat people to rescue their comrades in the water. On mustering, it was found that two Chinese and one

neill, 1st, 42, Adino, 228 t., Dundee.—8th.—E. Lawson, 1st, 36, Sea, 840 t., Liverpool; W. Gergson 1st, extra 41, Windsor, 676 t., Newcastle.—11th.—J. H. Abram, 2nd, 33, Blanche, 360 t., London; J. Browne, 2nd, 30, Larkins, 701 t., 456389; H. Joblin, 2nd, 25, Marchioness of Bute, 193 t., 159867.—12th.—J. Mackay, 2nd, 27, Sea, 840 t., 401825, Liverpool; J. Robertson, 2nd, 27, Herschel, 220 t., 171760, Dundee; W. B. Cuming, 2nd, 19, Ann Best, 335 t., 307103, Plymouth.—14th.—T. C. Stayner, 2nd, 45, Tamar, 556 t., London; T. Spedding, 2nd, 35, Sarah Scott, 382 t., *13517; J. Gardiner, 2nd, 32, Garland Grove, 450 t., 336553; J. Gimblett, 2nd, 39, Barham, 1148 t.; T. Owen, 3rd, 33, Pauline Houghton, 242 t.—15th.—S. Stack, 1st, 34, Blarney, 155 t., 167228, Plymouth; W. Walker, 2nd, 23, Jane, 781 t., 180397, Liverpool; J. Black, 1st, 49, Free Trader, 802 t.; W. H. Canszar, 1st, 41, Una, 773 t.; H. Lawson, 1st, 29, T. Feilder, 903 t.—18th.—H. R. Percival, 1st, 29, Louisa Baillie, † 419 t., Portsmouth; J. W. Murton, 2nd, 25, Alfred, 1400 t., 27878, London; H. E. Lansdowne, 2nd, 32, Sea Park, 835 t., 33884; W. Bell, 2nd, 55, Bucephalus, 985 t.; J. Gray, 2nd, 21, Columbus, 216 t., 69896, South Shields.—19th.—J. B. Teulon, 2nd, 33, Malabar, 686 t., 183938, Liverpool; R. T. Cochrane, 2nd, 28, Niagard, 1800 t., 238778.—21st.—W. Cumberland, 2nd, 44, Camperdown, 993 t., London; J. Hole, 2nd, 30, lively, 202 t., 14438; T. M. Hopkins, 3rd, 29, Bucephalus, 985 t., 4918.—22nd.—J. Young, 1st, 33, Jessie Greig, 220 t., Dundee.—23rd.—R. Burgoyne, 2nd, 24, Hindoo, 310 t., 211408, Plymouth.—25th.—J. Innes, 1st, 31, Kelso, 567 t., 326440, Yarmouth; J. P. Ward, 1st, 24, Ottoman, 196 t., 40994, Yarmouth.—26th.—J. Henderson, 2nd, 36, Sir Howard, Douglas, 715 t., 256769, Liverpool; C. T. Rodge, 2nd, 29, Fantec, 270 t., London; R. Stephenson, 3rd, 33, Brighton, 384 t., 4929.—27th.—T. Wishart, 1st, 36, Susan, 212 t., Dundee.—28th.—C. G. Weller, 1st, 36, Monarch, 1415 t., London; J. Tovar, 2nd, 39, Marlborough, 321 t.; D. W. Lang, 2nd, 26, Lee, 120 t., 11396; C. W. Goddard, 2nd, 47, Flora, 137 t.—29th.—J. Clark, 1st, 29, Duna, 230 t., Dundee.—30th.—J. Laing, 1st, 30, Amelia Gordon, 250 t., Glasgow; T. Coupar, 2nd, 27, Amelia Gordon, 250 t., 23650.

MATES.

May 3rd.—J. C. Almond, ° 2nd, 31, Ajax, † 591 t., 23667, London.—14th.—A. Withy, 2nd, 28, Empress, 405 t., 325385, London; J. White, 3rd, 25, Seringapatam, 872 t., 456583; F. Hayes, 3rd, 24, Edmundsbury, 523 t., 24693.—21st.—T. Dallas, 2nd, 29, Larkins, 701 t., 327823, London.—23rd.—J. Wilson, 2nd, 30, Grace, 244 t., 199675, Newcastle.—24th.—A. Kingsford, 2nd, 25, Seringapatam, 493 t., London; T. G. Thomas, 3rd, 25, Macedon, 528 t., 15487.—28th.—C. H. Treweeke, ° 3rd, 26, Dee, 1800 t., 383237, London.—31st.—J. Venables, 2nd, 25, Viscountess Canning, 183 t., 5525, London.—5th June.—R. Gilpin, 2nd, 20, Sovereign, 242 t., 266236, Plymouth.—10th.—G. A. Williames, 2nd, 26, H.M.S. Poitiers, || 456624, London.—11th.—E. Yeats, 2nd, 21, Ocean Queen, 630 t., 142489, London; C. Furner, 3rd, 37, Tasman, 581 t., 150976; J. L. Sinclair, 2nd, 20, Cowlitz, † 391 t., 457201; A. D. Wilson, 3rd, 31, Westminster, 700 t., 174510.—18th.—J. T. Durrell, 3rd, 23, Indus, ||| 368 t., 201538, London.—25th.—J. W. Aikenhead, 2nd, 26, Duke of Wellington, 563 t., 23651, London; W. J. Lewis, 3rd, 22, Bordeaux, 189 t., 27891.—26th.—J. Swanson, 2nd, 23, Cowlitz, 391 t., 457307, London; Issac Norton, 2nd, 24, Euphrates, ¶ 617 t., 258844, Liverpool.—28th.—J. A. Grant, 1st, 27, Waterville, † 198 t., 29745, Dundee.

Those having an [°] perfixed to their Names are qualified for Steam Vessels only.

* As Mate. † As Apprentice. ‡ As Chief Officer. || As Master's Assistant.
||| As Seaman. ¶ As Second Mate.

THE

NAUTICAL MAGAZINE

AND

Naval Chronicle.

OCTOBER 1849.

THE PEACE CONGRESS.

“ Man, on the dubious waves of error toss'd
His ship half founder'd, and his compass lost,
Sees, far as human optics may command,
A sleeping fog, and fancies it dry land.”

THE object of the Peace Society is, abstractedly, admirable, but impracticable; and, therefore, hopeless in any anticipated good result. Man, it is true, as generations succeed generations, becomes more and more enlightened; knowledge is diffused; manners improved; religion more seriously, or, at all events, more carefully followed; the dictates of humanity more conscientiously felt; but still man is, ever was, and probably ever will be, an erring creature; as Cowper says

“ Reasoning at every step he takes,
Man still mistakes his way.”

and whilst he is such, the desire of the “ Society of Friends ” will be an impossibility: that is, that no war, offensive or defensive, should exist.

As to the general question of arbitration, it has been tried under the term negotiation. Whatever temporary effect it may have had, it has always failed in preventing subsequent evil. When self-interest does not influence in cases of this sort, all the wisest arguments in the world will not stop one nation from inflicting wrong upon another.

As to the disarming, nothing that the soundest heads could advance, would induce Governments to follow the advice: necessity alone could force any power to reduce its standing army or commissioned fleet; and,

in that case, the act would be done irrespective of the voice of wisdom, or indeed, from any other consideration than self-interest, which is, more or less, the governing principle in all councils. With reference to the Quakers who take so active a part in these meetings, we may be permitted to say a few words. In all affairs where humanity is involved, and where passiveness in social concerns may produce dissent without absolute resistance of law, the Society of Friends displays the force which a settled habit of thought begets in the human mind.

Without meaning to say one word which may be considered offensive, it is impossible not to be struck with the apparent want of consistency in the mode of action of this singular sect, as a sect, *sui generis*. The followers, one and all, repudiate human pride; and yet, to common sense, what action can display it more than the resistance to a practice, which as an act of politeness, distinguishes the denizen of civilized society, from the unpolished and unrefined savage of the woods? The Quaker refuses to lift his hat even to his sovereign; and has been humoured! humoured as if *he* were a superior being, standing in all respects above his fellow men! The gospel enjoins courtesy, yet he disdains it. With his tenets, we have nothing to do; but we may ask whether this plain, sober, and quiet being is, or is not, endowed with human passions? If he be,—if it be found that he is equally liable to *error* with other men, who embrace other religious feelings than those held by him, wherein lies *his* superiority?—Does his passiveness alone constitute him fit to guide the councils of nations? My object in bringing him forward here will at once be seen,—after all he is but a man! To admit his doctrine of non-defensive war, we must first assume that men have been transformed into angels! Can we conceive such a thing? If we cannot, the doctrine (though it should be fulfilled in individual strife) cannot be followed by nations.

But men who do not affect the drab colour are as obstinate in the pursuit of an object as is the "Friend." To be sure, whatever they may preach, their practice explains to us plainly enough, that *they* are not above the temptations which assail humanity! How can these erring men pretend to set themselves up as the councillors of the world? Our "corn-law-league-hero" has let us understand this fact—it was a proud day with him. Does he or any man not blinded by—(what you please) conscientiously believe that the disbanding of armies, and the paying off fleets or squadrons, would prevent wars; or, that keeping up standing armies and ships of war is the cause of wars? The causes are moral not physical; these may be traced to the ambition and tyranny of Potentates and ministers devoid of humanity, who are as infatuated with power, and as much prejudiced in this our day, as was an Alexander, or any other ancient wholesale regal robber in his.

"Men made for kings! those optics are but dim,
That tell us so;—say, rather, they for him,
That were indeed a king—ennobling thought,
Could they, or would they, reason as they ought."

There are two sides to the question: and it may be proved by sound argument, as it has been briefly by that light of the law, my Lord Brougham and Vaux, that, the keeping up of standing armies and commissioned squadrons of ships, is one of the best means for insuring peace, both internal and external. We grant defensive war alone is to be considered justifiable. The remembrance of Alfred and his brave followers live in our hearts, and

“ The man, that is not moved with what he reads,
That takes not fire at their heroic deeds,
Unworthy of the blessings of the brave,
Is base in kind, and born to be a slave.”

PASSAGE OF H. M. S. FIGGARD,* *Capt J. A. Duntze, through the Strait of Magellan to the Pacific.*

THE *Figgard*, 42, sailed from Plymouth, on the 16th of July, 1843, for the Pacific, calling at Madeira and Rio, which latter place she left on the 20th of Sept. *en route* for Valparaiso; intending to try the passage through the Strait of Magellan, in preference to the more general, but dreary and uninteresting circuit round Cape Horn.

The land to the northward of the Strait was first seen on the evening of the 13th Oct., and at daylight of the 14th Cape Virgins was distant eight leagues: the morning delightfully fine, and the sea smooth. These circumstances were most agreeable to all on board, and there appeared to be every prospect of our making a speedy and pleasant trip through this far-famed Strait, and of seeing with our own eyes, some of the “inhabitants of the regions.”

At noon it falling calm, and the tide being against us, we anchored with the kedge: in about three hours a light and fair breeze springing up, we weighed and stood into the Strait. The wind continued to favour us, and under all sail we left the Atlantic, and when near Point Possession we anchored for the night.

We remained here until ten on the following morning, the tide now setting to the westward, and the wind still fair, we proceeded towards the first narrows, the pilotage to which is of a difficult nature: the principal marks—Mount Aymond and the Asses Ears, were very conspicuous; but the Direction Hills were not so satisfactorily distinguished. The entrance to this narrow is not easily made out, being low. The country about it is sterile and uninteresting: the only objects worthy of

* Several years have elapsed since the abovementioned passage was made; but as it has always been one of considerable difficulty, and in this case, accomplished by the largest sailing vessel that has ever attempted it, an account of the proceedings, however feeble, may be acceptable to some of your readers.

DIEGO RAMIREZ.

attention were some guanacoës feeding on a neighbouring plain, and a few walrusses basking on the northern coast.

After entering the narrow we kept rather on the Fuegian side, and when Cape Baxa came in view, we steered along the Patagonian shore, the tide running through with considerable strength. At six in the evening, having cleared the narrow, and not wishing to lose a fair breeze, the moon shining brightly, we pushed onwards for Gregory Bay. At the end of an hour we were running at the rate of four or five knots. However, at about 8h. 30m. although the leadsman had no indication of shoal water, the ship stopped, having taken the ground, but so quietly, that at the time, few on board were aware of the circumstance. Sail was immediately shortened, and preparations made for getting out the kege, &c. Whilst all this was going on she slipped off into deep water: when in 20 fathoms the anchor was let go, and we remained in this place until dawn on the following morning.

From our position at daylight, it was found that we must have touched on a small detached piece of soft ground, near the Triton Bank; and but for this little incident giving a momentary check to the ardour of those who were anxious to avoid the dangers of the Cape, its occurrence was of no further consequence than an hour's employment for the men, and a little amusement for the master.

Soon after breakfast we weighed with a fine breeze from N.E., the Gregory range on our starboard beam: we now steered for the second narrows; its entrance was soon distinguished, and which we rapidly approached. At noon the wind fell light, and became variable; the sky, which since first quitting the Atlantic, had been beautifully clear, now became overcast; squalls from the S.W., accompanied with hail and sleet began to arrest our progress, and at times the land was obscured in heavy mist. With the tide in our favor we commenced working through the narrow. In the afternoon the wind freshened, and finally settled at west; the clouds went off, and we had a delightful sunset. In passing through this passage we had to keep over on the Fuegian side to avoid a shoal on the northern shore; a remarkable hummock on the Patagonian coast was of great use as a mark for clearing this bank. At four we saw the islands of Elizabeth, St. Martha, and Magdalena; at five we had got out of the narrow, and continued to work to the westward. Towards evening the wind falling light, and the darkness setting in, we availed ourselves of a tolerably good anchorage in the Royal road.

All day we had been anxiously hoping to get a glimpse of some of the natives, but none of them made their appearance. Had they known the vast stores of riches, now so near their principal haunt, no doubt we should have had more of their company than would have been agreeable. The country at this part has a blank and desolate character, and excepting as an abode for guanacoës and vultures, does not appear to possess the least signs of affording sustenance for any living creature.

Early on the next morning, a fine fair breeze induced us to weigh and proceed to the southward. We kept close in with the eastern side of

Elizabeth Island, in doing which the ship passed through large quantities of kelp, causing no small degree of anxiety to the captain and master, as she was running at a rapid rate. The implicit confidence placed in the chart, (from Captain FitzRoy's survey,) tended greatly to facilitate our dashing through this weedy space*.

This difficulty being surmounted, we steered towards Sandy Point; at eight Elizabeth Island was lost sight of, and the breeze continued to freshen. At nine Cape St. Mary was on our beam: about this part of the Strait the country assumed a more inviting appearance; trees and bushes innumerable studded the rugged points, and all looked green and pleasant. Several lofty mountains were now in view, amongst the most conspicuous of which were those of Graves and Tarn, rearing their snowy peaks. The aspect of the Strait now presented a very rare and interesting sight. The wind still freshened, and soon blew a perfect gale. We were running past the land at 11 or 12 knots, almost in certainty of anchoring in Port Gallant before night: the weather was becoming every moment more boisterous, sleet and snow constantly intercepting our view of the coast. On nearing Point St. Anna, a Chilian flag was seen flying on the hill which forms the northern side of the bay called Port Famine. At first we supposed it to be a signal made by some shipwrecked people, and all was prepared for running into the harbour; but on our opening the entrance we saw a small schooner under the same colours, riding at anchor. We therefore, kept away on our former course: at two we rounded Cape Froward, the most southern point of South America, and which well deserves its name, for a more forbidding, and desolate headland can scarcely be imagined: a succession of rugged mountains piled one on each other, form this extremity of the vast range of the Andes.

At three we caught a faint glimpse of Cape Holland, and were making great progress towards Port Gallant, which we hoped soon to reach. We ran in this manner until four, when the wind suddenly fell light and shifted to the westward, thus putting a very unceremonious damper on all our cherished hopes. We now wished for an anchorage, as the prospect of remaining underweigh all night, with thick and unsettled weather and strong tides, was anything but cheering to our blighted spirits. A little nook under Cape Holland presented itself as being the most likely place to afford us a temporary refuge: after much anxiety and numberless casts of the lead in deep water, we picked up a berth close inshore in 13 fathoms. This little corner, which is dignified with the name of Wood's Bay, might shelter a small vessel when quite under the headland, and protect her from westerly winds. There is a stream of excellent water near the upper part of the bay, and which runs into the sea. We found no inhabitants or any trace of them: the bushes and small trees rendered it next to impossible to penetrate any distance inland, and so could form no idea of the adjacent country.

On a large stone near the beach, we painted the ship's name, and

* Capt. P. King says in his directions " Avoid kelp everywhere."—ED.

date, in hope that H.M. steam-vessel *Cormorant*, which was on her way from Rio to Valparaiso, might know of our having reached so far on our voyage.

The view from this anchorage was very beautiful; as a large portion of the most picturesque part of the Strait could be seen. To the N.W. three high peaks close together, and almost exactly alike, covered to the summit with snow, had a very novel appearance. Whilst to the south, the coast of Tierra del Fuego, broken into numerous creeks and inlets, by the many islands and channels of which it is formed, assumed the most fantastic shapes imaginable, and the lofty snow-capped mountains, towering as it were from the ocean behind, completed a landscape which for grandeur and sublimity has seldom been surpassed.

On the forenoon of the next day, the wind fresh from the westward, and with the help of the tide, we beat up towards Port Gallant, but from the great force of the breeze, and its blowing right through the channel, we did not reach the anchorage until sunset, taking up a berth in 20 fathoms, about half a mile from Wigwam Island. This harbour affords good shelter from all but southerly winds: during five days that we were detained here from stress of weather, we employed the ship's company in cutting wood, hauling the sein, &c. The heavy rains and the thickness of the forest prevented our making an inland excursion. We found the remains of many wigwams; but their tenants had no doubt crossed the water some time before our arrival. We here cut the ship's name on a rock on Wigwam Island.

At daylight of the 23rd, the weather having moderated, we left this anchorage, hoping to reach Borja Bay. At nine it blew a gale, and the weather was rendered more unpleasant from perpetual rain and sleet. The incessant tacking ship gave plenty of work to the men, and the utmost skill of our worthy master* was required in piloting us through the labyrinths of islands, which we were constantly passing. The trying duties that we had experienced for several days did not in the least diminish the ardour of our crew, who heartily joined in their efforts to make all go pleasantly, and to lighten the weight of responsibility which now devolved on our gallant captain.

At 5h. 30m. the day being nearly done, and finding all further attempts to get to windward, vain, we sought an anchorage in Elizabeth Bay; a wild and rocky place, where we were soon obliged to let go both anchors. In reaching this small distance from Port Gallant we had to make thirty-four tacks.

The morning of the 24th was anything but propitious, and had the anchorage been at all secure, we should no doubt have remained here in preference to facing the gale that was blowing. The topsails and courses were close-reefed, and we once more launched forth into the Strait with a determination, if possible, to reach Borja Bay.

When advanced a considerable distance, and in a very intricate part,

* Mr. E. P. Cole.

we carried away the slings of the fore yard; but by the activity of our first lieutenant this accident was soon repaired: and at four after having tacked thirty-nine times we reached the desired haven, and were soon snugly anchored for the night, the depth of water being 21 fathoms.

This proved to be a very secure bay, sheltered from nearly all winds, and abounding with wood and water. The same obstacle, an impenetrable forest, prevented our going any distance into the country.

On the 26th in the forenoon, the wind being still very strong from the west, we left this place for Swallow Bay, the tide in our favour. At noon the wind had increased very much, and the heavy puffs which came off the Fuegian shore threatened every moment to dismast us. At two we had reached as far as Snowy Sound, and the island which forms the western side of Swallow Bay was occasionally seen through the showers of hail and snow: at four, we were close in with it, and shortly after bore away for the anchorage. In running in we were guided principally by the kelp, which is a never failing indication of rocks. After considerable trouble we anchored in 18 fathoms, but the bottom was very foul, and we subsequently let go a second anchor in 8 fathoms, having veered a considerable quantity of cable on each. The trip from Borja Bay to this place cost us forty-four tacks.

During the night the terrific gusts of wind (williwaws) from the land, came down on us with great violence; and at about four, one heavier than the rest gave the ship such a sudden jerk as to snap the best bower cable, close to the anchor: at daylight it was found that we had dragged some distance from our first position. All hands were soon employed laying out warps for shifting berth, &c., and parties were occupied until the last moment of our stay in sweeping for the lost anchor. It was hooked several times; but from the rocky and uneven nature of the ground every exertion was fruitless, and we were compelled very reluctantly to leave poor "Rodger" behind, to rust at the bottom.

On the 29th in the afternoon the wind becoming fair, we got up lower yards and topmasts, which had been struck on the previous day, and were soon clear of the harbour, running to the westward.

During the short period of our visit to this place, we were too much occupied to have an opportunity of making any survey of it, for had we been supplied with one, however rough, we should no doubt have been more fortunate in choosing a better anchorage. From the appearance of the bay I should think it would prove a snug retreat in bad weather. At sunset we were abreast of Playa Parda Bay. This from the eastward is easily made out.

During the night the wind veered gradually round to the westward, but the moon being very bright enabled us to proceed onward: at 8 A.M. of the 30th we could faintly distinguish Cape Pillar. By sunset we had worked up so as to be abreast of it, and at 7 we were fairly to the westward of this last difficulty, and drawing slowly into the Pacific where a heavy cross-sea was impeding our progress: at daylight on the next morning we could safely say that we had doubled Cape Horn, and now shaped

dents connected with them that attend a sea-life, he confers a benefit on the rising youth of his profession, who would do well to avail themselves of it. There is perhaps no subject in which officers differ more in opinion upon, than in that of seamanship, and the plan of Capt. Liardet appears to take each portion of the whole duty of the officer in this important branch of his profession, and give him the benefit of his own experience, with the proper way of executing it. We will for the present illustrate Capt. Liardet's method with the following extracts. The first, is *on the best sail to bring a Ship to anchor under.*

"It has appeared to me, that with a commanding breeze, the three top-sails, jib, and driver, are the most seamanlike sails to bring a ship to anchor under. I advance this opinion with the greatest deference to many good officers who continually bring their ships to an anchor under a heavy press of sail, with the view of shortening all sail at once. No one can doubt the beauty of this evolution; it is one that astonishes all but the initiated; in reality it is frequently a manœuvre of the greatest trickery, such as singling top-sail sheets, clewing the top-sails up to the caps with burtons, stopping the hauling parts of the top-sail buntlines to the yards, so as to make the weight of the top-sail yards haul up the buntlines at the same time; and in this way the top-gallant yards clew up the royals, and the top-sail yards clew up the top-gallant sails, the clewlines being previously marked before being stopped, to allow for the different lengths of the masts, &c.

"If a ship take in all sail in the manner I have described, I ask any sailor, is it possible for that ship, with all her unnecessary gear, single top-sail sheets, &c. to make sail again as quickly, if required, as the ship which comes to an anchor under manageable sail, without the aid of trickery?

"If you add to the above, studding-sails lying about the deck, with the frequent occurrence of carrying away anchors or cables, torn sails, and sometimes loss of life, &c. I have observed that ships which practised this manœuvre most, were generally those that were the most out of their station, and often obliged to unmoor to take up a fresh berth. A ship should take in her studding-sails, royals, and flying jib well together, and have her studding-sails quickly in their places; next take in courses and top-gallant sails with a good clear run, furling the top-gallant sails immediately, then take up your berth under the three top-sails, jib, and driver, and, if you can, run your cable out without the assistance of your sails; take them all in together, to the word "Lower away," or "Square away;" minding to have the squaring marks of your lifts and braces in at the same moment.

"From what I have said, I do not infer that in single ships the men should not frequently be practised in taking in all possible sail together. I only mean to observe, that in a fleet, with a commanding breeze, ships will take up their stations better under three top-sails, jib, and driver, and if they get into danger, they will be more manageable, and more ready to make sail to get out of it. In ships where they are in the habit of making running moors with fresh way on the ship (though the defects in this mode of mooring a ship may not be observed in the anchors, cables, or on the copper at the time of weighing,) still we think, that if this subject were closely analyzed, that it would be found that those vessels which continually practise this evolution, have had more casualties with their anchors or cables, than other ships not following this manœuvre. It must be remembered that snubbing a vessel with a chain cable brings the strain more directly on the anchor, and that the chain cables are more liable to injury from sudden jerks, than rope cables, more particularly when snubbed at a short scope with the force of ship's fresh way.

"When a ship is making a running moor, and happens from some accident to be brought up all standing, or greatly checked in running out her cable, it would, perhaps, be well to take an early opportunity of sighting the anchor and examining the cable."

felt. The accounts agree as regard the regularity and strength of the tides.

Nova Scotian side of the Bay.—I have given the preference to this side of the bay, when bound to St. John, because the coast is straighter, and by avoiding the superficial current, and having the tides regular, you are able to calculate them, and the general practice of the St. John ships is in favour of this preference.

The passage by St. Mary's Bay.—I fear that the narrowness of the channel, the rock lying in it, and the very rapid tides, are sufficient causes to prevent that channel from coming into general use as a passage into the bay.

Bryer Island Passage.—This passage appears to me likely to continue to be the high way into the Bay of Fundy when bound to St. John, and its great defect is the want of a powerful light and a gong for thick weather upon the Old Proprietor. It contracts this channel very much, but it is only a point, and you can (if the tide serves) stand past it on either side; but at present you have nothing to indicate its position, and you are kept in dread for miles on each side of it. The rise and fall of the tides is great, but I believe that it is practicable, and certainly very needful, to have a lighthouse upon the Old Proprietor. The wind from the northward, which disperses the fog, frequently blows strong, and in the winter season brings with it a severe frost.

Capt. Peel has pointed out one great advantage on the Nova Scotian side, which I omitted, that is, that the fog accompanying the winds from the south and south-eastward (which are the prevalent winds in the summer season) "seldom comes close home" to the coast. Which side of the bay is the best, must be left to the judgment of the navigator, and will probably be much influenced by present circumstances, and the season of the year.

Colonial trade and their social system.—The last paragraph touches upon the ship-building of New Brunswick, and it is considered detrimental to the Colonists, as drawing off their attention from agriculture, and making them dependent upon the United States for food. This is not the only bad effect which has arisen from the great number of new ships built in New Brunswick. It has held out premiums for desertion to seamen, and led to the fearful extension of that most demoralising system, both in New Brunswick and Canada; and the much-lauded new law has made matters no better, and in some instances worse. It will never stop desertion, unless a supplementary act should declare that, a schedule Q should be demanded by the first officer who boards the vessels upon their arrival, and a forfeiture of wages and imprisonment be imposed on men found without register tickets. Many get a good stock to begin with under different names, and when they cannot get a new ticket by saying that they got drunk and lost it, or some such excuse, then they either belong to some of our widely spread Colonies and have not had one before, or else they are Americans. But why things

are sometimes worse is, that they will not desert now, if they have anything due to them, but demand their discharge; and have got it upon such *trifling pleas* that should not for a moment have been listened to: for instance, a crew has been discharged in Quebec because they had *fresh meat* in place of salt, and it had been omitted in the scale of provisions: this was *certainly an awful greivance*, and for not getting *lime juice*. Those things *do not* entitle them to their discharge. If the master has done wrong he is answerable for it at the end of the voyage. But the power given to Consuls and Collectors of customs is pernicious, and naval officers who understand the character and habits of seamen have not the slightest power over them, except, to take them from us and give us worse, at least not better, if they can help it, as they like good men as much as we do. But in the North American trade where drunkenness, insubordination, and neglect of duty are most frequent, men very rarely have any wages due to them, and then we have *no remedy*. If seamen give you all the trouble and annoyance in their power, and take you before a magistrate, and they are *cast*, they have only to say, that they are willing to go on board, and go to work, and you have no hold of them. It has been said that if a man gives you a decided insult, you should knock him down; but no matter what provocation, we must not put a finger upon those tender lambs of the new laws. Let Sailors' Home libraries be put on board of ships to improve their minds; at present the law is in advance of their intellectual culture.

R. LEIGHTON.

NOTES ON THE RIVERS AND INTERNAL COMMERCE OF SOUTH AMERICA.

(Concluded from page 470.)

DOUBTLESS, a mere casual reader of South American geography, who may have so far accompanied me, will now exclaim, surely for all purposes of commercial enterprize, no one would dream of advancing farther up this river than Assumpcion. But I beg to differ with him, for the two following reasons: Bolivia with a population of 1,300,000 souls, shut off from the Pacific by the selfish policy of Peru, and the physical geography of her western frontier, has no more outlet for her corn, wool, and enormous mineral wealth than the mighty Paraguay which drains the eastern base of her elevated table land; and, the western states of Brazil, Matto Grosso, Minas Novas, Minas Geraes, &c., whence she draws her gold, diamonds, and cotton, could far more conveniently transmit their produce to the sea, by embarking it on the waters which flow through their valleys than by traversing the lofty sierras, which run in parallel ridges north and south, with a view of carrying them to

the eastern seaports for exportation,—a long and tedious transit to which I will hereafter refer.

With these reasons as a justification, we will ascend the Paraguay to its head waters, in the deep valleys formed by the southern spurs of the elevated plains of Matto Grosso; and at a distance of 1,200 miles from its debouchment at Corrientes, affording by its navigable stream a natural highway to the heart of South America. There we find an extensive province, with three provincial cities, Cuyaba, Villa Bella, and Santiago: the first of which, some years ago (1845), possessed a population of 30,000 souls, the major part of whom are employed in gathering the wealth of a highly auriferous soil, and transmitting it to the capital of Brazil, by either of the two following routes;—on mules, each of which carry about 300 lbs. weight, and traverse three lofty ranges of the eastern Cordilleras, which of course can only be done in the favourable seasons, and by a journey of five or six months reaching Rio Janeiro, by way of Villa Boa, passing northward of the sources of the Parana, and traversing the diamond regions of Minas Geraes, or otherwise by the following, an extraordinary system of water-carriage, which for circumambulation, I believe is unparalleled, and in itself a proof of how obstacles are surmounted, and difficulties vanish, where a people possess property, which can with certainty be converted into luxuries, without which gold and silver are but dross.

Embarking at Cuyaba in about 15° S. latitude, and 55° W. longitude, the traders descend a stream of the same name into the main waters of the Paraguay, which has already received the tribute of a multitude of rivers, few of them inferior to our European ones, such as the Sygotuba, Itiguire, &c., borne rapidly down to the mouth of the Tagauri, which empties itself into the Paraguay from the eastward. This tributary is ascended almost to its source against the current, and obstacles in the shape of rapids, at a place called Fazenda de Campnao, situated ninety leagues S.S.W. of Cuyaba where portage occurs, the cargoes and canoes being carried for one mile across what is actually the division between the water shed of the Paraguay and Parana; and at the head of a river called Rio Prado, flowing to the east. The goods are again embarked, and floated down into the swift current of the Parana. Here the stream is again ascended until on its eastern bank the mouth of the river Tiete is reached. The distance between the mouths of the Pardo and Tiete being 105 miles, which in consequence of the strength of the current of the Parana has to be tracked, and occupies thirty days in ascending; but only five in returning downwards. The flotilla now leaves the Parana, and ascends the Tiete, a broad and rapid flowing stream: some idea of the difficulty of navigating which I give as gleaned from a Brazilian Itinerary.

The Tiete has in a course of 456 miles, thirty-nine great falls or rapids, which require portages, entailing the unloading and loading of the vessels. The volume of water carried down to the Parana is very great; the Tiete receiving in its course at least thirty important streams,

and its mean breadth may be conjectured by the fact of its being eighty yards wide at a distance of 363 miles from the Parana. At Porto Felix, situated on its banks, and in the near neighbourhood of the city of St. Pauls, the navigation ceases, and it forms the depot for the exchange of the produce of Matto Grosso for the necessaries and luxuries of life, imported into Brazil by way of Rio Janeiro. The traders usually leave Cuyaba for St. Pauls in the month of October, when the Paraguay is confined to its natural banks, and reach their destination in the month of February, returning with the cargoes for the interior in April and May. The major portion of this traffic is confined to Cuyaba and its neighbourhood; but a considerable number of canoes ascend higher, to the mouth of the Jaura, a western feeder of the Paraguay; and then forward their cargoes to, and receive the returns from Villa Bella, a city on the western confines of Matto Grosso.

In a direct line the distance from Cuyaba to Rio Janeiro, the nearest Brazilian seaport is 1,000 miles. To reach this they have a river navigation of 2,166 miles! occupying a period of four months, or otherwise a land journey of unparalleled hardship, which takes six months to accomplish. And yet Buenos Ayres and Cuyaba situated on the same river are only 1,950 miles apart; and of that distance we are assured by a good authority, (Robertson,) 1,500 miles is navigable for vessels drawing 10 feet water; and what time I ask would that require for a small river steamer to ascend?—From ten to fifteen days.

One more remark 'ere we leave the Paraguay. The early explorers of this river, by some fatality generally reached its head, where it receives numerous tributaries from the high table land of Matto Grosso, just at the commencement of the inundation which extends from the mouth of the Jaura to lat. 21° 22' S., where mountain spurs from the Cordilleras of Potosi and Northern Paraguay, confine its stream to proper limits. This inundation gave rise to the idea of a great inland lake, from whence the various systems of rivers throughout the continents were supposed to take their rise, as was a short time ago thought of the Australian rivers. This inundation was dignified with the name of Lake Xarayes; and such it really is for some months in the year, when the swollen streams overflow the neighbouring plains, and an inland sea 300 miles long, and 150 miles from east to west, spreads its broad surface before the astonished traveller, who with pain can recognize amongst the numerous picturesque islands which then appear, the hills and sierras of the dry season. In this fairy lake perished Juan de Ayolas, the second captain-general of the province of Rio de la Plata, after penetrating to Peru, and amidst its labyrinth of morasses wasted away to a few hundreds 14,000 men whom his successor Trala, endeavoured to lead to fresh conquests.

The Parana now claims our attention, its numerous feeders lie far within the Brazilian frontier, and drain the broad province of Minas Geraes, on one of the largest of which, the Rio das Mortes, is situated

the town of St. Jose, famous as being the entrepôt for the highly productive gold mines and washings of the adjoining district; as likewise the city of Villa Rica, the centre of a region, the wealth of which, in minerals and precious stones is untold. We have an intelligent author writing of it in the following strain—"Rich iron ores with which the district abounds might furnish far more profitable employment for capital than gold washing, if the carriage of so bulky a metal would admit of it being conveyed to the coast. During my stay here, my men brought me a quantity of the finest Porcelain clay I have ever seen: that used at the manufactory of Sevres, near Paris, is inferior to it." And, again, the the river Abaite near Villa Rica, intersects strong lodes of lead; some pieces of it have been seen weighing 20 lbs.; but the distance of 600 miles from Rio Janeiro, will not admit of it being worked with profit, although it is the only lead mine in Brazil, or, indeed in the country generally. The narrow minded jealousy of the Portuguese in the olden day, and the contemptible want of common enlightenment in the policy of the Brazilians of the present century, render it almost impossible for a correct conclusion to be arrived at, with respect to the internal system of communication between one part of the Brazils and the other. That the present degenerated race have improved but little, upon routes opened by their energetic forefathers, we have ample proof, for in 1740 we find the Spanish jesuit fathers of Paraguay in a state of suspicious alarm, at receiving a visit from a large Portuguese party, headed by one Don Antonio Rineyro, who was travelling from St. Pauls to Cuyaba, and the route followed by the Portuguese, as described by the jesuits, was nearly the same as the one I have pointed out a few pages back, as being pursued by the traders in the present day.

The Parana may be roughly estimated at 1,200 miles of navigation, from Corrientes upwards; but it has one insurmountable obstacle in the Falls of Salto Grande in lat. 24° S., which will always oblige a portage; and the Parana in its whole course is a deeper river, with a swifter current than its neighbour the Paraguay.

From the Salto Grande to Corrientes, the Parana flows along the northern frontier of the province of Entre Rios, and the old, but now dilapidated capital, Cadelaria, stands upon its banks. Under the Spanish rule this province contained 100,000 inhabitants, and the capital 4,000 residents; but, the Libertadores, Conquistadores, and Salvadores of these glorious revolutionary days have diminished the former to 8,000 souls: and Cadelaria is now a collection of ruined ranchos with 700 impoverished republicans to shout "Viva la libertad, sin calzones!"

We have now followed these two rivers to their sources, and as a summary may say, that in their whole extent including tributaries, they show the enormous amount of 10,000 miles of river navigation, nearly the whole trade arising from which might be made to concentrate at Corrientes and Santa Fe. The former not more than 1,000 miles from Buenos Ayres, and the latter about 300 miles.

The Uruguay drains the western slopes of a range of mountains which

attention were some guanacoës feeding on a neighbouring plain, and a few walruses basking on the northern coast.

After entering the narrow we kept rather on the Fuegian side, and when Cape Baxa came in view, we steered along the Patagonian shore, the tide running through with considerable strength. At six in the evening, having cleared the narrow, and not wishing to lose a fair breeze, the moon shining brightly, we pushed onwards for Gregory Bay. At the end of an hour we were running at the rate of four or five knots. However, at about 8h. 30m. although the leadsman had no indication of shoal water, the ship stopped, having taken the ground, but so quietly, that at the time, few on board were aware of the circumstance. Sail was immediately shortened, and preparations made for getting out the kedge, &c. Whilst all this was going on she slipped off into deep water: when in 20 fathoms the anchor was let go, and we remained in this place until dawn on the following morning.

From our position at daylight, it was found that we must have touched on a small detached piece of soft ground, near the Triton Bank; and but for this little incident giving a momentary check to the ardour of those who were anxious to avoid the dangers of the Cape, its occurrence was of no further consequence than an hour's employment for the men, and a little amusement for the master.

Soon after breakfast we weighed with a fine breeze from N.E., the Gregory range on our starboard beam: we now steered for the second narrows; its entrance was soon distinguished, and which we rapidly approached. At noon the wind fell light, and became variable; the sky, which since first quitting the Atlantic, had been beautifully clear, now became overcast; squalls from the S.W., accompanied with hail and sleet began to arrest our progress, and at times the land was obscured in heavy mist. With the tide in our favor we commenced working through the narrow. In the afternoon the wind freshened, and finally settled at west; the clouds went off, and we had a delightful sunset. In passing through this passage we had to keep over on the Fuegian side to avoid a shoal on the northern shore; a remarkable hummock on the Patagonian coast was of great use as a mark for clearing this bank. At four we saw the islands of Elizabeth, St. Martha, and Magdalena; at five we had got out of the narrow, and continued to work to the westward. Towards evening the wind falling light, and the darkness setting in, we availed ourselves of a tolerably good anchorage in the Royal road.

All day we had been anxiously hoping to get a glimpse of some of the natives, but none of them made their appearance. Had they known the vast stores of riches, now so near their principal haunt, no doubt we should have had more of their company than would have been agreeable. The country at this part has a blank and desolate character, and excepting as an abode for guanacoës and vultures, does not appear to possess the least signs of affording sustenance for any living creature.

Early on the next morning, a fine fair breeze induced us to weigh and proceed to the southward. We kept close in with the eastern side of

not aroused the parent government, and more than one colonial minister has advocated the policy of the United States, rather than the interests of the provinces bordering upon the Atlantic, many of whose inhabitants scarcely enjoy a peaceable fasthold upon the land.

The result has been, that the fisheries are injured; the best stations are occupied by foreigners, and an illicit trade carries away the best catch of our shomen; while our young and active fishermen are drawn from the province, to perpetuate a system, by which they are yearly exiled from their homes.

It has been established by the legal authorities of the crown, that the treaty of 1783 was annulled by the war of 1812, and that the "rights of fishing of the citizens of the United States, must now be considered as defined and regulated by the convention of 1818". The same authority has declared that by that convention, "American citizens are excluded from any right of fishing within three miles of the coast of British America, and that the prescribed distance of three miles is to be measured from the headlands, or extreme points of lands, next the sea of the coast, or of the entrance of the bays, and not from the interior of such bays, or indents of the coast; and consequently, that no right exists on the part of the American citizens to enter the bays of Nova Scotia, there to take fish, although the fishing being within the bay may be at a greater distance than three miles from the shore of the bay".

Notwithstanding the plain and obvious meaning of the treaty, it is well known that the Americans fish within less than two miles of the shore, they set their nets in the coves and harbours, and occasionally by superior force, they drive the inhabitants away, over-hauling and cutting their nets. They also land and purchase bait in exchange for gin, tobacco, and other notions. They occupy the Magdalen Islands in the Gulf of St. Lawrence, in the fishing season, as freely as British subjects. From 800 to 1000 of their vessels not only pass through the Strait of Canseau, but make it a place of resort to obtain their fuel: that strait scarcely exceeds a mile in breadth, to the distance of fifteen miles, and may be said to divide Nova Scotia into two parts. I have seen them at a number of the unoccupied harbours of Nova Scotia near Brunswick, and Prince Edward's Island, setting and clearing their nets. The rule with them is to follow the fish and not the treaty, and their maxim is, where "Providence sends the fish we will send the fishermen".

That part of the treaty which humanely permits them to enter our harbours in distress, or for fuel, and water, is made a complete loop-hole for evasion. While one part of a crew is filling a water cask, the remainder are collecting bait, fishing or clearing decks of the offal so pernicious to the fisheries. I was informed of a vessel that carried two bowsprits, one for sea service, and another, which had been sprung for inshore work. With the latter the skipper could enter any of the harbours by night or by day. Similar schemes are well known and practised. Early in the spring season the harbours of the eastern states pour forth fleets of schooners and shallops, destined for the coasts of the British provinces.

They are well supplied with provisions, salt, empty casks, seines, nets, twines, hooks, jigs, and bait mills, and every article required for the capture of fish of all kinds. Of these craft there are two descriptions, the real fishermen and the "speculator in fish;" the latter carry pork, flour, molasses, tobacco, gin, and almost every article required by the provincial fisherman. These vessels are soon out of water, spring a mast, or some of the crew fall sick, and they are steered into some of the estuaries or harbours, where they are kindly relieved; at least of their superfluous cargo by the inhabitants. A barter traffic is immediately commenced, green, salted, and half-dried fish are taken in payment for American goods, which from being landed free from the payment of duty are given to the fisherman at a lower price than those obtained from the established merchant. The business of the smuggler is soon completed, and always in time to keep clear of the revenue officers, and he departs leaving the butts and stakes of the shoremen fishless. A few hours afterwards the crew of the foreign visitor are perhaps engaged in drawing up the finny broods of the sea, or they steer to another inlet to strike new bargains. Should a British cruizer appear, or a preventive officer reach the deck, there are plenty of holes in the treaty to creep out at. If the vessel and cargo are seized under the law, the act is soon made a serious matter of negotiation, and forsooth, a war is threatened by the apprehension of an American citizen, found in the act of carrying on a contraband trade.

Some of the American skippers will relate their adventures with all the *sang froid* and good nature imaginable. A very clever old captain told me, that he once ran into St. Mary's: "Tidings of my doings had got out, and on the night of my arrival, a revenue cutter came to anchor right alongside of me. What to do I did not know, I could not get away as the wind blew a stiffer right into the harbour. All at once I had it. In less than no time I cleared away for action, I sent ashore and borrowed two young calves from one of my customers, and lifted them on deck, one of them squalled out prodigiously. I stowed all the cord-wood I had abaft the foremost; but the best of it all was, I dressed two of my Nantucket boys in woman's clothes, topping them off with a pair of bonnets sent in my vessel as a venture. By the first peep of the day I set them to washing shirts on deck, and as soon as I seed the crew of the cutter begin to move, which they did not until long after sunrise, I went in my little boat and axed the people of the cruizer if they would give me a bit of old canvas to mend my mainsail, and sure enough they gave me a fairish piece. There we lay till 12 o'clock. The women washing and drying clothes, and our calves bleating like mad for their mothers. The wind came round, the cutter got underweigh, and as she rounded past us, the captain hailed me, and asked if I would sell one of the calves. I told him they were a particular breed and not for sale. I think that remark replied he, "will apply to your whole crew." Not a bad joke was it, and after laughing heartily at my washermen and my calves, my gentlemen sheered off. When I seed that his jib was the right way, I made a low

bow to him; and after he was clean gone, I sent my calves on shore, turned my washerwomen into boys again, and finished the trade of the *Peggy Ann*." "In another instance," said this 'cute old captain, "it was stark calm, and as the fog cleared up a little, I saw I was in the very jaws of a ship-of-war, and I almost gave up all for lost; however as they were lowering their jolly boat to board me, I skulled off to them, all alone, in my little punt, and asked the people of the ship if they know'd what was good for the measles. I could hear them laugh from stem to stern. A big fat man, they called the doctor, told me to keep my patients warm, and to give them hot drinks. It was enough; they took care not to come near the *Peggy Ann* that time."

By such and similar practices, the merchants who advance to the fishermen goods legally defrauded, the resources of the country are thrown away, and the morals of the people are contaminated. Aggressions and illicit trade are not confined to any part of the coast. During the fishing season, American vessels enter the harbours and surround the island of Grand Manan; they are scattered along the shores of the Bay of Fundy, and visit the bays, harbours, and inlets of Nova Scotia, Cape Breton, Prince Edward's Island and coast of Labrador. They are also very numerous in the Gulf of St. Lawrence, where they occupy the best banks, to the exclusion of British subjects. American fishermen have landed upon the shores, taken the bait, destroyed the nets, and even plundered the dwellings of the harmless inhabitants.

In 1829, France employed from 250 to 300 vessels in the fisheries on the British American coasts, and 2,500 sea-going fishermen, who by treaty are not permitted to become residents. Their vessels are from 100 to 400 tons burthen, and carry from 40 to 120 men each. In the above year, the Americans employed in their fisheries 1,500 vessels manned by 15,000 seamen, and took 1,000,000 quintals of fish and 3,000 tons of oil: at the lowest estimate. One quarter of these vessels fish within the bounds prescribed by the treaty: at that period the British catch was 2,000 of quintals annually. This estimate has recently been brought up to 1847, by Patrick Morris, Esq., Treasurer of Newfoundland, and who, in his recent work has ably set forth the pernicious effects of the concessions made to the French and Americans.

By this writer, the French catch is estimated, from official documents, at 1,000,000 quintals, the bounties at £125,000 sterling per annum, and the number of fishermen employed at 25,000. The American fishery is estimated to employ 37,500 men from 1,500 to 2,000 vessels, with a bounty of twenty shillings per ton, and the catch is estimated at 1,500,000 quintals.

The British fisheries on the coast of Newfoundland are estimated at 1,000,000 quintals. Perhaps the whole of the British North American fisheries including the Bay of Fundy, the coast of Nova Scotia, the Gulf, Gaspe, Labrador and Newfoundland fisheries, extending along a coast of about 3,000 miles, do not exceed in value £1,500,000 sterling, while two and a half millions of quintals are annually carried away from our

doors by the French and Americans. The most pernicious effect, as a national consideration, is, that by means of their bounties, the French and Americans are enabled to monopolize the bank fishery, the best nursery for seamen, while the British fishery is confined to boats along the coast.

It is impossible for the British and Colonial fisherman ever to compete with the French and Americans in these fisheries, so long as the latter are cherished and stimulated by bounties, that not only encourage the taking of fish in our waters, but draw away from us our best fishermen. This state of things can only be prevented by carefully protecting the privileges that still remain to us, by giving a bounty to our own fishermen, and by compelling foreigners to fish in the manner laid down by the treaty. Mr. Morris has proposed that the French and Americans be allowed to fish in all our bays and harbours provided they will discontinue their bounties. But the inhabitants of these provinces have been taught to know that such permission would not only drive them from the deep sea banks; but also prove fatal to their shore fisheries.

The French are restricted to fishing with common hooks and lines. Within a few years past they have invented, and now employ bultows of which some vessels have 10,000 fathoms. These bultows are most detrimental and will prove extremely destructive to the bank as well as to the inshore fisheries.

It has been supposed that the British armed vessels on the North American station are sufficient to check the evils so long complained of. The length of the coast including the bays and other indents to be guarded, exceeds 2,000 miles; a fleet of fifty sail would therefore be insufficient for the coast guard, and our men of war are much too large for this kind of service. Nor would the skill of their commanders enable them to contend with swarms of chary and ingenious fishermen, who shelter themselves under the terms of a treaty, which by numerous pretexts may be evaded.

It had long been hoped that the remonstrances annually sent from these colonies to the home government, would finally bring protection; but so late as the 19th of May, 1845, a despatch to Lord Falkland, then governor of Nova Scotia, states that, "After mature deliberation Her Majesty's Government deem it advisable for the interests of both countries, to relax the strict rule of exclusion exercised by Great Britain over the fishing vessels of the United States." Another despatch of the 17th of Sept., 1845, brought the unwelcome tidings that the Bay of Fundy "has been thrown open to the Americans, under certain restrictions." No policy could be more fatal to the welfare of Nova Scotia than this gradual yielding up of her maritime resources to the neighbouring states.

The abundance and cheapness of bread and other provisions enable the Americans to fit out their vessels at a lower rate than they can be supplied in any of the ports in the province. The tonnage and other bounties on fish granted by the eastern states, have stimulated their inhabitants in this branch of industry; and to their credit it may be added, they

are more skilful and indefatigable in taking and curing the finny inhabitants of the sea, than the general run of fishermen on our shores.

In 1839, the report of mackerel from the port of Halifax was only 19,127 barrels. In 1841, it was 35,917 barrels; and in 1842, 54,158 barrels. This increase has been ascribed to the employment of the revenue cutters, which also protect the fisheries, and by enforcing the restrictive regulations upwards of 160 sail of American vessels, which carried away 30,000 barrels of pickled fish annually, from the shores of Cape Breton have been kept at bay. The protective operations have had a corresponding influence upon the trade of the Americans to our waters; for in 1835 they had 6,108,211 tons of shipping employed in these fisheries, which in 1844 had decreased to 1,177,550 tons. Since that period the fisheries carried on by British subjects have continued to prosper. It has been deemed necessary thus briefly to advert to the state of our maritime privileges, for although they are important resources, their value can only be estimated by the benefit derived from them by British subjects and not by the citizens of foreign states.—*Gesner's Nova Scotia.*

NATIVES OF THE NICOBARS.

As far as my acquaintance with the natives of those islands and their language enabled me to carry on my investigations, during a stay of about two years amongst them, I do not think that the amount of the whole population spread or scattered over the Nicobar Archipelago, exceeds the moderate amount of 8,000 souls; of whom about 2,000 inhabit Carnicobar. Theresa, where was I settled had a population of about 500 souls.

Being but slightly acquainted with few of the languages of India, I am not able to trace back through that channel the origin of the savages of those islands. The shape of their body, and particularly the features of the face, incline me to believe that they belong rather to the Hindoo race, than to the Burmese or Malayan. The hair is not of a deep but rather slight black, the eyes black, the nose aquiline, the body well shaped and proportioned; the stature exceeds that of the Burmese and Malays. The Nicobars are strong and capable of carrying very heavy burdens; I have seen some of them carrying without any trouble 200 cocoa-nuts. I had with me a large trunk filled with books which I was hardly able to move, one of the natives, to my great surprise, placed it upon his shoulders, and walked a good distance without being apparently fatigued.

All the inhabitants or aborigines belong to the same race. In the islands of the south it strikes me that there is some mixture of Malay blood: in those parts too the Malay language is very extensively, or rather, universally known.

I have much questioned the natives concerning their origin and the epoch when their ancestors landed first on those shores, but nothing satisfactory upon that important point could be obtained. The impression their different stories has left upon my mind is that from a very remote period the Nicobar Archipelago has been inhabited. It is hardly necessary to notice that their narrations upon that subject ended invariably in ridiculous and puerile fables, to which no credit can rationally be given. The absence of any monument whatever will probable leave the question for ever unsettled.

The language used by the Nicobarians is polysyllabic, abounds in vowels, and its pronunciation is harsh and far from being harmonious. After my arrival, when I heard the natives speaking, it appeared to me the sounds formed in the throat came out through the nose, and that the tongue, the usual instrument for producing distinct sounds, had very limited functions in their language. Young boys, as speaking generally more distinctly than grown up persons, were my teachers at first, until my ears had been practised to the hearing of such confused sounds.

The chief food of the Nicobarians is the pulp of the cocoa-nut, yams, plantains, papayahs, fowls, and above all pigs, which abound in those islands. It is not uncommon to see round a single hut, 40, 50, or 60 of them. The quantity of pigs killed and eaten is almost incredible, yet the Nicobarians, however voracious, separate the grease from the flesh, and keep it separately for culinary purposes: they never eat, or rather devour, anything but the flesh, and that for a single festival day. To satisfy my curiosity I saw and counted seventy-five large pigs killed for satiating the wolf-like appetite of the inhabitants of an inconsiderable district of my island. In this respect, the Chinese could not be a match for the Nicobarians.

Notwithstanding this immoderate use of food, the natives are seldom to be seen with those nasty and disgusting ulcers so common amongst the Chinese who belong to the poorer class. They are attacked with many cutaneous diseases, but not of the worst kind. I do not recollect having ever met with a single individual marked with the small-pox, a circumstance which induces me to believe that that disease is quite unknown in those islands. Twice a year almost all the inhabitants are attacked with a severe cough accompanied with fevers. The Nicobar islands are famous as a place where strangers are inevitably attacked with a most violent fever. My unfortunate companion fell a victim to its malignity. I narrowly escaped, and at last was compelled to go to Mergui on the Tenasserim Coast for the recovery of my most debilitated health; yet, I believe that, with a stock of good medicines, and especially quinine, one can live in those islands and successfully check the fever. The probable cause of the unhealthiness of the country is its uncultivated state, the number of streams stopped in their course by fallen and decayed trees and plants, and forming many swamps and marshes. Should the country be cleared of its jungle, so far as to afford a free circulation to the air, I have no doubt that the Nicobars

would not prove a more unhealthy place than other countries situated under the same latitude.

Although fever seems to spare partly the natives to a certain extent, the period of their existence is confined between narrower limits than that of Europeans,—it is exceedingly rare to see men living beyond 60 years, and women 50. From what I heard from the natives, population is certainly on its decline, and should Christian civilization not come to the help of those wretched savages, the time is probably not distant when they will have disappeared entirely, as so many wild tribes have done in different parts of the world.

The Nicobarians do not possess the slightest knowledge of the Supreme Being: they have no religious worship whatever, unless we give such a name to the superstitious ideas they entertain concerning the souls of the dead. They dread much the souls of wicked people, because they believe that after their demise, or the separation from their earthly abode, those souls retain their former malicious propensities, and endeavour to annoy the living. The Nicobarians believe that they can propitiate those evil spirits by making to them some offerings. It is customary among them to make great rejoicing on the occasion of the funeral of old people. The defunct, previously to his departure from this world, fattens a number of pigs and fowls, which are to be eaten on the occasion of his funeral. Next to this, in point of folly, the parents invariably bury with the corpse, all the small property belonging to the deceased, such as clothes, or rather rags, silver, knife, &c. This is the reason why the silver they get in exchange for their cocoa-nuts, or which they rob from vessels which happen to fall a prey to their rapacity, disappears almost completely, without affording them any profit.

The Nicobarians hold in dishonour simultaneous polygamy, but do not scruple at all about successive polygamy; that is to say, they never keep more than one wife at once, but they are easy in dismissing her for the slightest motive, and taking another. The dismissed wife is not considered dishonoured, but can easily find another husband. This is perhaps the principal reason of the comparative sterility of those women, notwithstanding their being of a corpulent and stout complexion. The females are universally far from being fair, and indeed they are probably the ugliest in the world; they shave their heads in order to add, as one would believe, to their natural ugliness and deformity.

The chief productions of the country are the cocoa-nut and the betel-nut. The cocoa-nut tree grows on the flat ground, chiefly along the shores and in the valleys. The nut is not of a large kind, but filled with a thick pulp which yields more oil than the nut of a longer kind. The yams of Nicobars are probably the finest in India, both in size and quality. Oranges are very abundant and remarkably sweet. Various sorts of plantains are to be found. I had taken with me some seeds of different kinds of vegetables, they grew remarkably well, and their taste appeared to me not inferior to those of the same kind I had eaten here. There is no timber of a large description, the hilly part of the

is covered with a high grass which the natives are in the habit of partially burning every year.

The Danes are, I believe, the only Europeans who have made an attempt to colonize those islands. In about the middle of the last century they settled at Camarta, but the little colony was soon swept away by fever. It is said that many Danish Missionaries died in that island; their tombs are still to be seen, of course in a very decayed state. When I went to that place I was so weak and exhausted, that, to my regret, I could not go near them. The Missionary efforts appear to have been entirely unsuccessful, although they laboured during a period of nearly thirty years. I have found among the inhabitants of that island no vestige at all of christianity. The only thing which is likely to perpetuate the remembrance of the Danish settlement, is the great number of wild cows which have multiplied from the stock brought over by the Danes.

In time of war the Nicobar islands have often afforded a shelter to vessels: sometimes they went there to get water. Admiral Suffrein when cruising in the Indian seas touched there several times. During the late war the French privateers anchored several times in the harbour of Nancowry. Up to this day the natives have retained many French words, mostly those coarse expressions which are chiefly used by sailors. I must say that they appear very quick in picking up a little of the languages used by the navigators who visit their islands; they understand besides Malay and a little of Portuguese, English, Hindostanee and Burmese.

The iron weapons they use are those they receive from foreigners in exchange for their cocoa-nuts, such as knives of different sizes and spears. Some of them possess muskets, but use them very little. They are much afraid of that weapon. A single man by pointing at them a musket would probably make them run away like a flock of sheep. Their favorite weapon, which is peculiar to them, is a sort of javelin, which they throw to a great distance of 50 yards; they often poison the point of the weapon, and the poison they use is a most subtle one.

From what I have seen of this people, I do not believe they are naturally cruel and fond of spilling the blood of their fellow creatures. They have an aversion for such a deed, yet cupidity or the desire of procuring things they are fond of, can prevail upon the inhabitants of the southern islands to perpetrate murder. Silver, either coined or in other shapes, seems to have a peculiar attraction for them, and is the article which chiefly induces them to commit murder upon the crews of vessels they suspect to have on board money or silver things. Cowardice accompanies them in the execution of their nefarious designs. They wait for a moment when the poor sailors are not on their guard to fall upon them and despatch them as quickly as they can, but they would never dare to make an open attack even upon a native crew.

The following instance is an illustration of their way of attacking and murdering people. I vouch for the accuracy of the facts which I am about to relate, as I heard the story related to me by different natives on the very spot where the murder took place.

the town of St. Jose, famous as being the entrepôt for the highly productive gold mines and washings of the adjoining district; as likewise the city of Villa Rica, the centre of a region, the wealth of which, in minerals and precious stones is untold. We have an intelligent author writing of it in the following strain—"Rich iron ores with which the district abounds might furnish far more profitable employment for capital than gold washing, if the carriage of so bulky a metal would admit of it being conveyed to the coast. During my stay here, my men brought me a quantity of the finest Porcelain clay I have ever seen: that used at the manufactory of Sevres, near Paris, is inferior to it." And, again, the the river Abaite near Villa Rica, intersects strong lodes of lead; some pieces of it have been seen weighing 20 lbs.; but the distance of 600 miles from Rio Janeiro, will not admit of it being worked with profit, although it is the only lead mine in Brazil, or, indeed in the country generally. The narrow minded jealousy of the Portuguese in the olden day, and the contemptible want of common enlightenment in the policy of the Brazilians of the present century, render it almost impossible for a correct conclusion to be arrived at, with respect to the internal system of communication between one part of the Brazils and the other. That the present degenerated race have improved but little, upon routes opened by their energetic forefathers, we have ample proof, for in 1740 we find the Spanish jesuit fathers of Paraguay in a state of suspicious alarm, at receiving a visit from a large Portuguese party, headed by one Don Antonio Rineyro, who was travelling from St. Pauls to Cuyaba, and the route followed by the Portuguese, as described by the jesuits, was nearly the same as the one I have pointed out a few pages back, as being pursued by the traders in the present day.

The Parana may be roughly estimated at 1,200 miles of navigation, from Corrientes upwards; but it has one insurmountable obstacle in the Falls of Salto Grande in lat. 24° S., which will always oblige a portage; and the Parana in its whole course is a deeper river, with a swifter current than its neighbour the Paraguay.

From the Salto Grande to Corrientes, the Parana flows along the northern frontier of the province of Entre Rios, and the old, but now dilapidated capital, Cadelaria, stands upon its banks. Under the Spanish rule this province contained 100,000 inhabitants, and the capital 4,000 residents; but, the Libertadores, Conquestadores, and Salvadores of these glorious revolutionary days have diminished the former to 8,000 souls: and Cadelaria is now a collection of ruined ranchos with 700 impoverished republicans to shout "Viva la libertad, sin calzones!"

We have now followed these two rivers to their sources, and as a summary may say, that in their whole extent including tributaries, they show the enormous amount of 10,000 miles of river navigation, nearly the whole trade arising from which might be made to concentrate at Corrientes and Santa Fe. The former not more than 1,000 miles from Buenos Ayres, and the latter about 300 miles.

The Uruguay drains the western slopes of a range of mountains which

Turning to the lighthouses of modern days, we find that the light-tower of Corduan, in the Bay of Biscay, is alike the first in point of time, the chief in height and range, and the example for all the improvements that have been successively made in the production and transmission of the warning rays of light to perplexed mariners. This tower was begun by Louis de Foix, in the reign of Henry II. of France, A.D. 1584, and finished in 1610, under Henry IV. It is situated at the mouth of the Garonne, about two leagues from Bordeaux, and serves as a direction to all the coast navigation of the Bay of Biscay, as well as to the large influx of shipping attracted towards the *embouchure* of the celebrated Languedoc Canal, which leads into the Mediterranean. The Tour de Corduan is 157 feet in height, and its light may be seen in a direct line for 25 miles in clear weather. Even on the Isle of Bone, 38 miles distant, a spectator, looking from some elevated point, may detect the blaze in the horizon; but the curvature of the ocean hides the light from the seaman on deck. Its light is intermitting, changing, at half-minute intervals, from white to red. Even the red rays, whose penetrating powers are far inferior to the white, are visible as far as 12 or 14 miles, except in hazy weather. From its erection down to 1780 the light of this tower was derived from the flame of wood. In that year M. Senoir substituted oil-lamps, with metal reflectors; and in 1822 M. Fresnel extended the range of illumination to the extraordinary distances we have mentioned above, by the addition of dioptric lenses, acting upon lamps of an improved and more powerful construction. The use of this and similar beacons upon that coast has been enormous. In the era of its first erection one of the Breton counts, who, as lord of the soil, possessed rights of trover and wreckage along the coast, is said to have boasted to a jeweller that a single black rock which stood in the tideway was more valuable to him than the best diamond in his caskets.

In England, the earliest lights and beacons along the coast were erected by individuals, to whom royal patents were granted, authorising them to collect certain tolls from the passing vessels to defray the cost of building and maintenance. The right of constructing those sea signals, however, rested solely with the crown; and, in fact, the far larger number were used only in times of warlike expedition, and for certain special purposes. The earliest lighthouse which still remains in existence was that of Lowestoft, built in 1609. Another at Hurstbarton Point on the east coast, was erected in 1665; and the light on the Scilly Isles dates establishment from 1680. Besides these there were two light-towers erected during this period at Dungeness and Orfordness, under patents granted by James I. to Sir R. Howard and Sir W. Erskine. These establishments remained private property, paying only a small quit-rent to the crown, until very recently, when the Trinity Board, under the act of 1836, purchased them both at a high price from their owners, Mr. Coke and Lord Braybrooke.*

The earliest of the above dates (1609) saw the final establishment of

* A clear explanation of this condition of some of our Lighthouses was given by Mr. Labouchere, and will be found in our August number.

not aroused the parent government, and more than one colonial minister has advocated the policy of the United States, rather than the interests of the provinces bordering upon the Atlantic, many of whose inhabitants scarcely enjoy a peaceable fasthold upon the land.

The result has been, that the fisheries are injured; the best stations are occupied by foreigners, and an illicit trade carries away the best catch of our shoremen; while our young and active fishermen are drawn from the province, to perpetuate a system, by which they are yearly exiled from their homes.

It has been established by the legal authorities of the crown, that the treaty of 1783 was annulled by the war of 1812, and that the "rights of fishing of the citizens of the United States, must now be considered as defined and regulated by the convention of 1818". The same authority has declared that by that convention, "American citizens are excluded from any right of fishing within three miles of the coast of British America, and that the prescribed distance of three miles is to be measured from the headlands, or extreme points of lands, next the sea of the coast, or of the entrance of the bays, and not from the interior of such bays, or indents of the coast; and consequently, that no right exists on the part of the American citizens to enter the bays of Nova Scotia, there to take fish, although the fishing being within the bay may be at a greater distance than three miles from the shore of the bay".

Notwithstanding the plain and obvious meaning of the treaty, it is well known that the Americans fish within less than two miles of the shore, they set their nets in the coves and harbours, and occasionally by superior force, they drive the inhabitants away, over-hauling and cutting their nets. They also land and purchase bait in exchange for gin, tobacco, and other notions. They occupy the Magdalen Islands in the Gulf of St. Lawrence, in the fishing season, as freely as British subjects. From 800 to 1000 of their vessels not only pass through the Strait of Canseau, but make it a place of resort to obtain their fuel: that strait scarcely exceeds a mile in breadth, to the distance of fifteen miles, and may be said to divide Nova Scotia into two parts. I have seen them at a number of the unoccupied harbours of Nova Scotia near Brunswick, and Prince Edward's Island, setting and clearing their nets. The rule with them is to follow the fish and not the treaty, and their maxim is, where "Providence sends the fish we will send the fishermen".

That part of the treaty which humanely permits them to enter our harbours in distress, or for fuel, and water, is made a complete loop-hole for evasion. While one part of a crew is filling a water cask, the remainder are collecting bait, fishing or clearing decks of the offal so pernicious to the fisheries. I was informed of a vessel that carried two bowsprits, one for sea service, and another, which had been sprung for inshore work. With the latter the skipper could enter any of the harbours by night or by day. Similar schemes are well known and practised. Early in the spring season the harbours of the eastern states pour forth fleets of schooners and shallops, destined for the coasts of the British provinces.

attributed to the comparative lightness of its materials and the slight foundation prepared for it on the rock.

A tradesman on Ludgate-hill, Mr. Rudyerd, then undertook the construction of a tower wholly of wood. The form was that of a conical cask 70 feet high, with its lower ranges stiffened and strengthened with courses of masonry. But the chief improvement in this tower was in the contrivance of its foundations. The irregular and shelving surface of the rock was levelled into a range of broad steps. Into these steps a number of holes were drilled, in sets of three each, diverging slightly from above downwards; when the three being broken into one, left a cavity of a conical form, widest at its lower end. A compound wedge of iron being driven tight into this cavity, clamped together, and the interstices filled with melted lead, formed an immovable basis whereto the lower piles of timber or blocks of stone might be secured. This contrivance, introduced by Mr. Rudyerd in the Eddystone, has since been extensively employed in lighthouse and submarine works. The wooden tower bore the brunt of the weather from 1708 until 1755, when it unfortunately caught fire, and, after burning for several days, was totally consumed. Two years later Mr. Smeaton was engaged in founding the present edifice. On the 16th October, 1759, the lights were first shown, and have never since ceased to shine from sunset to sunrise. At first the only source of illumination was derived from tallow candles, which were continued long after the far better method of lighting by means of Argand burners had been extensively used. In 1807, at the expiration of a long lease, the Trinity Board came into possession of the Eddystone lighthouse, in which they at once substituted the oil lamps as they at present exist. The light is revolving, in a period of one minute, and is visible, in clear weather, for thirteen miles.

The successive improvements in the mechanical operation of lighting introduced during this period may be thus recapitulated. Up to 1784, open fires of coal, wood, or pitch, were generally used; in some few instances a system of tallow candles, protected by glass frames, being substituted. In that year M. Argand invented the oil lamp, known by his name. M. Borda, very shortly afterwards, contrived to adapt the invention to lighthouses. The Trinity Board were not insensible to the value of this discovery. A deputation, consisting of the deputy-master and several of the brethren, visited France to inspect the results, and reported so favorably, that it was speedily adopted in this country, and extended to Scotland and Ireland. In 1789, the suggestion of Buffon and Condorcet, for the manufacture of glass lenses of large diameters, was adopted for a lighthouse in the Isle of Portland; but, owing principally to the imperfect state of the glass manufacture, was found impracticable.

In 1811, Brewster invented the method of building large lenses in segments or zones of separate pieces, and recommended the adoption of these infracting or "dioptric" glasses in lighthouses. Nothing was done, however, until Fresnel set the example eleven years afterwards in

bow to him; and after he was clean gone, I sent my calves on shore, turned my washerwomen into boys again, and finished the trade of the *Peggy Ann*." "In another instance," said this 'cute old captain, "it was stark calm, and as the fog cleared up a little, I saw I was in the very jaws of a ship-of-war, and I almost gave up all for lost; however as they were lowering their jolly boat to board me, I skulled off to them, all alone, in my little punt, and asked the people of the ship if they know'd what was good for the measles. I could hear them laugh from stem to stern. A big fat man, they called the doctor, told me to keep my patients warm, and to give them hot drinks. It was enough; they took care not to come near the *Peggy Ann* that time."

By such and similar practices, the merchants who advance to the fishermen goods legally defrauded, the resources of the country are thrown away, and the morals of the people are contaminated. Aggressions and illicit trade are not confined to any part of the coast. During the fishing season, American vessels enter the harbours and surround the island of Grand Manan; they are scattered along the shores of the Bay of Fundy, and visit the bays, harbours, and inlets of Nova Scotia, Cape Breton, Prince Edward's Island and coast of Labrador. They are also very numerous in the Gulf of St. Lawrence, where they occupy the best banks, to the exclusion of British subjects. American fishermen have landed upon the shores, taken the bait, destroyed the nets, and even plundered the dwellings of the harmless inhabitants.

In 1829, France employed from 250 to 300 vessels in the fisheries on the British American coasts, and 2,500 sea-going fishermen, who by treaty are not permitted to become residents. Their vessels are from 100 to 400 tons burthen, and carry from 40 to 120 men each. In the above year, the Americans employed in their fisheries 1,500 vessels manned by 15,000 seamen, and took 1,000,000 quintals of fish and 3,000 tons of oil: at the lowest estimate. One quarter of these vessels fish within the bounds prescribed by the treaty: at that period the British catch was 2,000 of quintals annually. This estimate has recently been brought up to 1847, by Patrick Morris, Esq., Treasurer of Newfoundland, and who, in his recent work has ably set forth the pernicious effects of the concessions made to the French and Americans.

By this writer, the French catch is estimated, from official documents, at 1,000,000 quintals, the bounties at £125,000 sterling per annum, and the number of fishermen employed at 25,000. The American fishery is estimated to employ 37,500 men from 1,500 to 2,000 vessels, with a bounty of twenty shillings per ton, and the catch is estimated at 1,500,000 quintals.

The British fisheries on the coast of Newfoundland are estimated at 1,000,000 quintals. Perhaps the whole of the British North American fisheries including the Bay of Fundy, the coast of Nova Scotia, the Gulf, Gaspé, Labrador and Newfoundland fisheries, extending along a coast of about 3,000 miles, do not exceed in value £1,500,000 sterling, while two and a half millions of quintals are annually carried away from our

doors by the French and Americans. The most pernicious effect, as a national consideration, is, that by means of their bounties, the French and Americans are enabled to monopolize the bank fishery, the best nursery for seamen, while the British fishery is confined to boats along the coast.

It is impossible for the British and Colonial fisherman ever to compete with the French and Americans in these fisheries, so long as the latter are cherished and stimulated by bounties, that not only encourage the taking of fish in our waters, but draw away from us our best fishermen. This state of things can only be prevented by carefully protecting the privileges that still remain to us, by giving a bounty to our own fishermen, and by compelling foreigners to fish in the manner laid down by the treaty. Mr. Morris has proposed that the French and Americans be allowed to fish in all our bays and harbours provided they will discontinue their bounties. But the inhabitants of these provinces have been taught to know that such permission would not only drive them from the deep sea banks; but also prove fatal to their shore fisheries.

The French are restricted to fishing with common hooks and lines. Within a few years past they have invented, and now employ bultows of which some vessels have 10,000 fathoms. These bultows are most detrimental and will prove extremely destructive to the bank as well as to the inshore fisheries.

It has been supposed that the British armed vessels on the North American station are sufficient to check the evils so long complained of. The length of the coast including the bays and other indents to be guarded, exceeds 2,000 miles; a fleet of fifty sail would therefore be insufficient for the coast guard, and our men of war are much too large for this kind of service. Nor would the skill of their commanders enable them to contend with swarms of chary and ingenious fishermen, who shelter themselves under the terms of a treaty, which by numerous pretexts may be evaded.

It had long been hoped that the remonstrances annually sent from these colonies to the home government, would finally bring protection; but so late as the 19th of May, 1845, a despatch to Lord Falkland, then governor of Nova Scotia, states that, "After mature deliberation Her Majesty's Government deem it advisable for the interests of both countries, to relax the strict rule of exclusion exercised by Great Britain over the fishing vessels of the United States." Another despatch of the 17th of Sept., 1845, brought the unwelcome tidings that the Bay of Fundy "has been thrown open to the Americans, under certain restrictions." No policy could be more fatal to the welfare of Nova Scotia than this gradual yielding up of her maritime resources to the neighbouring states.

The abundance and cheapness of bread and other provisions enable the Americans to fit out their vessels at a lower rate than they can be supplied in any of the ports in the province. The tonnage and other bounties on fish granted by the eastern states, have stimulated their inhabitants in this branch of industry; and to their credit it may be added, they

are more skilful and indefatigable in taking and curing the finny inhabitants of the sea, than the general run of fishermen on our shores.

In 1839, the report of mackeral from the port of Halifax was only 19,127 barrels. In 1841, it was 35,917 barrels; and in 1842, 54,158 barrels. This increase has been ascribed to the employment of the revenue cutters, which also protect the fisheries, and by enforcing the restrictive regulations upwards of 160 sail of American vessels, which carried away 30,000 barrels of pickled fish annually, from the shores of Cape Breton have been kept at bay. The protective operations have had a corresponding influence upon the trade of the Americans to our waters; for in 1835 they had 6,108,211 tons of shipping employed in these fisheries, which in 1844 had decreased to 1,177,550 tons. Since that period the fisheries carried on by British subjects have continued to prosper. It has been deemed necessary thus briefly to advert to the state of our maritime privileges, for although they are important resources, their value can only be estimated by the benefit derived from them by British subjects and not by the citizens of foreign states.—*Gesner's Nova Scotia.*

NATIVES OF THE NICOBARS.

As far as my acquaintance with the natives of those islands and their language enabled me to carry on my investigations, during a stay of about two years amongst them, I do not think that the amount of the whole population spread or scattered over the Nicobar Archipelago, exceeds the moderate amount of 8,000 souls; of whom about 2,000 inhabit Carnicobar. Theressa, where I settled had a population of about 500 souls.

Being but slightly acquainted with few of the languages of India, I am not able to trace back through that channel the origin of the savages of those islands. The shape of their body, and particularly the features of the face, incline me to believe that they belong rather to the Hindoo race, than to the Burmese or Malayan. The hair is not of a deep but rather slight black, the eyes black, the nose aquiline, the body well shaped and proportioned; the stature exceeds that of the Burmese and Malays. The Nicobars are strong and capable of carrying very heavy burdens; I have seen some of them carrying without any trouble 200 cocoa-nuts. I had with me a large trunk filled with books which I was hardly able to move, one of the natives, to my great surprise, placed it upon his shoulders, and walked a good distance without being apparently fatigued.

All the inhabitants or aborigines belong to the same race. In the islands of the south it strikes me that there is some mixture of Malay blood: in those parts too the Malay language is very extensively, or rather, universally known.

I have much questioned the natives concerning their origin and the epoch when their ancestors landed first on those shores, but nothing satisfactory upon that important point could be obtained. The impression their different stories has left upon my mind is that from a very remote period the Nicobar Archipelago has been inhabited. It is hardly necessary to notice that their narrations upon that subject ended invariably in ridiculous and puerile fables, to which no credit can rationally be given. The absence of any monument whatever will probable leave the question for ever unsettled.

The language used by the Nicobarians is polysyllabic, abounds in vowels, and its pronunciation is harsh and far from being harmonious. After my arrival, when I heard the natives speaking, it appeared to me the sounds formed in the throat came out through the nose, and that the tongue, the usual instrument for producing distinct sounds, had very limited functions in their language. Young boys, as speaking generally more distinctly than grown up persons, were my teachers at first, until my ears had been practised to the hearing of such confused sounds.

The chief food of the Nicobarians is the pulp of the cocoa-nut, yams, plantains, papayahs, fowls, and above all pigs, which abound in those islands. It is not uncommon to see round a single hut, 40, 50, or 60 of them. The quantity of pigs killed and eaten is almost incredible, yet the Nicobarians, however voracious, separate the grease from the flesh, and keep it separately for culinary purposes: they never eat, or rather devour, anything but the flesh, and that for a single festival day. To satisfy my curiosity I saw and counted seventy-five large pigs killed for satiating the wolf-like appetite of the inhabitants of an inconsiderable district of my island. In this respect, the Chinese could not be a match for the Nicobarians.

Notwithstanding this immoderate use of food, the natives are seldom to be seen with those nasty and disgusting ulcers so common amongst the Chinese who belong to the poorer class. They are attacked with many cutaneous diseases, but not of the worst kind. I do not recollect having ever met with a single individual marked with the small-pox, a circumstance which induces me to believe that that disease is quite unknown in those islands. Twice a year almost all the inhabitants are attacked with a severe cough accompanied with fevers. The Nicobar islands are famous as a place where strangers are inevitably attacked with a most violent fever. My unfortunate companion fell a victim to its malignity. I narrowly escaped, and at last was compelled to go to Mergui on the Tenasserim Coast for the recovery of my most debilitated health; yet, I believe that, with a stock of good medicines, and especially quinine, one can live in those islands and successfully check the fever. The probable cause of the unhealthiness of the country is its uncultivated state, the number of streams stopped in their course by fallen and decayed trees and plants, and forming many swamps and marshes. Should the country be cleared of its jungle, so far as to afford a free circulation to the air, I have no doubt that the Nicobars

would not prove a more unhealthy place than other countries situated under the same latitude.

Although fever seems to spare partly the natives to a certain extent, the period of their existence is confined between narrower limits than that of Europeans,—it is exceedingly rare to see men living beyond 60 years, and women 50. From what I heard from the natives, population is certainly on its decline, and should Christian civilization not come to the help of those wretched savages, the time is probably not distant when they will have disappeared entirely, as so many wild tribes have done in different parts of the world.

The Nicobarians do not possess the slightest knowledge of the Supreme Being: they have no religious worship whatever, unless we give such a name to the superstitious ideas they entertain concerning the souls of the dead. They dread much the souls of wicked people, because they believe that after their demise, or the separation from their earthly abode, those souls retain their former malicious propensities, and endeavour to annoy the living. The Nicobarians believe that they can propitiate those evil spirits by making to them some offerings. It is customary among them to make great rejoicing on the occasion of the funeral of old people. The defunct, previously to his departure from this world, fattens a number of pigs and fowls, which are to be eaten on the occasion of his funeral. Next to this, in point of folly, the parents invariably bury with the corpse, all the small property belonging to the deceased, such as clothes, or rather rags, silver, knife, &c. This is the reason why the silver they get in exchange for their cocoa-nuts, or which they rob from vessels which happen to fall a prey to their rapacity, disappears almost completely, without affording them any profit.

The Nicobarians hold in dishonour simultaneous polygamy, but do not scruple at all about successive polygamy; that is to say, they never keep more than one wife at once, but they are easy in dismissing her for the slightest motive, and taking another. The dismissed wife is not considered dishonoured, but can easily find another husband. This is perhaps the principal reason of the comparative sterility of those women, notwithstanding their being of a corpulent and stout complexion. The females are universally far from being fair, and indeed they are probably the ugliest in the world; they shave their heads in order to add, as one would believe, to their natural ugliness and deformity.

The chief productions of the country are the cocoa-nut and the betel-nut. The cocoa-nut tree grows on the flat ground, chiefly along the shores and in the valleys. The nut is not of a large kind, but filled with a thick pulp which yields more oil than the nut of a longer kind. The yams of Nicobars are probably the finest in India, both in size and quality. Oranges are very abundant and remarkably sweet. Various sorts of plantains are to be found. I had taken with me some seeds of different kinds of vegetables, they grew remarkably well, and their taste appeared to me not inferior to those of the same kind I had eaten here. There is no timber of a large description, the hilly part of the

is covered with a high grass which the natives are in the habit of partially burning every year.

The Danes are, I believe, the only Europeans who have made an attempt to colonize those islands. In about the middle of the last century they settled at Camarta, but the little colony was soon swept away by fever. It is said that many Danish Missionaries died in that island; their tombs are still to be seen, of course in a very decayed state. When I went to that place I was so weak and exhausted, that, to my regret, I could not go near them. The Missionary efforts appear to have been entirely unsuccessful, although they laboured during a period of nearly thirty years. I have found among the inhabitants of that island no vestige at all of christianity. The only thing which is likely to perpetuate the remembrance of the Danish settlement, is the great number of wild cows which have multiplied from the stock brought over by the Danes.

In time of war the Nicobar islands have often afforded a shelter to vessels: sometimes they went there to get water. Admiral Suffrein when cruising in the Indian seas touched there several times. During the late war the French privateers anchored several times in the harbour of Nancowry. Up to this day the natives have retained many French words, mostly those coarse expressions which are chiefly used by sailors. I must say that they appear very quick in picking up a little of the languages used by the navigators who visit their islands; they understand besides Malay and a little of Portuguese, English, Hindostanee and Burmese.

The iron weapons they use are those they receive from foreigners in exchange for their cocoa-nuts, such as knives of different sizes and spears. Some of them possess muskets, but use them very little. They are much afraid of that weapon. A single man by pointing at them a musket would probably make them run away like a flock of sheep. Their favorite weapon, which is peculiar to them, is a sort of javelin, which they throw to a great distance of 50 yards; they often poison the point of the weapon, and the poison they use is a most subtle one.

From what I have seen of this people, I do not believe they are naturally cruel and fond of spilling the blood of their fellow-creatures. They have an aversion for such a deed, yet cupidity or the desire of procuring things they are fond of, can prevail upon the inhabitants of the southern islands to perpetrate murder. Silver, either coined or in other shapes, seems to have a peculiar attraction for them; and is the article which chiefly induces them to commit murder upon the crews of vessels they suspect to have on board money or silver things. Cowardice accompanies them in the execution of their nefarious designs. They wait for a moment when the poor sailors are not on their guard to fall upon them and despatch them as quickly as they can, but they would never dare to make an open attack even upon a native crew.

The following instance is an illustration of their way of attacking and murdering people. I vouch for the accuracy of the facts which I am about to relate, as I heard the story related to me by different natives on the very spot where the murder took place.

the ship's side tried to burn a blue light which went out again directly. The ship did not fall on her beam ends at once, but seemed to settle down on them. I saw the steam escaping, as I thought, from the water having put the fires out, and which seemed corroborated by what Owen (a leading stoker,) who was at the fires at the time, afterwards said in the boat.

The sea now occasionally broke over her forecabin and quarter. From the time she first struck till her masts fell, was about ten minutes.

The moon at intervals shewed out brightly from behind heavy clouds, in which Galita was plainly seen, and the coast of Africa indistinctly. I thought the island bore north-east 10 or 12 miles: this was whilst lying off the ship, for I had seen no land previous, the night being very dark.

I observed the gig stove, and from the breakers of the other cutter floating near us, suppose her to have been swamped. It now began raining; when after an hour or more being quite exhausted with pulling, and having been gradually drawing away from the ship, which I suppose was now nearly half a mile off, I considered the best, as in fact my only plan, was to run under the lee of Galita, and there if possible remain on our oars till I had daylight sufficient to land and seek assistance for the ship, supposing it to be inhabited.

The last I saw of the ship she appeared to be firmly fixed, and I thought might hold together some time.

With the unanimous opinion of the rest I now turned the boat's head to Galita, for which I ran under a close reefed main on the bumpkin, stepped as a foremast, steering with oars, occasionally seeing the island.

When we were within about two miles of the island the wind shifted in a very severe squall, with lightning, thunder, and heavy hailstorm, through which it seemed impossible the boat could live. I kept running with the wind which veered about. At one time I must have passed the ship, but the night was dark.

Tuesday, December 21st, when daylight broke, it showed the coast of Africa, distant eight or nine miles, towards which I ran, edging along all I dared both to look for a place to beach the boat and to get near Tunis; however, it became impossible for the boat to live longer, and seeing a little spot of sand apparently clear of rocks, and slightly sheltered by a reef running out, I determined to try and beach her, going forward to direct the gunner steering.

When within about 150 yards the surf threw the boat right over, and four of us reached the shore, the other four losing their lives in the attempt. I reached it with great difficulty, as the boat fell over me, and the gear got entangled round my legs.

The time must have been about 10 A.M., the last place about five miles to the westward of the Fratelli rocks.

Within a few minutes a Bedouin herdsman who had been most likely watching the boat from the heights, came and took us to his hovel, making a large fire, round which we threw ourselves on the ground; he thus being the means of preserving our lives. In the evening his family

Turning to the lighthouses of modern days, we find that the light-tower of Corduan, in the Bay of Biscay, is alike the first in point of time, the chief in height and range, and the example for all the improvements that have been successively made in the production and transmission of the warning rays of light to perplexed mariners. This tower was begun by Louis de Foix, in the reign of Henry II. of France, A.D. 1584, and finished in 1610, under Henry IV. It is situated at the mouth of the Garonne, about two leagues from Bordeaux, and serves as a direction to all the coast navigation of the Bay of Biscay, as well as to the large influx of shipping attracted towards the *embouchure* of the celebrated Languedoc Canal, which leads into the Mediterranean. The Tour de Corduan is 157 feet in height, and its light may be seen in a direct line for 25 miles in clear weather. Even on the Isle of Bone, 38 miles distant, a spectator, looking from some elevated point, may detect the blaze in the horizon; but the curvature of the ocean hides the light from the seaman on deck. Its light is intermitting, changing, at half-minute intervals, from white to red. Even the red rays, whose penetrating powers are far inferior to the white, are visible as far as 12 or 14 miles, except in hazy weather. From its erection down to 1780 the light of this tower was derived from the flame of wood. In that year M. Senoir substituted oil-lamps, with metal reflectors; and in 1822 M. Fresnel extended the range of illumination to the extraordinary distances we have mentioned above, by the addition of dioptric lenses, acting upon lamps of an improved and more powerful construction. The use of this and similar beacons upon that coast has been enormous. In the era of its first erection one of the Breton counts, who, as lord of the soil, possessed rights of trover and wreckage along the coast, is said to have boasted to a jeweller that a single black rock which stood in the tideway was more valuable to him than the best diamond in his caskets.

In England, the earliest lights and beacons along the coast were erected by individuals, to whom royal patents were granted, authorising them to collect certain tolls from the passing vessels to defray the cost of building and maintenance. The right of constructing those sea signals, however, rested solely with the crown; and, in fact, the far larger number were used only in times of warlike expedition, and for certain special purposes. The earliest lighthouse which still remains in existence was that of Lowestoft, built in 1609. Another at Hurstbarton Point on the east coast, was erected in 1665; and the light on the Scilly Isles dates establishment from 1680. Besides these there were two light-towers erected during this period at Dungeness and Orfordness, under patents granted by James I. to Sir R. Howard and Sir W. Erskine. These establishments remained private property, paying only a small quit-rent to the crown, until very recently, when the Trinity Board, under the act of 1836, purchased them both at a high price from their owners, Mr. Coke and Lord Braybrooke.*

The earliest of the above dates (1609) saw the final establishment of

* A clear explanation of this condition of some of our Lighthouses was given by Mr. Labouchere, and will be found in our August number.

that board under whose control all the English lighthouses, and almost all the authority over English commerce and navigation, was ultimately to pass, namely, the Brotherhood of the Trinity House. This institution first commenced in the time of Henry VII., as a private confraternity of seamen and shippers. In the sixth year of his successor, Henry VIII., the brotherhood received their first charter as a recognized, "Guild," under the title of the "Brotherhood of the Trinity-house of Deptford le Strand and St. Clement." The charter commences with the curious declaration, that "On account of the sincere and entire love, and likewise devotion, which we bear and have towards the most glorious and undividable Trinity, and also St. Clement the Confessor," his Majesty gives and grants licence for the establishment of a guild, or perpetual fraternity, to certain individuals and their associates, "as well men as women." Early in Elizabeth's reign this charter was confirmed, and again in the 36th year of that sovereign, when, for the first time, those powers were granted which have subsequently led to the authority of the Trinity Board over all lighthouses. In that year the Lord High Admiral of England, Charles Howard of Effingham, formerly relinquished all claim, on his part and on the part of the crown in the rights, privileges, and emoluments for "buoyage, ballastage, and beaconage," which were thenceforth assigned to the Trinity Brotherhood. James II., in confirming this charter extended the powers of the fraternity, and organized the Board pretty much as it still exists. His first patent appoints "Our trusty and well-beloved Samuel Pepys, Esq., secretary of our Admiralty of England, to be the first and present master of the said Guild, Fraternity, or Brotherhood." The charter was again enrolled and confirmed by George II., and in the 6th and 7th session of William IV., the Trinity-house received enlarged powers, under which the whole number of lighthouses on the English coast, many of which had up to that time remained private property, under grants or leases, were re-purchased, and amalgamated under a uniform administration. The only exemptions to the rule of the Trinity Board are in the instances of certain harbour lights, which still continue in the control of local trustees.

The dates of the several patents granted to the Trinity-house begin with 1680, when Charles II. authorised the erection of the Scilly Light. Two other patents were issued by that monarch, for the light beacons of Spurm and Tynemouth Castle. Anne granted one patent to the Trinity-house for Milford Haven; George I. granted four; George II. seven; George III. fifteen; George IV. seven; and William IV. five.

The year 1656 saw the foundation first laid for that celebrated structure the Eddystone Lighthouse. Mr. Winstanley was the architect, and the tower stood 60 feet high in a sea, whose waves, during heavy storms, dash to an altitude of nearly 100 feet above the lantern. The light was first exhibited in 1698, and burnt steadily for five years, when the whole edifice was swept away by a furious gale in November, 1703, while Mr. Winstanley was himself within it. This lighthouse was formed of courses of stone, bound together with timber, and its destruction is

attributed to the comparative lightness of its materials and the slight foundation prepared for it on the rock.

A tradesman on Ludgate-hill, Mr. Rudyerd, then undertook the construction of a tower wholly of wood. The form was that of a conical cask 70 feet high, with its lower ranges stiffened and strengthened with courses of masonry. But the chief improvement in this tower was in the contrivance of its foundations. The irregular and shelving surface of the rock was levelled into a range of broad steps. Into these steps a number of holes were drilled, in sets of three each, diverging slightly from above downwards; when the three being broken into one, left a cavity of a conical form, widest at its lower end. A compound wedge of iron being driven tight into this cavity, clamped together, and the interstices filled with melted lead, formed an immovable basis whereto the lower piles of timber or blocks of stone might be secured. This contrivance, introduced by Mr. Rudyerd in the Eddystone, has since been extensively employed in lighthouse and submarine works. The wooden tower bore the brunt of the weather from 1708 until 1755, when it unfortunately caught fire, and, after burning for several days, was totally consumed. Two years later Mr. Smeaton was engaged in founding the present edifice. On the 16th October, 1759, the lights were first shown, and have never since ceased to shine from sunset to sunrise. At first the only source of illumination was derived from tallow candles, which were continued long after the far better method of lighting by means of Argand burners had been extensively used. In 1807, at the expiration of a long lease, the Trinity Board came into possession of the Eddystone lighthouse, in which they at once substituted the oil lamps as they at present exist. The light is revolving, in a period of one minute, and is visible, in clear weather, for thirteen miles.

The successive improvements in the mechanical operation of lighting introduced during this period may be thus recapitulated. Up to 1784, open fires of coal, wood, or pitch, were generally used; in some few instances a system of tallow candles, protected by glass frames, being substituted. In that year M. Argand invented the oil lamp, known by his name. M. Borda, very shortly afterwards, contrived to adapt the invention to lighthouses. The Trinity Board were not insensible to the value of this discovery. A deputation, consisting of the deputy-master and several of the brethren, visited France to inspect the results, and reported so favorably, that it was speedily adopted in this country, and extended to Scotland and Ireland. In 1789, the suggestion of Buffon and Condorcet, for the manufacture of glass lenses of large diameters, was adopted for a lighthouse in the Isle of Portland; but, owing principally to the imperfect state of the glass manufacture, was found impracticable.

In 1811, Brewster invented the method of building large lenses in segments or zones of separate pieces, and recommended the adoption of these infracting or "dioptric" glasses in lighthouses. Nothing was done, however, until Fresnel set the example eleven years afterwards in

France, where the majority of lights are now constructed upon that system. Only a few, comparatively, of the British lighthouses have to the present day abandoned the use of the reflectors, or "catoptric" lights. Yet the relative power of the dioptric lamps is two to one, and its economy nearly three to one over the reflecting burners, and they transmit no less than 360 times the light of an unassisted flame. On the other hand, there is some additional cost in the erection of the lenses. Some attempts have been made to employ the still higher illuminating powers of coal gas; but hitherto the difficulties have not been surmounted. The chief obstacle is in the danger of fire, and the liability of disorder in the apparatus, which has to be reduced to a small compass within the narrow limits of the light towers, and entrusted too often to the custody of men who are incompetent to conduct the operation. Nevertheless, gas was used in a lighthouse at San Salvore, on the coast of Istria, as early as 1818, and found to give a better light than oil, with a saving of 900 florins a-year. It was also employed in the Dantzic tower, which had formerly been lighted by an open fire of coal, consuming three times as much as the gas apparatus. Wax candles were afterwards employed in the same lighthouse, and 1080lb. weight burnt in the year. Oil flames urged with oxygen gas, and the brilliant "Drummond" or lime light, were subsequently subjected to experiments, with a view to their introduction as sea lights. But the same mechanical difficulties and dangers stood in the way of their adoption, and it was further discovered that a light from a small luminous point, however brilliant, was not so appropriate as that from the extensive surface of the Argand burners, of which, no less than twenty-four were sometimes used in a single lantern.

Sir David Brewster also proves that the ordinary quantum of light from the oil lamp is quite sufficient for all maritime purposes in clear weather. Yet the lime light, which casts a distinct shadow at eighteen miles distance, might be advantageously introduced as an assistant in hazy weather. At present the obscurity of fogs is compensated as far as possible by gongs, bells, and guns, which are rung and fired at intervals from the beacon towers.

As the lighthouse stations multiplied, it became necessary to contrive some distinguishing mark by which the pilot might determine the one he sought. Various forms and changes of the light were, therefore, introduced, accomplishing nine varieties—viz., the fixed white, revolving white, revolving red and white, revolving red and two whites, revolving white and two reds, flashing, intermittent, double fixed white, double revolving white. As the red rays penetrate little more than half as far as the white; no light must consist of red alone, especially as even white will look red through a dry haze. The other colours are less penetrating still, and therefore wholly unfit. According to the rule laid down by Mr. Stevenson, no two lighthouses within 100 miles of one another should have the same characteristics. The catastrophe of the *Great Britain* steamer is a sufficient evidence of the necessity of observing this rule, as it arose solely from a misapprehension of the light on the Calf

of Man. Now that lighthouses are becoming so thickly multiplied, even the nine variations we have mentioned become insufficient; and efforts are making to invent means for making numeral figures visible at great distances when traced in light. Already it is stated that the numbers can be distinguished at a distance of twelve miles.

A parliamentary committee was appointed in 1844, chiefly by the perseverance of Mr. Hume, to investigate the condition and administration of the British lighthouses, and published a voluminous report as the result of their labours. As usual, great mismanagement was proved to exist, combined with an uncertainty and inconsistency in the charges and tolls levied upon shipping, which must have occasioned considerable injury to our commerce. The worst results, however, were found to arise from the system of private management which still existed, either under old grants from the Crown, or in virtue of some very inconsiderate leases by the Trinity Board. The private owners in all cases thought only of making a large revenue from their monopoly, and in many instances had omitted to adopt the improvements in lighting universally employed elsewhere, and had occasioned some severe losses of shipping by their criminal negligence.

There was one light-tower in the Isle of Man, on the Scotch coast, which belonged to the Duke of Portland, and so late as the year 1810 was lighted by the primitive contrivance of an open coal fire. In that year, two frigates of the royal navy, the *Pallas* and the *Juno*, mistook for this light the flame from a lime kiln on the shore of East Lothian, and were lost in consequence. Several lives were sacrificed, besides the two ships, which were worth £200,000. The lighthouse has since passed into the keeping of the commissioners of northern lights, and is provided with the proper Argand and reflecting apparatus. The purchase-money paid to the duke, together with the outlay requisite for the introduction of an improved system of illumination, amounted to £70,452. Proofs of inattention, less in degree but equally unjustifiable, were discovered in other lighthouses under private management. It was proved also that while the cost of maintenance were far less than the navy lights erected by the Trinity Board, the revenues collected were per light somewhat superior, and the net income to the proprietors and lessees £60,392 per annum, drawn from the commerce of the country.

Some curious anomalies were also exposed in the levying of tolls on vessels, for the supposed advantage of the lights. Thus throughout England the duty of $\frac{1}{2}$ d. to $1\frac{1}{2}$ d. per ton was levied on every vessel passing a lighthouse, the rate varying with every light, which had its distinct rules and system of collection. In Scotland, on the other hand, a ship that passed one light paid a certain rate per ton for the whole number, and no more, if it went the entire circuit of the coast. In the voyage from Leith to London, therefore, a vessel of 142 tons would pay £1. 9s. $7\frac{1}{2}$ d. for the Scottish lights, though it passed only one of them; and would have £4. 17s. 3d. charged for the nineteen English lighthouses passed between Berwick and London, A Yarmouth vessel also, bound

for the Thames, but driven by stress of weather to the Frith of Forth, would pay for the series of Scotch lights, though it had used none, having only been driven into their waters. In Ireland, the charge was made at certain rates on the tonnage of every ship entering an Irish port, whether it had passed a lighthouse or not.

In consequence of the report of the committee in 1834, the act 6 and 7 William IV. was passed. Under this statute all the private rights in lighthouses were extinguished, and bought up by the Trinity-house at a cost of no less than £1,182,546, such was the presumed value of these indispensable monopolies. Of this sum Mr. Coke had £20,900 for Dungeness lighthouse, and Lord Braybroke £37,896 for the one on Orford Point. The Smalls light cost more than four times as much—£170,468. But the worst instance was that of the Skerries lighthouse in the Irish Channel. Queen Anne had granted a patent, in 1715, to Sutton French, Esq., to erect a light-tower off the coast of Anglesea, for the benefit of the Irish shipping, and levy a toll of 1d. per ton on all passing vessels, in recompense of the same. The immense increase in Irish commerce had rendered this light incredibly profitable, as it was kept up at a cost, probably, of under £500 per annum, and the returns were £20,000. For a long time Mr. Morgan Jones, the representative of the first possessor, resisted all the efforts of the Trinity-house to make him surrender his claim, or even furnish any account of his receipts, alleging that his patent was granted in perpetuity, and without rent or fee to the Crown or other authority. The stringency of the late act, however, compelled a production of the accounts, and after much litigation a jury assessed the compensation to Mr. Jones at £444,980, being 22 years' purchase of £20,042 annum revenue. This transaction closed in 1842, and since then all the English coast lights are under the management of the Trinity-house, and quite free from private claims. Some steps have also been taken towards reducing the tolls which are a heavy burden on commerce, and being levied per voyage, fall with unjust severity on the coasting and packet trade. When the debt for purchase has been extinguished, further remissions are promised.

In Scotland, the earliest lighthouse was that of Cambræ, on Little Cambræ Island, built in 1756, and rebuilt in 1793. The Leith light was established in 1780, and that on Cape Wrath, completed in 1796, is visible for 26 miles, being the widest range of any British light. The Bell Rock, finished in 1811, at a cost of £61,331; and the Skerryvore lighthouse in Argyleshire, completed as lately as 1844, for which the estimated cost was £31,509, are the works of most interest in an engineering point of view. Enormous difficulties were overcome in the construction of these edifices, and both remain triumphs of British skill and science. Their details are, however, too well known by the memoirs of their respective engineers, Alan and Robert Stevenson, to justify a repetition. The height of the Bell Rock tower is 100 feet, and that of the Skerryvore 138 feet 5 inches. In the lantern of the former there were twenty-four parabolic reflectors, each 18 inches across the tips, and

"At 6:30 P.M., passing through an illuminated sea: the sea also became suddenly smooth, with quantities of sea-weed floating by. At 10 an extraordinary luminous appearance to the northward, as that of a full moon rising or setting: the water of a thick white, with a very dark horizon, wind north-west, hazy blue sky, with passing clouds."

"January 25th.—I have looked at the bottle of sea water, but its luminous appearance is entirely gone. The animalculæ, I suppose, are dead. This clearly proves that they must have been alive when drawn up in the bucket: the three days in the bottle have killed them I fear."

LOSS OF THE KESTREL STEAMER.

THE *Kestrel* left Halifax on Thursday the 19th ult., having, besides the crew, twelve passengers, three of whom were for Sydney, Cape Breton. Owing to the thick fog she did not reach the latter place until the afternoon of Saturday, where, having landed her passengers and taken in coals, she proceeded on her way to Newfoundland.

On Saturday night the weather was very hazy, the wind blowing from the south-west. This continued all day on Sunday, the fog growing more dense as the vessel neared the Newfoundland coast. Captain Meagher, was on the deck the greater part of the time, exercising the utmost vigilance and keeping up a good look-out on the part of the crew. The course steered was one point more off the shore than he had ever allowed in any of his previous voyages, and which he imagined would take him clear of every danger. The ship, after leaving Sydney, averaged about $9\frac{1}{2}$ knots per hour, and every one on board fully expected to be in St. John's early on Monday morning. All went on well till half-past ten o'clock on Sunday night, when, without the slightest previous intimation of danger, the captain at the time being on deck, and a sharp look-out kept from the fore-castle, the ship going ten miles an hour, struck against some rocks, which subsequently proved to be inside of the much dreaded bay of St. Shotts. The engine was instantly stopped and backed, but no effect being produced by this, the captain ordered the fore-mast to be cut away. The sea at this time was very heavy, and breakers on every side almost prevented the hope of saving the lives of those on board.

Captain Meagher then ordered a boat to be lowered, and into this four passengers jumped, two of them being females, and with two of the crew pushed off from the wreck, with a dead line attached to establish a communication with the vessel, should they be able to effect a landing. This, however, was found impracticable, owing to the tremendous surf running, and after a time they cast loose the line and made out to sea, and next morning at eight o'clock, ran the boat on shore on the beach of St. Shotts, having suffered dreadfully from cold and exhaustion during the night, the females having left the wreck as they came from their beds.

All this time the vessel was beating with terrific violence upon the rocks, and threatened every moment to go to pieces. At length an escape was effected. The carpenter, Mr. William Elspie, succeeded in throwing a handspike into the cleft of a rock, and by means of a rope attached climbed up it to a place of safety. A hawser was then got on shore, and the passengers and crew drawn up from the wreck, which immediately afterwards

Of the original cost of the early lighthouses no accurate account has been kept. Of course the local difficulties occasioned an enormous difference in the necessary outlay on each. The most expensive seems to have been the Bell Rock, £61,331.* The Isle of Man Beacon, exhibiting three lights, cost £20,823; the Cape Wrath, £14,506; and the Barr-head, £12,575. The engineering improvements of modern days have much diminished the expense of their construction: twelve lighthouses erected by the Trinity Board between 1820 and 1834, cost £47,124, or on the average, £3,918 a piece. In the way of receipts, the Bideford Bar light stands lowest; its annual return having been £350, while the cost of maintenance was nearly £800. It is the only losing concern in the whole lighthouse system. Eddystone has four keepers regularly employed; about 12 others two; and the rest one. The consumption of oil varies from 1,200 gallons per annum at Beechey Head to 64 at Pakefield.

France, in 1845, possessed 153 lighthouses—77 in the Channel, 47 on the west coast, 24 in the Mediterranean, including Algiers, and 5 in Corsica. No less than 93 of these were on the lens or dioptric principle. By an *ordonnance* of the Emperor, in 1806, the lighthouses were placed under the control of the Minister of Travaux Publiques, and defrayed out of the Exchequer. The cost was about £110 annually per light.

America, at the same date, possessed 272 lights of various descriptions on her seaboard. For the cost of them £83,333 was charged upon the public service of the year, amounting to a little more than £300 for each establishment.—*Daily News*.

THE SORELLI ROCKS.

[THE Sorelli rocks, like the Esquerques in the same sea have acquired a fatal celebrity from the loss they have occasioned of two British men-of-war, attended by the loss of life also to a fearful amount. The circumstances attending each are singular, and each convey a lesson to the navigator that cannot be too deeply impressed on his mind of not making too free with such dangers. "If the Esquerques exist we are on them," were the words of the captain of the unfortunate *Athenienne*: no sooner uttered than the ship struck and all was lost. This occurred about mid-day, while that of the *Avenger* happened at night, the darkness of which increased the horrors of the scene that ensued. The following brief accounts of this event have been given by the survivors.]

My last watch on Monday, December 20th, 1847, was that from 6h. to 8h. P.M. When I relieved the deck the course given me by Lieut. Marryat was E.b.S., going 9 knots, under double reefed topsails and reefed foresail with square yards; weather squally with lightning and a heavy sea on, steam, (one boiler, I think). This continued, and I left

* The most expensive is the Skerryvore which cost £93,000, a complete account of which will be found in our last volume.—ED.

the same orders with Mr. Betts, (second-master,) at 8h. p.m., the usual lookouts (three) were on; the night was dark. The captain had been walking part of the watch, and the master had also been on deck.

In the gun-room we had all been sitting talking together (except the master who was engaged in the captain's cabin with charts), when about four bells in the first watch and just as we had retired to our cabins, we were startled by a sudden jerk, which Lieut. Marryat and myself immediately called out was a gun adrift, but whilst yet speaking, she gave a kind of heavy lazy roll as if filling, and having from her impetus in passing over a rock torn a hole in her bottom, her whole frame seemed shaken and every beam loosened. We all ran on deck, some without coats, myself without a cap, and on our arrival found every body either up or coming up, and the water they said was rushing in forward.

The Captain who was standing on the starboard paddle box, immediately gave the order "Out with the boats." This was the only order given, and the last I saw of Captain Napier.

I believed, as circumstances instantly justified, that the ship was fast sinking, and I did not think there was much probability of having time to get any boats down, or that they could live in the heavy sea on, and I firmly believe everybody on board thought there was neither time nor chance for the boats: and I also consider if it had not been for her striking again whilst apparently in the act of sinking, thus giving the boat time, that not a life would have been saved.

These being my apprehensions, I immediately called out for men to come and lower the cutters, according to the captain's orders, my only fear being that she would sink before I could effect what I wished, viz. to get them both together, and lay off the ship ready to give what assistance I could. Mr. Otley, master's assistant, being employed about the starboard cutter, I crossed the deck, when I met Mr. Larcom the gunner, coming up with his clothes on his arm, he having been in bed when she struck: I ordered him to come with me, and after some difficulty I got the boat lowered; a few other hands assisting.

I did not succeed in even forming a boat's crew. Just as the boat touched the water and before the falls were unhooked; and the ship struck again heavily and began swinging broadside to the sea, falling over to starboard at the same time, which, from the cutter I was in being the port one, made her come with great violence against the ship's side; but we pushed her off, being also protected by the position of the ship at the moment. I pulled away some yards from the ship, and then kept her head to the sea with the oars, pulling hard to keep her in that position, ready to save as many as the boat could live with, in the event of the ship either sinking or breaking up.

The ship having swung as I shoved off, was now broadside to the sea, with her head towards Africa: falling at the same time to windward with her deck exposed, her fore-mast, main-mast, and mizen-topmast falling over the starboard side and, the funnel on the gangway by which many must have lost their lives, and that paddle-box boat probably stove, upon which I had last seen the captain. Some one on board as the boat left

the ship's side tried to burn a blue light which went out again directly. The ship did not fall on her beam ends at once, but seemed to settle down on them. I saw the steam escaping, as I thought, from the water having put the fires out, and which seemed corroborated by what Owen (a leading stoker,) who was at the fires at the time, afterwards said in the boat.

The sea now occasionally broke over her forecastle and quarter. From the time she first struck till her masts fell, was about ten minutes.

The moon at intervals shewed out brightly from behind heavy clouds, in which Galita was plainly seen, and the coast of Africa indistinctly. I thought the island bore north-east 10 or 12 miles: this was whilst lying off the ship, for I had seen no land previous, the night being very dark.

I observed the gig stove, and from the breakers of the other cutter floating near us, suppose her to have been swamped. It now began raining; when after an hour or more being quite exhausted with pulling, and having been gradually drawing away from the ship, which I suppose was now nearly half a mile off, I considered the best, as in fact my only plan, was to run under the lee of Galita, and there if possible remain on our oars till I had daylight sufficient to land and seek assistance for the ship, supposing it to be inhabited.

The last I saw of the ship she appeared to be firmly fixed, and I thought might hold together some time.

With the unanimous opinion of the rest I now turned the boat's head to Galita, for which I ran under a close reefed mizen on the bumpkin, stepped as a foremast, steering with oars, occasionally seeing the island.

When we were within about two miles of the island the wind shifted in a very severe squall, with lightning, thunder, and heavy hailstorm, through which it seemed impossible the boat could live. I kept running with the wind which veered about. At one time I must have passed the ship, but the night was dark.

Tuesday, December 21st, when daylight broke, it showed the coast of Africa, distant eight or nine miles, towards which I ran, edging along all I dared both to look for a place to beach the boat and to get near Tunis; however, it became impossible for the boat to live longer, and seeing a little spot of sand apparently clear of rocks, and slightly sheltered by a reef running out, I determined to try and beach her, going forward to direct the gunner steering.

When within about 150 yards the surf threw the boat right over, and four of us reached the shore, the other four losing their lives in the attempt. I reached it with great difficulty, as the boat fell over me, and the gear got entangled round my legs.

The time must have been about 10 A.M., the last place about five miles to the westward of the Fratelli rocks.

Within a few minutes a Bedouin herdsman who had been most likely watching the boat from the heights, came and took us to his hovel, making a large fire, round which we threw ourselves on the ground; he thus being the means of preserving our lives. In the evening his family

made us some maize cake, and gave us some sour milk. Other Arabs came in, bringing the same; this appearing to be all they lived on. We again lay down on the ground bruised and wet, in company with goats, dogs, and cows! The wind was blowing very strong, and the rain falling heavily, the night bitterly cold. I had contrived to make him partly understand my situation, and my wish to get quickly to Tunis, when after some trouble and promises of reward he agreed to be our guide next morning to Biserta.

Wednesday, December 22nd.—At about 9 A.M. we started. Our road lay at first over a ridge of high hills, from which we saw nothing of the ship. We then crossed a sandy plain covered with the cactus, which badly wounded my feet. Afterwards passed through some wooded ravines, and over an extensive marsh intersected with brooks. Towards the evening a horseman overtook us, who seeing the tired condition of the steward, his feet bleeding, and also suffering from a gash on his head received whilst landing, carried him for about four miles, and when his road lay in a different direction, gave our guide his gun, and a piece of silver for us.

The night being now dark, and all of us exhausted, we stopped at a Bedouin encampment, and asked for shelter, which after some time was granted. We had been walking about ten hours, and got over more than thirty miles of broken ground, having stopped once for a few minutes to pick the berries off some arbutus trees, being our only food since breakfast till late that night. We were wet, coverless, and all except myself shoeless.

They gave us some maize cake and milk. Seeing horses I made them understand that they would be well paid if they let us have them to take us on to Biserta that night, when they made signs that the gates were locked, but that we should have them in the morning.

Thursday, December 23rd; at daylight we set out, but none of us could walk from swollen feet. After a ride of about fifteen miles, sometimes fording streams, and at others nearly up to our horses' knees in mud, we arrived at the house of our Consular agent, an Italian, about 10 A.M. whom I immediately asked to prepare a boat for Tunis.

The boats here were all too small to send to the wreck, and for which the wind was foul, with a fresh breeze. About 1 P.M. I started for Tunis, and arrived about 11 P.M. at the Goletta, where I landed, and sent to our Vice-Consul, who after some difficulty, owing to the port regulations, came to see me, and tried to pass me through the gates; but did not succeed. He promised to get two vessels ready, as unfortunately there were no steamers here at the time of our arrival. In one I meant to have sent Mr. Larcom to Galita, and the other I intended to take to the wreck.

Friday, December 24th: at daylight, when the gates opened, I entered a carriage, and drove up to our Consul-General, who ordered his agent to forward my views in every way, sending his son to hurry matters, whilst he communicated with the Bey, who ordered his squadron to sea.

Whilst my boat was preparing (a Maltese sponnara, with a crew of twelve men, selected for their knowledge of the coast,) I wrote two letters, one to Malta, and the other to Lisbon, stating the loss of the ship. Not having slept for four nights, and being thoroughly tired would account for the vague statement I sent. I then breakfasted, and started about 2 P.M., having put on board such provisions as my hurried departure admitted of—tea, coffee, biscuits, and spirits, in case I should be fortunate enough to save anybody.

Saturday, December 25th, on my passage, and at daylight on Sunday I was close to the spot where the *Avenger* was wrecked, although there was no broken or discoloured water to mark it. I cruized about till satisfied she had either broken up or sunk. Whilst here I saw two steamers, (*Lavoisier* and *Pasha*,) come up and cruize about Galita together: a merchant ship, and a gun-boat of the Bey's, with which I communicated, asking them to take me to Galita, which I wished to examine personally, as also to speak the steamers, my own crew with whom I had great trouble refusing to do so. They declined, when I asked them to take half my crew out, and lend me two men, to which request I also received a negative; so I returned to Tunis, arriving at about 1 A.M., on the morning of Tuesday, December 28th. Sir Thomas Read took all to his house, and made it a home for us. I went on board the French steamer, *Lavoisier* to thank the captain for his assistance, and also waited on the governor for the same purpose.

[Want of space prevents our following the subject by shewing the effect of the current on the remains of the *Avenger's* wreck: this we shall do in our next.—ED.]

THE MANDANE'S LOG.—*Marmion's Hurricane.*

SIR.—After perusing in your valuable publication the account of the Storms the *Marmion* experienced in the North Atlantic last December, I have been induced to send you extracts from my private log, of the days corresponding to hers, and some other days after. If I had known you received such reports, I would have been more particular at the time, so that I could have given you the distances; but I hope that will not lessen their value, as regards the changes of wind, and the state of the barometer, which I took a correct account of at the time.

After my arrival at Liverpool I found my barometer stood ten parts higher after comparing it for twenty-eight days with the barometer in the Exchange Rooms, set every morning at 9 o'clock. The ten parts I now call index error to subtract, which will have to be taken from the statements of the barometer in the given days' logs. I hope by sending you the above remarks and extracts, that I am not encroaching on your valuable time and space, for I hardly think myself capable of contributing my mite, only as our friend Mr. Piddington says, they must have material to work with; and we have many matters yet to work out, particularly with regard to the barometer; and the science of profiting by hurricanes.

There is a suggestion I should like to make, and that is, for those offering themselves, to undergo an examination for qualification as masters, to have

a knowledge of the Law of Storms, as laid down by the sailors' friends—Reid, Piddington, Redfield, &c.

I remain, &c.

G. H. HUTCHINSON;

Commander of barque *Mandane*.

H.	Courses.	Winds.	S.	Wthr	Bar.	Remarks, &c., Saturday 16th.
A.M. to 4	E.N.E.	} WNW to W.S.W.	6			Threatening appearance all round to the westward.
8			7	om	30-19	
Noon	...	...	8	omr	30-07	Lat. acct. 40° 19' N., Long. acct. 36° 42' W., gale increasing, ship
P.M. 4	E.b.N.	W.N.W.	9	...	29-76	running under double reefed top-
8	B.		bc	29-70	sails and foresail.	
Midt.	...		bcq	29-84		
H.	Courses.	Winds.	S.	Wthr	Bar.	Remarks, &c., Sunday 17th.
A.M. to 4	E	W.N.W.	9	bcql	29-82	Squally at intervals, very heavy squalls and threatening. Lat. acct.
8	E.b.S.		8	bcqp	29-90	
Noon	F.S.E.	N.W.	..	bcp	30-01	40° 59' N., Long. 33° 18' W., gale moderated, a good deal, out one reef
P.M. 4	S.E.b.E.	N.N.W.	7		30-06	of top-sails, all requisite sail set.
8	...		cop	30-16		
Midt.	E.		oc	30-23		
H.	Courses.	Winds.	S.	Wthr	Bar.	Remarks, &c., Monday 18th.
A.M. to 4	E.	N.N.W.	6	co	30-23	Steady breezes, sky quite over- cast, Lat. acct. 41° 55' N., Long.
8			...	5	...	
Noon	E.N.E.	W.	6	co	30-20	acct. 29° 52' W., very unsettled appearance, furled top-gallant sails
P.M. 4	...	...			30-17	and double reefed fore top sail.
8	...	W.S.W.	7	bc	30-12	Breeze quite lulled at times, and then coming in gusts.
Midt.	...	...			30-04	
H.	Courses.	Winds.	S.	Wthr	Bar.	Remarks, &c., Tuesday 19th.
1	E.N.E.	W.S.W.	7	bc	30-04	A.M. Moderate gale.
2	...	...		
3	...	...		
4	E.b.N.	...			29-95	
5	...	...		
6	...	...		
7	...	...		
8	...	...			29-89	Clear and fine appearance to the south and east, but dark cloudy ap-
9	...	...				pearance from west round to north.
10	...	...			29-86	
11	...	...			'85	
12	...	...			'82	Lat. obs. 43° 37' N., long. by chron. 27° 22' W., lat. acct. 43° 35'
1	...	S.W.b.W	8	bcq	'77	N., P.M., long. acct. 27° 14' W. In-
2	...	...			'74	creasing breeze and squally, double
3	...	...			'73	reefed the main topsail.
4	...	...			'72	
5	...	...			'71	
6	...	W.S.W.		g	'71	Dark gloomy appearance from north-west to north and north-east,
7	...	...			'71	but clear sky to south and west.
8	...	...			'70	
9	...	...			'69	
10	...	...			'67	
11	...	S.W.			'67	12h. do. weather, running under
12	...	...			29-62	double reefs and foresail.

H.	Courses.	Winds.	S.	Wthr	Bar.	Remarks, &c., Wednesday 20th.
1	E b.N.	W.S.W.	8		29·60	A.M. Wind coming in very severe
2	...	S.W.	8·9	coq	·55	gusts, and continuing for a few
3	...	...	10		·53	minutes and then lulling again.
4	...	...		bc	·49	4h. close reefed the topsails and
5	...	...	9		·50	reefed the foresail.
6	...	...				9h. Quite a fine appearance to the
7	...	...	7			south and west and not looking
8	...	...			29·40	quite so bad to the north-westward
9	...	...	6	c	·42	set reefed mainsail.
10	...	...			·40	Lat. obs. 45° 35' N., lat. acct. 45°
11	...	W.S.W.	8		·33	4' N., long. acct. 24° 21' W.
12	...	...			·29	P.M. 1h. 30m. wind shifted from
1			8	bc		W.S.W. to north-west, very severe
2	E.		10	q	29·38	squalls, furled the reefed courses.
3				bcqp		Kept her before the wind, it veer-
4	S.E.	N.	...		·48	ing to N.N.W. and north, very
5	up W.b.N.		10		·66	cross troubled sea making it diffi-
6	off		8		·74	cult to get her steered, hove to on
7	W.S.W.		7	bc	·79	starboard tack.
8			6			7h. Fine and clear, but a very
9					·87	cross sea.
10						8h. bore away and set double
11						reefed topsails and fore sail.
12			5	bc	29·94	Fine appearance.

H.	Courses.	Winds.	S.	Wthr	Bar.	Remarks, &c., Saturday 23rd.
4	E.	S.b.W.	8	co	20·87	A.M. barometer at midnight 22nd
8					·84	29·92, close reefed, and reefed the
12	E.b.S.	S.	9		·78	foresail.
4	...	...			·64	12h. Lat. acct. 48° 32' N., long.
8	up E.S.E.	...	10	cor	·48	acct. 15° 57' W. Furled the fore-
Midt. off E.b.N.	...	...	...		29·35	sail and fore-topsail.

Continued heavy gale with constant rain.

M.	Courses.	Winds.	S.	Wthr	Bar.	Remarks, &c., Sunday 24th.
4	{ up E.S.E. off E.b.N.	S.	11	corq	29·12	4h. A.M. very heavy squalls with
8	{ up E.b.S. off E.N.E.	S.b.E.	10	cor	29·02	constant rain.
9			6	co		8h. gale a little moderated.
9 30			3		29·97	9h. a great deal more moderate.
9 45			0		29·02	9h 45m. quite calm, ship tumb-
10					28·92	bled about in every direction, with
10 20					·96	the heavy cross sea. When the
10 30					29·01	barometer rose, I expected the
10 45					28·88	wind to come from the north or
11					28·89	north-westward, but it continued
11 30					29·00	calm until 11 o'clock, when a light
12			0		29·02	breeze came from N.N.W., for a
2			0	co	29·00	short while and fell calm again, lat.
3					29·05	acct. 49° 15' N., long. acct. 76° 10'
4	S.E.b.E.	W.N.W.	2	bc	29·04	W.
8	E.S.E.	...			29·24	8h. P.M. continued calm, with
9	...	...			29·28	heavy cross sea.
12	...	...	6	b	29·42	4h. a light breeze came W.N.W.

gradually increased to No. 6 by midnight.

During the whole of the gale the sea was more from the south-east than the wind. Midnight fine and clear except to the east and north-eastward.

H	Courses.	Winds.	S.	Wthr	Bar.	Remarks, &c., Monday 25th.
4	E.S.E.	W.N.W.	6	bc	29.52	4h. A.M. Clear and fine under
8	...	W.S.W.	5	oo	29.62	whole sails.
Noon.	E.	S.	8		29.56	8h. In top-gallant sails.
4	E.S.E.	S.b.W.	9		29.42	12h. Lat. acct. 49° 30' N., long.
8					29.33	acct. 13° 29' W.
Midt.	S.S.W.				29.32	4h. P.M. Close reefed the top sails and furl'd the courses. Dark cloudy appearance all round to the westward and looking very threatening.

H.	Courses.	Winds.	S.	Wthr	Bar.	Remarks, &c., Tuesday 26th.
4	E.S.E.	S.W.	10		29.28	4h. A.M. Strong gale.
8	E.	W.b.S.		cq	29.31	8h. Brought the ship to the wind on the starboard tack,
11						Lat. acct. 50° 12' N., long. acct.
12	upSWbS off S.	W.		cqp	29.42	10° 41' W.
4	up S.W. off S.S.W.		8		29.73	Bore away to the south-east and set double reefed topsails and fore-sails.
6	S.E.					Fine clear weather.
8	...				29.90	
12	...		6	b	30.09	

LUMINOUS SEA.

The following account of a Luminous Sea appeared in the last number of the Transactions of the Bombay Geographical Society. In a volume for 1839 will also be found a full dissertation on this interesting subject.

"*Moozuffer*, 25th, January, 1849.—I cannot permit this opportunity to pass by without describing to you, in the best way I am able, a most extraordinary phenomenon which we all witnessed on the night of the 23rd instant. It would indeed require a far abler and more scientific pen than mine to do justice to it—however, I hope you will take the will for the deed, and pardon all imperfections. At 6.30 P.M. observed a very remarkable milky appearance in the water, the colour assuming the same tint as a shallow mud-bank or sand-bank. The sea, which had a few minutes before been turbulent and confused, suddenly became smooth and placid, and the air felt cold and chilly. In the space of an hour the whole verge of the horizon, as far as the eye could reach, was most brilliantly illuminated. The vessel shortly after entered a vast body of water of the most dazzling brightness, and of a highly phosphorescent nature; in fact it looked as if we were sailing over a boundless plain of snow, or a sea of quicksilver. The surface of the ocean for miles in extent was unbroken—not a wave or ripple disturbed it, and the waters seemed so dense and solid, that the *Moozuffer* actually appeared as if she was forcing her way through molten lead. That part of the surface which was broken by the stroke of our huge paddle-wheels, resembled small patches of thick milk or cream. The sky, and everything around us, was quite lighted up by it. The weather was peculiarly fine, though the atmosphere was damp and moist: the wind was light from the north-west, stars over head clear and light, but those of a lesser

altitude were rendered dim by a haze. The horizon nearly the whole time was dark, and ill-defined; a few thin cumuli, floating very low down, occasionally swept past; but no other peculiarity in the atmosphere could be perceived until about ten o'clock, when a singular light was seen in the heavens to the northward, as if day was dawning, or the full moon was either setting or just rising. It strongly resembled a faint Aurora Borealis, being of a roseate tinge near the horizon, and was a steady fixed light, but without those coruscations which are usually observed in the higher latitudes. It extended along the horizon in the form of a segment of a circle from north-west to north-east, and the altitude of the centre of the arch was 15° . It continued visible until a few minutes after midnight, when it disappeared as sudden as it appeared, and the sea about the same period lost also its luminous quality.

“The light in the heavens, and the lightness of the sea, were, however, again seen for about ten minutes at two A.M., when both became once more invisible. The horizon, except where the light appeared, was everywhere dark and indistinct, and could not be made out: the sky and sea were apparently blended together. The phenomenon was altogether as beautiful as it was extraordinary. I could have stood on the deck gazing at it the whole of the night, and should not have felt fatigued. There was something grand and sublime in such a scene as I have faintly endeavoured to portray. No language of mine could ever do justice to it. We were upwards of six hours in passing through this vast body of luminous water, and during that time we ran a distance of upwards of forty miles. Our Lat. on first entering it was $16^{\circ} 13' S.$, and Long. $61^{\circ} 51' E.$, so that our position was exactly abreast of the entrance to the Persian Gulf and in the fair channel to the Red Sea. From the fact of our having seen immense quantities of sea-weed floating past whilst in this luminous water, I should conclude the accumulation of this and other decayed matter, whether vegetable or animalculæ, was the sole cause of this phosphorescent appearance; and that all this matter might have been swept out of those narrow seas by strong currents, which meet no doubt about this spot; and I am still more inclined to believe this is the case, as a luminous stream of water has often been noticed nearly in the same Lat. and Long., and about the same season of the year. I saw it once in the *Victoria*, when I commanded her in the month of January 1842, whilst on our voyage from Aden to Bombay; but the sea was not nearly so bright then as this time. The colour to the water so strongly resembled a shoal that I stopped the engines, and took several casts of the lead, but could get no bottom with 80 fathoms of line. Several buckets of water were drawn up by Dr. Wilson, of the *Moozuffer*, but nothing whatever could be seen. It seemed as clear as crystal; on taking a bottle of it, however, in the dark, it became highly phosphorescent, giving out a strong light. It was full of animalculæ; some were in the shape of most minute globules of gelatinous substance, and others were not unlike small worms, about an inch in length, and about the size of a fine hair. On removing the bottle to the light, the animalculæ became instantly invisible. The light seen in the heavens I cannot account for, unless it was the low fleecy clouds which hung on the verge of the horizon that reflected back the brightness of the sea; but why the whole sky should not have assumed the same appearance, I cannot imagine. It continued to shine in one spot only and disappeared at the same time the sea lost its brilliancy. I send you an extract of the log in which the luminous appearance in the sea and heavens is noticed:—

"At 6:30 P.M., passing through an illuminated sea: the sea also became suddenly smooth, with quantities of sea-weed floating by. At 10 an extraordinary luminous appearance to the northward, as that of a full moon rising or setting: the water of a thick white, with a very dark horizon, wind north-west, hazy blue sky, with passing clouds."

"January 25th.—I have looked at the bottle of sea water, but its luminous appearance is entirely gone. The animalculæ, I suppose, are dead. This clearly proves that they must have been alive when drawn up in the bucket: the three days in the bottle have killed them I fear."

LOSS OF THE KESTREL STEAMER.

THE *Kestrel* left Halifax on Thursday the 19th ult., having, besides the crew, twelve passengers, three of whom were for Sydney, Cape Breton. Owing to the thick fog she did not reach the latter place until the afternoon of Saturday, where, having landed her passengers and taken in coals, she proceeded on her way to Newfoundland.

On Saturday night the weather was very hazy, the wind blowing from the south-west. This continued all day on Sunday, the fog growing more dense as the vessel neared the Newfoundland coast. Captain Meagher, was on the deck the greater part of the time, exercising the utmost vigilance and keeping up a good look-out on the part of the crew. The course steered was one point more off the shore than he had ever allowed in any of his previous voyages, and which he imagined would take him clear of every danger. The ship, after leaving Sydney, averaged about $9\frac{1}{2}$ knots per hour, and every one on board fully expected to be in St. John's early on Monday morning. All went on well till half-past ten o'clock on Sunday night, when, without the slightest previous intimation of danger, the captain at the time being on deck, and a sharp look-out kept from the fore-castle, the ship going ten miles an hour, struck against some rocks, which subsequently proved to be inside of the much dreaded bay of St. Shotts. The engine was instantly stopped and backed, but no effect being produced by this, the captain ordered the fore-mast to be cut away. The sea at this time was very heavy, and breakers on every side almost prevented the hope of saving the lives of those on board.

Captain Meagher then ordered a boat to be lowered, and into this four passengers jumped, two of them being females, and with two of the crew pushed off from the wreck, with a dead line attached to establish a communication with the vessel, should they be able to effect a landing. This, however, was found impracticable, owing to the tremendous surf running, and after a time they cast loose the line and made out to sea, and next morning at eight o'clock, ran the boat on shore on the beach of St. Shotts, having suffered dreadfully from cold and exhaustion during the night, the females having left the wreck as they came from their beds.

All this time the vessel was beating with terrific violence upon the rocks, and threatened every moment to go to pieces. At length an escape was effected. The carpenter, Mr. William Elspie, succeeded in throwing a handspike into the cleft of a rock, and by means of a rope attached climbed up it to a place of safety. A hawser was then got on shore, and the passengers and crew drawn up from the wreck, which immediately afterwards

filled and fell over. The captain was, with the mate, the last to leave the wreck. He succeeded, through the exertions of his crew, who by the delay caused by the act of saving the mail bags, lost everything save the clothes they had on. It is to be hoped that this attention to their duty will not be lost sight of by the authorities, but that some mark of good will may be shown without delay to these poor shipwrecked men.

We are happy to learn that the *Kestrel* was insured to the amount of £10,000 sterling; but the inconvenience and loss to the company must be considerable.

EXAMINATION OF MASTERS AND MATES.

A List of the Masters and Mates in the Merchant Service, who have voluntarily passed an Examination, and obtained Certificates of Qualification for the Class against each assigned, under the Regulations issued by the Board of Trade, up to 20th August.

t. tons. * As Mate. † As Second Officer. ‡ As Apprentice. ¶ As Seaman.

The figures next to the class express the age of the individual.

MASTERS.

June 30th.—W. R. Tucker, 3rd class, 25 age, Diana,* 574 t., 190320, Plymouth.—2nd July.—S. Richmond, 2nd, 54, Pearl, 517 t., London; R. M. Miller, 3rd, 40, Duke of Wellington, 560 t.; J. A. Sinkley, 2nd, 48, Success,* 621, t., 92018; R. Peter, 2nd, 35, William and Mary, 536 t.; W. H. Parc, 2nd, 41, Owen Glendower, 1000 t.—3rd.—R. W. Gilbert, 3rd, 38, Soho,* 492 t., 2111, London.—5th.—J. C. Carter, 2nd, 32, Tiger,* 331 t., 323890, London; J. L. Kirby, 2nd, 28, Morayshire, 420 t., 26378.—6th.—H. C. Elliot, 3rd, 41, James T. Foord, 790 t., London.—9th.—R. Jordan, 2nd, 26, Robert and Isabella, 264 t., 163482, South Shields; A. Shaw, 2nd, 27, Owen Glendower,* 1000 t., 22297, London; H. Badeock, 3rd, 35, Edith, 81 t.; J. Bannister, 2nd, 24, Carshalton Park,* 441 t., 29206; W. J. Cooper, 2nd, 32, Mary,* 290 t., 10627; T. G. Chapman, 3rd, 32, Annette Gilbert, 293 t.; J. Coppell, 3rd, 33, Annette Gilbert,* 293, t., 187922; C. Scott, 2nd, 40, Aboukir, 816 t.; J. Sturgeon, 3rd, 26, Derwent, 220 t., 46165; R. Richards, 3rd, 38, Royal George, 560 t.—10th.—W. S. Jones, 3rd, 29, Stonehouse, 78 t., 127360, Plymouth; J. Patterson, 3rd, 41, Stonehouse, 78 t., 119973; J. Bowyer, 2nd, 25, Adam Lodge,* 574 t., 259913, Liverpool; R. Noonan, 1st, 35, Mary, 389 t., South Shields.—12th.—T. Bisset, 1st, 38, Hambro Packet, 125 t., Leith; E. Seater, 3rd, 27, Himalaya,* 477 t., 257198, London; M. J. Lay, 2nd, 36, Tudor, 1064 t.; J. Norie, 2nd, 31, Eliza,* 384 t., 394191; J. Doxford, 2nd, 56, Packet,* 258 t., 31146; F. W. Harris, 2nd, 29, Monarch,* 1450 t., 30518; P. Skelton, 2nd, 27, Brisk,* 267 t., 457812; T. B. Thurtell, 1st, 38, Wigrams, 287 t.; W. Parfitt, 1st, 25, Wigrams, 287 t., 20459.—18th.—R. Dow, 2nd, 25, Helen,* 257 t., 154893 Dundee.—16th.—P. Palot, 2nd, 24, Rose, 89 t., 25796, London; C. Wiltshire, 2nd, 33, Monarch,* 1450 t., 29352; T. H. Withers, 2nd, 33, Cressy, 720 t.; I. Durrant, 3rd, 32, Royal George,* 583 t., 6391; J. D. Bell, 2nd, 37, Cressy,* 720 t., 17124; D. Brown, 2nd, 34, Monarch,* 1450 t., 34482.—17th.—T. Taylor, 1st, 37, Petrel, 846 t., Liverpool; T. Power, 3rd, 29, Jane, 72 t., Plymouth; J. W. Gill, 2nd, 26, Prince of Wales, † 1350 t., 27738.—18th.—F. Putt, 1st, 23, Indus, 368 t., 182024, Glasgow.—19th.—H. J. Gimblett, 3rd, 31, Earl of Hardwick,* 1000 t., 34334, London; R. Thomson, 1st, Royal Saxon, 322 t., Leith; W. H. Pope, 1st, 32, Alfred,* 1350 t., 27877, London;

G. M. Holland, 2nd, 32, Sovereign, 426 t., 153557, Hull.—20th.—J. Cheyne, 2nd, 22, Magellan,* 353 t., 1218886, Liverpool; J. Buchanan, 1st, 35, Anna, 1098, t.—23rd.—G. F. Snart, 2nd, 28, Prince of Wales,* 1244 t., 32986, London; W. Fraser, 2nd, 23, Cressy,* 634 t., 17711.—26th.—J. Toynbee, 2nd, 30, Gloriana,* 1100 t., 32983, London; F. Lay, 2nd, 23, Tudor,* 1064 t., 33873; D. Allen, 2nd, 25, Kingston,* 341 t., 29951; D. M'Leod, 2nd, 33, Queen, 1244 t.; J. T. Hislop, 3rd, 27, Lismoyne,* 506 t., 328393.—27th.—R. Spencer, 2nd, 41, Ottawa, 345 t., Liverpool; J. Pennack, 3rd, 40, Cosmopolite, 138 t., 111358, South Shields; G. Venns, 2nd, 27, Home, 406 t., 79429, Newcastle.—30th.—J. Macfarlane, 1st, 30, Nile, 379 t., Glasgow; J. H. Young, 2nd, 41, Bolton, 541, t., London; H. Hall, 2nd, 32, Collingwood,* 743 t., 19116; E. J. Cox, 2nd, 27, Robert Clive,* 163 t., 67760; W. Reid, 2nd, 28, Dartmouth,* 733 t., 329499; J. Toohig, 2nd, 28, Robert Henderson,* 368 t., 272876; W. F. Sewell, 2nd, 39, Ottoman, 196 t., Yarmouth.—31st.—D. McDonald, 2nd, 25, Timandra,* 341 t., 55205, Newcastle; T. Reed, 2nd, 24, Susan,* 348 t., 152888, South Shields.—August 1st.—J. M. Taylor, 2nd, 24, Mary,* 207 t., 185131, South Shields.—2nd.—J. Molison, 2nd, 33, Collingwood, 743 t., London; A. E. Stafford, 2nd, 26, Englishman,* 135 t., 158071; F. J. Mercer, 3rd, 31, Robert Clive, 163 t.; H. Thomas, 2nd, 35, Druid, 250 t.—3rd.—D. Wilson, 2nd, 43, Sarah, 729 t., Liverpool; J. Patterson, 2nd, 41, Stonehouse, 78 t., 119973, Plymouth.—6th.—L. Brown, 2nd, 44, Earl of Hardwicke, 967 t., London; G. T. Cadge, 2nd, 24, Countess of Durham,* 264 t., 327382; W. Litton, 2nd, 47, Tigress, 427 t., 456564; E. G. Sweetman, 2nd, 32, Agnes,* 691 t., 435252; D. Macdonald, 1st, 45, John Gray, 578 t., Glasgow; R. Methven, 2nd, 33, Charlotte, 700 t., London.—7th.—C. C. Consitt, 3rd, 43, Devonshire, 832 t., London; N. Beazley, 2nd, 27, Lively,* 264 t., 180481, South Shields.—8th.—J. H. Bowman, 2nd, 32, Sarah,* 259148, Liverpool.—9th.—D. Rickards, 2nd, 33, Advocate,* 296 t., 10981, London; A. Sharp, 2nd, 39, Thames,* 440 t., 8244; D. Barclay, 2nd, 30, Worcester,* 636 t., 185398.—10th.—S. Flood, 2nd, 28, Enchantress,* 284 t., 232417, Liverpool.—13th.—H. A. F. Scowcroft, 2nd, 24, Severn,* 536 t., 25174, London; J. Love, 2nd, 29, Cleopatra, 130 t.; S. Lovett, 2nd, 39, Lady Sale, 200 t.; E. W. Beazley, 2nd, 48, Orestes, 680 t.; J. Russell, 3rd, 29, Ramona,* 177 t., 2693; H. W. Norris, 3rd, 30, Devonshire,* 832 t., 32974.—14th.—C. Taw, 3rd, 30, Elizabeth, 133 t., Plymouth; W. Kelley, 1st, 38, Dalriada, 1504 t., Liverpool; C. Hewitt, 1st, 29, Jane Augusta, 948 t., 211037; R. Dunn, 2nd, 29, Expert,* 428 t., 11530, South Shields; G. M. Holland, 1st, 32, Sovereign, 426 t., 153557, Hull.—15th.—C. Howard, 2nd, 23, Eclipse,* 540 t., 18939, London; J. H. Bigg, 2nd, 29, Ben Lomond, 946 t., 23191; J. R. Aps, 2nd, 25, Somersetshire,* 455 t., 87911; I. Stadden, 2nd, 28, Harpley,* 547 t., 24167; R. C. Jeffares, 2nd, 39, Harry Lorrequer, 985 t.; C. F. Tibbs, 2nd, 30, Simlah, 597 t., 18622.—18th.—G. Clark, 2nd, 27, Montrose, 387 t., 35977, Leith.—20th.—G. L. Yorston, 2nd, 27, Hector, 296 t., 395108, London; H. J. G. Tomlins, 2nd, 28, Simlah, 597 t., 305076; J. Walsh, 2nd, 28, Concord, 323 t., 309885; J. Burnard, 3rd, 40, Bubona, 212 t., 102698.—21st.—J. Williams, 1st, 34, Dunhody, 458 t., Liverpool.—23rd.—R. W. Prance, 2nd, 46, St. Michael, 400 t., London.—27th.—J. R. Williams, 2nd, 28, Lady, 315 t., London; H. R. Fraser, 2nd, 29, Jane Glassen, 834 t., 25826.—29th.—J. Shearer, 1st, 32, Jane, 333 t., Yarmouth.—30th.—A. M. Ames, 2nd, 35, Lady Ann, 96 t., London; J. Ollard, 2nd, 28, Thomas Arbuthnot, 621 t., 13123; T. Harley, 2nd, 26, Ann Stainton, 257 t., 180480, South Shields; W. Jacks, 2nd, 29, Roman Empress, 282 t., 224006.—31st.—J. Manning, 3rd, 38, London, 99 t., 247945, Plymouth; G. M. Williams, 2nd, 23, Alice, 156 t., 27490, Milford.

The following Certificates were not received at the Board of Trade until after the publication of the July List.

June 12th.—J. Oliver, 3rd, 38, Mary, 155 t., 49823, South Shields.—14th.—A. Finlayson, 3rd, 46, Volusia, 450 t., London.

MATES.

June 30th.—J. Keir, 2nd, 24, Scotland, 562 t., 211003, Glasgow.—2nd July.—C. E. Walch, 2nd, 19, Wellington, † 588 t., 344629, London.—13th.—J. Nicholson, 3rd, 24, Menam, 472 t., 412981, London.—16th.—W. Howard, 3rd, 21, Aboukir, 816 t., 329119, London.—19th.—A. Thornhill, 2nd, 23, Pottinger, 1400 t., 388059, London; C. Horton, 2nd, 20, Waterloo, 898 t., 17783.—23rd.—G. R. Duncan, 2nd, 21, Severn, 536 t., 377081, London.—26th.—C. Fleury, 2nd, 22, Science, 381 t., 169056, London; E. J. Pashley, 3rd, 20, Aboukir, 816 t., 328385; H. Bake, 3rd, 24, Lismoynne, 505 t., 186612; J. Duncan, 2nd, 20, Coromandel, 765 t., 404664, Glasgow.—August 6th.—J. Ralph, 2nd, 20, Eclipse, † 540 t., 19597, London; J. Balchin, 3rd, 3', Nelson, ¶ 603 t., 170632.—9th.—J. Harvey, 3rd, 29, Elphinstone, 425 t., 208193, London.—16th.—W. J. Carless, 3rd, 22, Equestrian, 800 t., 344847, London; N. W. Whitehead, 3rd, 24, Tropic, 389 t., 15856.—20th.—J. Bull, 3rd, 22, Protector, 330 t., 34420, London.

Errata.—Henry Faithful, described as Master, Second Class, should have been Second Class Mate. Wilson Cuming Bennett, described as Master, Second Class, should have been Second Class Mate.

BEACON ON THE GOODWIN SANDS.—Several men under the direction of the Trinity Board have been employed on the Goodwin about mid sand. It appears the object is to force, by means of atmospheric pressure, several lengths of cylindrical iron tubes into the sand until some solid material is arrived at; each length of tube is about 10 feet long, and $2\frac{1}{2}$ in diameter; but although six lengths securely fastened, have been made to penetrate a depth of about 60 feet beneath the surface no foundation has yet been reached. It is in contemplation, as soon as a sub-stratum sufficiently firm is found to place several tubes of similar dimensions at approximate distances, and to erect a beacon thereupon. Should the attempt succeed, and sanguine expectations are entertained that it will, there exists little doubt of the important effect of a structure of this kind, in diminishing the amount of danger to shipping of a spot proverbial for its disasters and fatal consequences to life and property.—*Civil Engineers Journal*. In several numbers of this work we have alluded to the subject of these operations on the Goodwin, on the principle of Dr. Potts, commencing with our volume for 1846.—ED.

Algoa Bay, April 3rd, 1849.

AGULHAS LIGHTHOUSE.—Dear Sir.—I passed the Agulhas Lighthouse about noon on Monday (Mar. 26), distance four miles,—consequently had not an opportunity of seeing the light; but the house is a fine building, quite equal, and even superior to many of our lighthouses on the English coast, and a noble land mark for the anxious mariner.—And next to Agulhas, I do not know any part of the coast where there is a light more required than on Cape Recife. I had no idea the reef extended so far off the Cape. I rounded the reef about 9 A.M.: on Thursday, and had a good view of it.

I am, &c.,

F. ANDERSON,

Commander of ship Emily.

[A Cape paper says, "This desirable construction has been set about with creditable promptitude. The Phoenix in her next return to Algoa Bay, we understand, will take up the first working party, who will commence operations as soon as they arrive at Port Elizabeth. Captain Piddington will probably follow in the steamer's subsequent trip.]

List of Wrecks and Casualties that have occurred within Ten Miles

Date.	Vessels' Name	Belong to.	Ton	Cargoes.	From.	To.	Masters.
1795—March 2	Peggy	Pwllhelly	....	Provisions	Ireland	London	Lloyd
Nov. 6	Ann	Hartland	....	Ballast	Penzance	Wales	Galswothy
1797—April 4	Happy Return	Penzance	....	Coals	Swansea	Falmouth	Nichols
May 2	Mary	Ireland	....	Ballast	Dublin	Kinsale	Carthey
1799—Feb. 11	Mary	London	....	Provisions	Waterford	London	Fenwick
1800—Sept. 24	Hope	Plymouth	....	Ballast	Dublin	Plymouth	Cloke
Dec. 6	James	Dublin	....	Coals	Chester	Dublin	Kelly
1803—Sept. 11	Nancy	Southamp'tn	....	Oats	Waterford	South'pton	Nowlan
1806—Sept. 15	.....	"	....	.....	.....	.....	.....
1807—Nov. 20	Ann	Milford	....	Genrl cargo	London	Bristol	Phillips
"	Mamone	Aberdovey	....	"	London	Bristol	Richards
"	Bollinda, store	"	....	Stores	"	"	Cardeu
1808—Nov. 18	Enterprise	Newcastle	....	Ballast	Spain	Portsm'th	Davis
1809—June 2	Alpha	Sunderland	190	Coals	Swansea	Rochester	Kerson
Sept. 11	Fanny	"	....	Genrl cargo	Waterford	Chichester	.....
1811—Jan. 16	Janet	Kincardine	....	Barilla	Canary I.	London	Yule
Nov. 26	Commerce	Arundel	....	Provisions	Waterford	London	King
Nov. 28	Hebe	Bideford	....	"	Waterford	London	.....
Dec. 4	Magnet	Greenock	....	Wool	Spain	London	.....
1815—April 21	Active	Banff	70	Prns & linen	Cork	London	.....
April 21	Mary	Padstow	....	stves, limest	Plymouth	Padstow	French
1819—Nov. 21	Narrow esc: pe	"	30	.....	Bude	Portreath	Metheral
1820—March	Mary Ann	Dungarvon	50	.....	.....	.....	.....
1832—Dec. 31	Duch Somerset	"	....	Ballast	.....	.....	.....
1840—Feb. 5	Liverpool	Woodbridge	....	.....	.....	.....	.....
" 6	Thomas	Ipwich	....	Salt	.....	.....	.....
Novem.	General	Stockton	....	.....	.....	.....	.....
1841—Mar. 5	Brilliant	Penzance	70	Slates	.....	.....	.....
				Oats	.....	.....	.....
1842—May 20	L. Willoughby	Conway	60	.....	Liverpool	Torquay..	.....
1843—Feb. 3	Julianna	Exeter	130	Salt. Furtre	.....	.....	.....
" 4	Erata	"	....	.....	Newport	.....	.....
April 2	Oriel	Falmouth	1000	.....	Quebec	London	Lewes
June 18	Jeunc Cupidon	"	....	Iron	Cardiff	Nantes	.....
1844—Dec. 14	Miuerva	St. Ives	130	Copper ore	.....	.....	Quick
1845—Dec. 20	Young Eagle	Milford	....	Grain	Ireland	.....	Jenkin
1846—Oct. 22	Samaritan	"	....	Genrl cargo	Liverpool	Constn'ple	Davis
" 8	Spartan	Dartmouth	....	Iron	.....	.....	.....
Dec. 8	Marq Abercorn	Londonerry	160	Timber	Quebec	London	.....
1848—Feb. 20	Amorous	Newcastle	....	Ballast	Nantes	Cardiff	Stron'man

Vessels discharged at Newquay, since Jan. 1841.

No.	Tons.	Men.	Year.
122	5243	378	1841
143	6133	446	1842
145	6607	461	1843
149	6930	492	1844
131	6362	434	1845
149	6863	488	1846
184	7970	587	1847
197	9490	678	1848
219	10126	723	1849

Principally laden with Coals.

There are 21 Seine Boats, 7 Seines, and 133 men employed in the fishery; 20 or 30 men follow the pilotage, but no Trinity pilots to the port.

The exports are Lead, Iron, and Corn.

The foundation of the South Pier laid on the 12th of July, 1832, and completed in October, 1833. Tram wood or railroad commenced at Newquay 21st July, 1845, and intended to be carried over to Par harbour.

Population of Newquay in 1831, was nearly double.

East or West of Newquay, Coast of Cornwall, between 1795 and 1849.

Wind.	Where lost or stranded.	Remarks.
	^{m.}	
	Cranstock Bay 4 W.	Crew saved, vessel sold.
	Holywell 6 "	Ditto ship got off.
	Perran Bay 8 "	Crew drowned, vessel went to pieces.
	St. Eval Cliff 8 E.	Crew never seen, vessel went to pieces.
	Perran Bay 8 W.	Five of the crew and 23 passengers drowned, 5 saved and 4 passengers—ship total loss.
	Mawgan Porth 6 E.	Crew drowned, ship went to pieces.
	Perran Bay 8 W.	Ditto saved ditto
	Ditto 8 "	Ditto ditto
	Holywell 6 "	Part of hull of vessel—noting known of her.
	Crantock 4 W.	Three drowned, 2 saved—vessel went to pieces.
	Perran Bay 8 "	Crew saved, ship got off.
	Ditto 8 "	Ditto, vessel sunk after being got off.
	Mawgan Perth 6 E.	Ditto, ship sold.
	Ditto 6 "	Ditto, ditto
	Ditto 6 "	Ditto, ship got off.
	Ditto 6 "	Ditto.
	Ditto 6 "	Ditto, vessel went to pieces.
	Newquay Beach	Ditto, ship got off.
	Ditto "	Four Frenchmen drowned, 8 saved, and one Englishman.— This vessel had been taken by a French privateer.
	Perran Bay 6 "	The captain and two men drowned, scarcely anything saved
	Newquay "	Crew saved, vessel went to pieces.
N.W.	Fistal Beach 8 W.	Ditto, cargo landed.
N.N.E.	Perran Porth 8 "	Ditto, vessel blown away.
	Mawgan Porth 6 E.	Ditto.
N.N.W. 10	Ditto "	All drowned.
N.W.	Holywell 6 W.	Crew came on shore, having left their vessel at Holywell with masts cut away.
	Off Newquay 10 "	Crew drowned
W.S.W. 8	Watergate Bay	Ditto, dismasted five miles north of this, and brought up in Watergate Bay, drove on shore.
W. 7	Gannell 3 W.	Ditto saved, ship got off.
N.W.		} Crew saved, cargo landed, vessel sold.
N.W.b.N. 10		Ditto, vessel went to pieces,
W. 8	Watergate Bay	Ditto, vessel struck on sunk rock, off Eval Head, and sunk in deep water.
N.N.W. 7	Eval Bay 8 E.	
SSF. to ENE		
N.W. 11	A little outside of pier	Total wreck, all drowned.
N.N.W. 11	Brodethan steps 8 E.	Eight drowned, two saved.
	Parkhead 10 "	Crew saved, vessel and cargo lost.
	Crantock head 4 W.	Four drowned, ship and cargo sold.
N. 10	Constantine bay 11 E.	Vessel got off, crew saved.

* These two vessels were observed endeavouring to work off the lee shore, and the latter in a very damaged state as to spars and sails. They were both induced to run for the harbour of Newquay, by means of lighted tar barrels placed on the brow of the hill without the harbour, and as they neared the pier the barrel was removed to the outer pier end, enabling them to run in with very trifling damage. Had it not been so well managed both must have become wrecks.

The present tidal harbour is quite inefficient on account of the heavy breaking seas, which extend a long distance off the entrance in north and N. Westerly gales. Had they constructed a pier, as proposed by Mr. Treffry, at Montfore Rock, of 2000 feet in a E.S.E. and W.N.W. direction, they would have possessed a harbour, available at all times with 3½ fathoms, at low water sufficiently capacious, for all local trade.

TABLE BAY.

THE Table annexed to this paper, and which has been compiled from the official returns of the Port Office, affords results which, in whatever light they are viewed, must be considered of a highly gratifying nature. What will strike every one on first examining it is the increase in the number and tonnage of vessels which have entered our port,—an increase so steady that it can only be attributed to permanent causes connected with the general prosperity of the colony, and so great that few ports in the world, even in the most thriving portions of the Western Continent, can afford a parallel to it. In twenty-five years, the number of vessels annually entering the Bay has more than trebled, the tonnage has more than quadrupled. The regularity and amount of this increase will become more apparent, on dividing the whole term into periods of five years. From 1824 to 1828 inclusive, the arrivals were 1,147, with a tonnage of 259,019; from 1829 to 1833, the numbers were 1,386 vessels and 364,742 tons; from 1834 to 1838, 1,931 vessels and 579,533 tons; from 1839 to 1843, 2,369 vessels and 686,503 tons; from 1844 to 1848, deducting the 142 guano vessels, 2,710 arrivals, with a tonnage of 800,278. There is no reason to doubt that this increase will continue, in at least, the same ratio, and that a fair estimate, of a most encouraging character, may be formed from these figures, respecting the future improvement of our commerce.

The other results shown by the table are not less satisfactory nor less important. They prove, by the clearest evidence, how little the Port of Cape Town merits the imputation of being an unsafe harbour. The Port of Havana is perfectly landlocked, and esteemed one of the safest harbours in the world; yet in a single hurricane, a few years ago, as many of our readers doubtless remember, the list of disasters (including the loss of several men-of-war.) was longer and heavier than that which comprises all the casualties in Table Bay during twenty-five years. In that period, out of 9,615 vessels which have entered the Bay, only 28 have been lost or seriously injured,—not one-third per cent. of the whole number; and of those casualties, the greater number, perhaps we may say, nearly all, were owing to carelessness, or (what amounts to the same thing) deficiency in ground tackle. And to this the fact, that in 14 of the 25 years, namely in 1825 '27, '29, '32, to '36 inclusive, '38, '39, '41, and '43 to '45 inclusive, there were no casualties of any description; and we may well ask, how many ports, in any quarter of the globe, so much frequented, can offer more favorable returns?

These facts have only to be generally known abroad, to shipowners, shipmasters, and insurance offices, in order to remove impressions injurious to the prosperity of our port. Nor will it diminish this favorable effect if they shall at the same time be informed that constant efforts are making to render Table Bay one of the most convenient harbours, at least in the southern hemisphere, for landing and shipping goods, taken in water, repairing, and the other ordinary needs of shipping. Hardly a month passes which does not see some addition made to the facilities of this nature. Neither the Government nor the Municipality have been careless or niggardly in these matters; and private enterprise has not been wanting. The figures in the first columns of the table demonstrate that this judicious liberality has met with an abundant return.

Statement of the Number and Tonnage of all Vessels that have entered Table Bay annually, from the year 1824 to 1848:—and the number of vessels that have been wrecked during the said period, in consequence of Northerly Gales.

Years.	No. of Vessels.	Tonnage	Years of Wreck	Dates.	Name.	Rig.	Ton
1824	178	35,632	1824	Aug. 4	Antonio,	Brig	144
1825	221	45,812	1826	June —	Nautilus, (a)	...	180
1826	262	56,279	1828	June 16	Importer,	...	219
1827	229	57,580	...	...	Walsingham,	Barque	194
1828	237	63,716	1830	June 3	Silence,	Brig,	225
1829	252	66,862	...	July 4	Alfred, (b)	Barque	267
1830	271	68,433	1881	July 17	Calpe,	Brig	165
1831	240	65,010	...	...	Usk,	...	123
1832	278	76,817	...	...	Rambler	...	170
1833	345	87,600	...	...	Vine,	...	170
1834	319	100,338	...	...	Candian, (c)	Barque	226
1835	363	105,960	...	...	Sir James Saumerez,	Brig	102
1836	396	107,445	1837	Aug. 18	Antelope, (d)	Schnr.	107
1837	398	122,283	...	...	Ranger,	Ship	270
1838	465	143,507	1840	July 16	Howard, (e)	Barque	199
1839	506	150,983	1842	July 13	Speedy, (f)	Schnr.	94
1840	487	130,463	...	...	Arion, (g)	Brig	246
1841	433	133,963	...	Aug. 28	Waterloo, (h)	Ship	414
1842	478	128,224	...	...	Aber. Robinson, (i)	...	1414
1843	405	112,870	...	Sept 9	Reform,	Brig	121
1844	539	159,802	...	...	Ghika (j)	Schnr.	122
1845*	680	191,922	...	...	John Bagshaw,	Ship	416
1846	550	158,413	...	...	Henry Hoyle,	Brig	207
1847	523	162,706	...	...	Fairfield, (American)	Barque	198
1848	560	164,417	1846	Jan. 7	Diana, (k)	Barque	270
			...	...	Francis Spaight (l)	...	366
			1847	April 10	Israel, (American) (m)	Barque	357
			1848	June 6	Chieftain, (n)	Brig	128

REMARKS.

(a) Struck the ground while at anchor, and before she drove, was lost in consequence.

(b) Was very badly found in ground tackle.

(c) The *Vine* being badly found in ground tackle, drove foul of the *Candian*, and carried her ashore with her.

(d) Very badly found in ground tackle.

(e) Wrecked from carelessness.

(f) Badly found in ground tackle

(g) Was hove off and afterwards condemned.

(h) Badly found in ground tackle, and let go the sheet anchor when driving, without being stocked.

(i) Anchored in shoal water, and was wrecked in consequence of not having room to veer cable.

(j) Was hove off after being condemned.

(k) The *Diana* was a condemned slaver, with very small and inadequate ground tackle, and was about to be beached to be broken up by decree of V. A. court.

(l) The *Francis Spaight's* chains were very much worn and corroded.

(m) The chain cables were much worn and corroded, and altogether inadequate for such a vessel. The officers and crew abandoned her soon after dark, with

the exception of one man, said to have been asleep, who was taken from the wreck, near the salt river, by the life boat, and before she was stranded. It was not a severe gale, for no other vessel either parted or drove.

(n) Got on the rocks close to the Mouille Light when entering Table Bay, about 3 o'clock in the morning, and became a wreck,—the weather at the time was fine and light variable wind.

(*1845) The increase of vessels and tonnage in this year was in consequence of the great number of vessels employed in the guano trade; say, from October, 1844, to February, 1846, 142 vessels; tonnage, 36,982.—*Cape Shipping Gazette*.

NAUTICAL NOTICES.

THE AUCKLAND ROCK.

We said in our June number that "Every one who has had to search for a sunken rock, knows well the difficulty of finding it;" and we really meant a real one! For, although from some years' experience in conducting this journal, certain "apocryphal dangers" might have been lurking in our memory, we discarded the idea contemptuously, and stood out firmly for the veritable reality of the Auckland Rock. Nor were we alone in our conclusions. With a becoming zeal for the safety of our fleets, numerous as they are, of the Royal and Mercantile shipping, Admiral Sir William Parker, by orders from the Admiralty, directed three of his squadron, the *Rosamond*, the *Oberon*, and the *Spitfire* to search for it, and the tracks of these vessels are now before us. Alas! for the character of some seamen—the rock which was reported to have been struck on by the *Auckland*, reported to the Admiral in the Mediterranean, reported to the owners of the *Lord Auckland*, and reported to the Board of Admiralty, turns out to be no rock at all! A false protest is made at Malta, and a false log is invented; honesty is set at nought, and the *Auckland* striking on a rock 85 miles east of Malta turns out to be a wicked invention.

In deploring these inventions, which we have had to do before now, we said long ago, that, rocks which had no existence in reality, were far more dangerous than those which had; and here is another to be added to the many proofs we have given of this apparently questionable assertion. The *Auckland*, good ship, was bound to Malta for fuel, and *she* found the island before any one else on board! But the rock, 85 miles E. of Malta was a capital cloak to cover the blunder. Report said there was such a rock, it was sworn to have been seen many a time, nay, it had been even landed on; and who wanted more than a vessel knocking a hole in her bottom against it as a proof of its existence, excepting those who knew better.

If the tracks of the vessels sent in search of it were not sufficient proof of there being nothing of the kind like the "Auckland Rock," the following statement will consign it to oblivion. We place by the side of each other the accounts of the master and his mate: the first given to the Admiral a day or two after the event, and the second after the return of the vessel from the next voyage made by the *Auckland* after the disaster, in which the mate had become master, the former master having been discharged.

THE MASTER'S STORY.
Screw Steamer Auckland, Malta.
 March, 26th 1849.

SIR,—I have the honor to inform you that on my passage from Constantinople to this place to procure fuel to proceed on my voyage to London, at or about 11h. 30m. P.M., on Monday 26th inst. in lat. $35^{\circ} 48' N.$, long. $16^{\circ} 23' E.$, we struck something very heavily forward. We then reversed the engines, and finding the vessel to be afloat we stopped her to sound, and found no bottom at 180 fathoms. It was thick weather at the time, the wind S.S.E., light; the vessel's draught of water aft 11 feet, forward 9 feet. Very little sea on at the time of striking: after which we ran 85 miles, W.b.N. $\frac{1}{2}$ N. by compass, Massey's patent log: and made the east end of the island, right ahead and arrived here at 9h. A.M. on Tuesday, March 27th.

To Rear-Admiral Harvey.

THE MATE'S STORY.
Steam Shipping Company,
 Sept. 4th, 1849.

Statement of the chief mate of the Earl of Auckland. On the 26th March, 1849, at 11h. 30m. P.M. struck heavily forward, the engines were stopped. At this moment I came on deck it having been my watch below, it was thick and foggy, could see no land. The second mate and an apprentice told me he thought he saw a building on the shore. We then hauled to the E.b.S. (the opposite course to the one we had been steering) and continued going about 4 hours at two miles an hour. We then steered to the N.N.W., about 5 knots an hour, for about two hours. It then cleared up, and we saw Malta W.b.N. about three miles distant. We then steered along the land for Valetta, distant about four miles; and anchored at 8h. 30m. a.m. March 27th.

Let us now hear no more of the Auckland Rock. There is no general rule without exceptions; and from the general character of British seamen, the master of the Auckland has established his claim to be classed among the latter.

FLY ROCK, Mercury Bay, New Zealand, Ship struck.—In February last H.M.S. *Fly* struck on some rocks near the entrance to the river to Mercury Bay, and in a place where the chart of Shouraki Gulf, (the only one there is of it,) gives four fathoms. Fortunately the wind was light, the ship under double reefed topsails and top gallant sails, jib, spanker, and head to wind in stays, so that the concussion was scarcely felt. On heaving all aback, she went off immediately.

The bay being insecure the *Fly* was again under way to go into the river, which is said to be easy of access and well sheltered.

In the small sketch of Mercury Bay, Lat. $36^{\circ} 45'$ south, Long. $175^{\circ} 43'$ east, which is inserted in the Admiralty chart of Shouraki Gulf, (on the authority of Capt. J. Cook, 1769,) there may be perceived three soundings of 4 fathoms each on the southern shore, and yet it appears that in one of these spots H.M.S. *Fly*, in February last struck on a rock. The exact depth is not stated, nor are any bearings given, but the navigator will be careful how he approaches the mouth of the river along that shore.

Collector's-Office, New Orleans, July 24th, 1849.

ATCHAFALAYA BAY.—There has been placed in Achafalaya Bay a floating light-vessel, for the guidance of vessels navigating said bay. The bearings, from said floating light are as follows:—Pointe-au-Fer, E. 22° S. distant 12 miles; Bell Isle, N. 33° E.; Tucka Hammock, N. 22° W.; Turn State N. 5° W. $1\frac{1}{2}$ miles; S.W. or outer Stake, S. 38° E. Directions.—Bring the floating light to bear N.W. $\frac{1}{2}$ W., and run directly for her. You will leave the outer or

S.W. stake on your larboard hand; when up with the light vessel you must anchor near her on the N.E. side, as you cannot proceed further without a pilot, or until daylight. At full sea there is twelve feet water in the channel. The light vessel bearing any way between S.S.E. and N.N.W. Westward of you and near to you are in safe anchorage.—S. J. PETERS, *Collector*.

— — —

REEF ON THE EASTERN SIDE OF KINGS ISLAND, BASS STRAIT.—We observe in the Shipping Gazette of the 27th March, an account of the *John Souckay*, striking on a reef off the Eastern side of Kings Island. The vessel had passed to the north of the Sea Elephant rocks, and the reef is discovered on the starboard, on which she is stated to have put her helm *a port* and struck, (no wonder) so that there is no doubt on the score of its being there. But the master would have done service to his brother seamen by giving some particulars of its position, and we hope “Mr. Lucas, the well known pilot of Hobart Town”, who seems to have known all about it, will at all events, do so, for whether the vessel went inside or outside of the Sea Elephant rocks, (not two miles from the shore, or whether she was one or five miles from the shore,) we have no means of knowing from the master’s statement.

IRISH PASSENGER TRAFFIC.

A document has been issued by the Lords of the Privy Council, enforcing a new code of regulations in relation to the carriage of passengers between Ireland and the British shores. The communication is dated from the Council-chamber, Whitehall, August 7, and contains the following clauses:—

“1. The number of deck passengers to be carried by a paddle steamer, having no cargo on deck, shall be one passenger to every ton of the builder’s tonnage.

“2. The number to be carried by a paddle steamer, having cargo on deck, but none of it stowed abaft the paddle-shaft, shall be one passenger to every registered ton.

“3. The number to be carried when cargo (not live animals or poultry) is stowed abaft the paddle-shaft, shall be three passengers to every two square yards of clear space abaft the paddle-shaft.

“4. The number to be carried when live animals or poultry are stowed abaft the paddle-shaft shall be fixed with reference to the arrangement of the vessel and cargo, so as to provide, as nearly as possible, two square yards for every three passengers, in a part of the vessel separate from the cattle and live stock.

“5. Screw steamers, in which the deck passengers are allowed to go below, and are accommodated with space on the lower deck for one half their numbers, or on that on which the bulwarks are raised, and a spare deck constructed so as to afford protection to the passengers on deck, shall be licensed to carry the same number of passengers in each case as paddle steamers.

“6. Screw steamers on which these provisions are not made shall be licensed to carry only one passenger to every four tons of the registered tonnage.

“7. The proportion of passengers to be carried in the months of November, December, January, February, and March shall be two thirds the number allowed in the other months.”

Captain Denham has also addressed a memorandum to the owners of the steamers employed in the conveyance of passengers, recommending additional regulations, as follows:—

“*Custom-house, Liverpool, Aug. 10.*—I am commanded by the Lords of the

Committee of Privy Council for Trade, to strongly impress upon the owners of steam-vessels employed in the conveyance of passengers the propriety of making some provision for the health and cleanliness of those on board, by furnishing them with a sufficient supply of tarpaulin to protect them from the weather and from the washing of the sea, and also by providing water closets for their use. Although my Lords have not thought it necessary to make these provisions compulsory, as they might do, by refusing certificates till they should be complied with, they nevertheless attach great importance to them, and will bear the subject in mind with a view to future legislation, should they find, by experience, that a necessity exists for more stringent provisions to compel the adoption of these reasonable measures.

H. M. DENHAM, *Captain R.N.,*
Steam Navigation Inspector.

NEW BOOKS.

THE INDUSTRIAL RESOURCES OF NOVA SCOTIA, comprehending the *Physical Geography &c. of the Province.*—By A. Gesner, Surgeon, &c.: Halifax, N.S., 1849.

There is so much important information on all that concerns Nova Scotia, and all who have, or are likely to have an interest in that long neglected part of the world, that the appearance of this work should be the means of remedying those evils of which Mr. Gesner so justly complains. It was a good design to place before the world, (we mean the world of Great Britain) the numerous sources of riches, possessed by Nova Scotia;—to lay bare the land even to its nakedness, and to show the evils and their causes of neglect,—how little had yet been done to settle Nova Scotia, and how much remained for the emigrant to turn to account. The “Industrial Resources,” as Mr. Gesner has well expressed the character of his work, we trust will effect that good for his country which it has been his aim to produce in compiling his work. We have availed ourselves of some of his information in our present, and hope to do so likewise in some of our future numbers.

MURRAY'S HOME AND COLONIAL LIBRARY. With untiring zeal Mr. Murray continues his “Cheap Literature for all classes” in the shape of his Home and Colonial Library, and has just presented the reading world with “the Memoirs” of that excellent man and worthy christian, Sir Thomas Fowell Buxton, Bart., in three parts forming one of the most interesting volumes of that very interesting and useful miscellany. The perusal of these memoirs improve the mind, and we are led insensibly to take as much interest in the family concerns of this philanthropic individual as in the history of that great measure which is for ever imperishably connected with his name. The work is edited by a near relation and the “disease of admiration” of character in such a man is therefore very excusable.

The question of laying a ship by the wind in a Hurricane is solved by Colonel Reid, in the following manner. He says:—

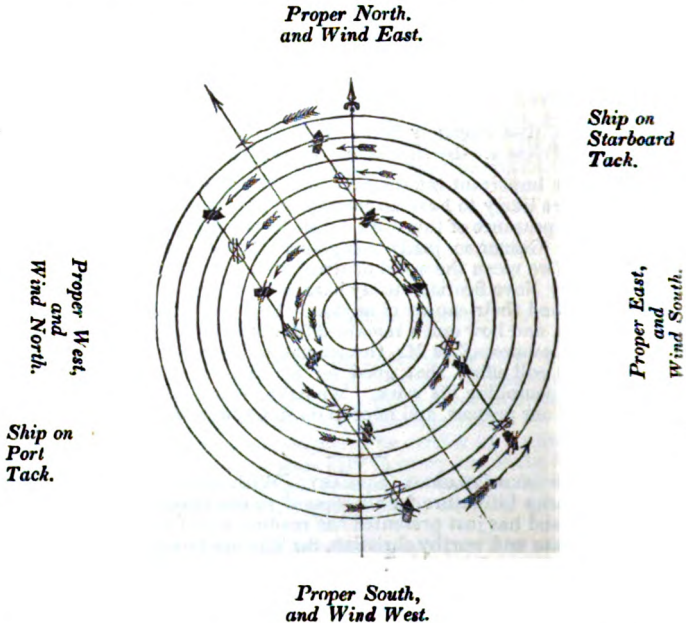
When I first entered on the study of the subject of hurricanes I found that seamen were anxious to have a rule, by which a ship, when laid to in a hurricane, should come up to the wind instead of falling off from it.

It was explained to me, that in these tempests, when a vessel is lying to, and the wind veers by the ship's head, she is in danger of getting stern way, even when no sail is set; for in a hurricane, the wind's force upon the masts and yards alone will produce that effect, should the wind veer a-head; and it is supposed that vessels have often foundered from this cause.

When the wind veers aft, as it is called, or by the stern, this danger is avoided; and a ship *comes up* to the wind instead of *falling off* from it.

In order to define the two sides of a storm, that side will be called the *right-hand* semicircle, which is on the right of a storm's course, as we look in the direction in which it is moving, just as we speak of the right bank of a river. In the two next figures, the central track or courses are shown by spears, and their directions by the spear heads.

If it be desired to lay a ship to, in a revolving storm, so that she shall *come up* to the wind, instead of *falling off* from it, the rule will be, when in the *right-hand* semicircle to heave-to upon the *starboard* tack; and when in the *left-hand* semicircle to heave-to upon the *port* tack in both hemispheres.

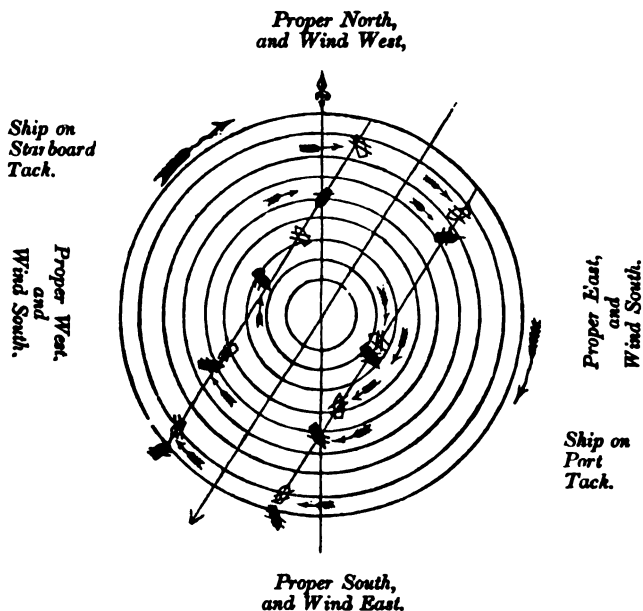


The first of two figures inserted here, is intended to represent one of the West Indian hurricanes, moving towards the north-west by north, in the direction of the spear drawn obliquely. The commander of a ship can ascertain what part of a circular storm he is falling into, by observing how the wind begins to veer. Thus, in the first figure, the ship which falls into the right-hand semicircle, would receive the wind at first about east by north; but it would at first receive the wind at north-east; but with this latter ship, instead of veering towards east, it would veer towards north.

The explanation of the rule will best be made out by attentively inspecting the two figures. In both, the black ships are on the tacks on which the ships will come up to the wind; the white ships on the tacks on which they will fall off.

The second figure is intended to represent one of those hurricanes in south

latitude, which pass near Mauritius, proceeding to the south-westward. The whirlwind is supposed to be moving south-west by south, in the direction of the spear-head. It will be seen that the black ships are always coming up, and the white ships always breaking off; and that they are on opposite tacks on opposite sides of the circles.

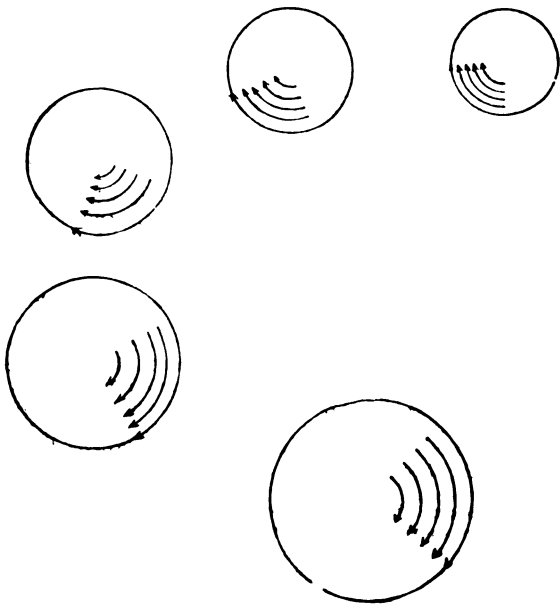
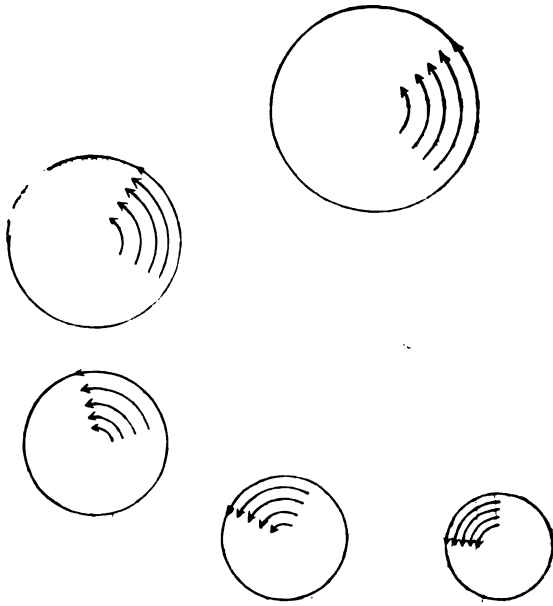


This will be the rule for laying a ship to in a revolving gale when it shall be desired that she shall *come up to the wind*.

From this rule it follows that, if two ships be hove-to within the compass of the same revolving gale and on the same tack, and the one ship falls off, the centre of such revolving gale will be passing between them. This will assist in judging approximately of the track gales may be following, even in the case of single ships.

There are, however, reasons for modifying this rule. If we look at the black ships, in the *left-hand* semicircle of the figure of the *northern* hemisphere, and in the *right-hand* semicircle of the figure in the *southern* hemisphere, it will be seen that these black ships point with their heads towards the storm's centre. If they forge a-head, they will draw towards the storm's central track. It may, therefore, be preferable, as a general rule, when heaving-to in a revolving gale, to bring the ship to the wind on the starboard-tack when on the north side of the Equator, and on the port-tack when on the south side of the Equator. Then will the ships, when shooting a-head, be gradually moving away from the storm's centre.

In a progressive storm, there will be one quadrant in which it will be more dangerous for a ship to scud than in the other three, that being the one in which a vessel steered so as to sail before the wind, would be led in advance of the centre of the storm's track. The annexed diagram, in which the quadrants



of greatest danger are shaded, will serve to explain, for both hemispheres, what is here meant. Within the Tropics, whilst the course of storms tend towards the west, the quadrants of greatest danger will be on the west side of the storm. But these quadrants will gradually change their relative positions as the storms recurve, which they generally appear to do in the space from the Tropics to the thirtieth degree of latitude. In high latitudes, where the courses of storms become easterly, these quadrants of greatest danger come to be on the east side of the storm.

Captain Andrews, commander of one of the Royal Mail steamers, pointed out to me, that by keeping the wind on the starboard-quarter when in a revolving storm, in the northern hemisphere, ships gradually sailed from the storm's centre. And by keeping the wind on the port-quarter, when in the southern hemisphere, ships gradually sailed from the centre of a revolving storm.

This rule applies to three quarters of the storm's circle. But care should be taken lest in its application, a ship be carried into what has been called the quadrant of greatest danger, and before the centre of the advancing storm. The practical seaman knows that a ship is difficult to steer during a storm, and in a high sea, with the wind on the quarter. The Racer brig of war upset when steering two points and a half abaft the beam, when under bare poles in a hurricane.

NEW CHARTS.

Published by the Admiralty, and Sold by R. B. Bato, 21, Poultry, in September 1849.

	Price.
TYNE RIVER, <i>Mr. E. K. Calver, Master R.N., 1849.</i>	3 0
BRITISH LIGHTS, corrected to 1849.	1 0
MEDITERRANEAN LIGHTS, ditto.	0 6
SHEDIAC BAY AND HARBOUR, (New Brunswick) <i>Capt. Bayfield, R.N., 1839.</i>	1 6
BEDEQUE HARBOUR, (Prince Edward Island) <i>Capt. Bayfield, R.N., 1841.</i>	1 6
PORTS FITZROY AND PLEASANT, (Falkland Islands) <i>Capt. B. Sullivan, R.N., 1838.</i>	1 6
MOCHA ROAD, <i>Com. S. B. Haines, I.N., 1836.</i>	1 6
NAMOA ISLAND, (China) <i>Capt. Collinson, R.N., 1814.</i>	1 6
TONGSANG HARBOUR AND HUTAU BAY, <i>Ditto ditto.</i>	1 6
PESCADORE ISLANDS, <i>Ditto ditto.</i>	3 0
HOOCYOW AND CHIMMO BAYS, <i>Ditto 1843.</i>	1 6
CHINCHOO HARBOUR, corrected to 1847.	1 6
KINTANG CHANNEL, ditto.	1 6
PORT BOWEN, (Australia) <i>Capt. F. Blackwood, R.N., 1843.</i>	1 6
ROCKINGHAM BAY, ditto <i>ditto.</i>	1 6

H.M.S. ARROGANT.—A clever lithograph has been published of this splendid ship from a painting by Lieut. Thomas, R.N., of Portsmouth, whose skill in marine drawing is highly approved by all who are acquainted with his pictures. Mr. Thomas's portraits of Her Majesty's ships are celebrated for their fidelity; and he possesses the art of representing them under their most picturesque views,—all the minor detail of gear, and peculiarities of form, so important to accuracy being attended to with the eye of the seaman artist. The view of the Arrogant represents that ship leaving Portsmouth harbour under the command of Captain Fitzroy, which ship being a screw steam

ship of the largest dimensions of the frigate class, there is a character about her which the pencil of Lieut. Thomas has very happily preserved, and an interest which his picture is well calculated to maintain.

CHART OF THE ATLANTIC.—Lieut. Maury of the United States Navy has constructed a chart of the Atlantic, the purpose of which is to shew the limits of the trade winds, variables, and calms throughout the year. The design is very fairly carried out when it is considered how much is to be expressed on a single sheet. An examination of a multitude of logs has enabled him to mark the place on the chart where vessels have crossed those limits every month of the year, to which he has allowed a range of five degrees of longitude. Hence the limit for any month is traced easily through the successive portions of longitude, and enables a vessel to know in what latitude according to her longitude, she may expect to find it. The different regions of trades and calms are distinguished by colour, and in the hands of the careful navigator it will be appreciated.

METEOROLOGICAL REGISTER.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, Royal Observatory,
From the 21st August to the 20th of September, 1849.

Month Day.	Week Day.	Barometer In Inches and Decimals				Thermometer In the shade				Wind Quarter Strength				Weather.	
		9 A.M.		P.M.		9A	3P.	Min	Max	A.M.	P.M.	A.M.	P.M.	A. M.	P.M.
		In	Dec	In.	Dec	o	o	o	o						
21 Tu.		30.36	30.32	64	73	56	73	NW	NW	1	1		bc	bc	
22 W.		30.23	30.20	66	68	61	70	NW	W	2	2		bc	bc	
23 Th.		30.18	30.17	64	68	60	69	NW	NW	1	1		o	bc	
24 F.		30.19	30.17	62	68	57	70	NW	NW	1	2		bc	bc	
25 S.		30.05	30.14	64	73	55	74	W	W	1	1		bc	bc	
26 Su.		30.13	30.10	65	74	58	75	W	W	2	2		bc	bc	
27 M.		30.03	29.99	61	66	59	67	SW	SW	3	4		bc	bc	
28 Tu.		30.00	29.99	62	71	55	72	W	W	3	4		bc	bc	
29 W.		29.94	29.94	65	70	60	71	W	W	1	1		bc	bc	
30 Th.		29.92	29.88	68	73	61	75	NW	SW	1	2		o	bc	
31 F.		29.91	29.98	66	70	62	72	NW	N	1	1		og	bc	
1 S.		29.82	29.76	62	64	58	68	SE	E	4	4	op 1] 2	op 1] 2	op 1] 2	
2 Su.		29.76	29.82	63	68	60	72	SW	SW	4	4		bc	bc	
3 M.		29.96	29.99	64	72	56	73	S	SE	4	2		bc	bc	
4 Tu.		30.09	30.11	65	68	58	70	NE	E	1	1		bc	bc	
5 W.		30.14	30.14	64	72	59	73	NE	NE	3	3		bc	b	
6 Th.		30.13	30.11	62	72	54	72	NE	NE	4	4		b	b	
7 F.		30.19	30.18	58	66	53	67	NE	NE	5	5		qbc	qbc	
8 S.		30.20	30.16	57	63	51	65	NE	NE	4	2		bc	bc	
9 Su.		29.94	29.84	58	65	46	66	SW	SW	3	4		bc	bc	
10 M.		29.54	29.40	62	66	53	67	S	S	5	4		qo	op [4	
11 Tu.		29.20	29.15	58	65	53	66	W	W	2	2		bc	bctp 3]	
12 W.		29.09	29.06	62	54	48	58	S	SW	5	3	qop [3]	bc	bc	
13 Th.		29.50	29.76	54	57	47	59	NW	NW	5	5	qbcp [1]	bc	bc	
14 F.		30.12	30.16	57	62	48	63	W	W	2	4		bc	bc	
15 S.		30.21	30.18	58	62	53	63	SW	S	1	1		bc	o	
16 Su.		30.14	30.16	59	64	50	65	N	N	1	1		bc	og	
17 M.		30.22	30.24	54	61	52	62	NR	N	4	5		bc	qb	
18 Tu.		30.35	30.26	52	56	46	58	N	N	4	4		b	bc	
19 W.		30.49	30.46	53	62	47	63	N	N	4	3		bc	bc	
20 Th.		30.45	30.38	54	57	48	58	N	N	3	3		c	og	

August 1849.—Mean height of the barometer = 30.010 inches; mean temperature = 62.9 degrees; depth of rain fallen 0.42 inches.

TO OUR FRIENDS AND CORRESPONDENTS.—In reply to several enquiries, the new edition of Raper's Navigation will be published within a month.

Hunt, Printer, Old Church Street, Edgware Road.

THE
NAUTICAL MAGAZINE

AND

Naval Chronicle.

NOVEMBER 1849.

ON THE GEOLOGICAL FEATURES OF THE GOODWIN SANDS, AND
ADJACENT SHOALS.

THE substratum of these celebrated and much dreaded shoals, having been at length determined, through the persevering energies of the officers and servants of the Trinity Corporation, under the instructions of Sir J. H. Pelly, Bart., Deputy-Master, it may be interesting to examine how far this discovery coincides with the long received opinions of geologists and antiquarians relative to cause and effect, which may have originated their present state and condition.

And first, Geologically.—It has been evident to many, who with myself had local opportunities of investigation, as to tides, and their deposits, the abrasion of our chalk cliffs, and their annual waste, together with the substratum bored through in Minster level, for Artesian wells, that the Goodwin Sands were a ridge of chalk forming an inclined plane (with little deviation in the Gull stream,) of the nearest shore of the Isle of Thanet; the several small shoals and patches, together with the Brake Sand, being similar ridges of chalk, and together creating the numerous eddies, which have been the means of clothing their summits, in some places with flint boulders and shingle, and at others (like the Goodwin) with a clean live sand, of many miles in extent without a particle of extraneous matter. These chalk ridges being a continuance of the Thanet cliffs, formed the eastern side of the estuary of Ruechboro', and the channel of the Stour or Wantsume. The Southford land and its hills forming the opposite shore, and the dip of these chalk downs

beneath the Minster level constituting what is appropriately called the Sandwich Basin.

Beginning then at the highest land at Mount Pleasant near the Minster mills, in the Isle of Thanet, we have a clinal angle from which there appears to have been a subsidence of the chalk strata, inclining more or less to the outcrops of that island in every direction; and the dislocations called slips, in the face of the chalk-pits and cliffs, appear to give evidence of earthquake at some remote period. Similar convulsions of more recent date have left their traces in more than one of our church towers. Some very interesting statements, have occasionally been made to the Geological Society, one of which will be found in their Reports, January 17th, 1838, by Mr. John Morris.

That gentleman's paper describes a subsidence of 21 feet, in 340 paces, between Ramsgate and Cliffs End in Pegwell Bay, and these facts render it probable, that the Goodwin was once an island, and in common with others upon the opposite or Belgic coast, submerged by earthquake and tempest. Mr. Morris gives from data obtained, the waste of the present cliffs at three feet annually: the half of that waste during the last five centuries would carry the Ramsgate boundary over the nearest shoal, called the Dyke, which is a mass of flint boulders formed by the abrasion of these cliffs, and the scouring of the tide over a chalk bottom. The average height of the Ramsgate cliffs are 60 feet; their chalk base continued out, towards the North Goodwin, deepens gradually into 60 feet; together 120 feet. Then the mound of the Goodwin rises above the low water mark, and extends outwards about two miles, terminating precipitately; and in two miles still further out, will be found a depth of 210 feet water.

Now, if we imagine the water drained away, the geological features would be (as will be shown hereafter by the cylinder sent down,) a chalk hill or mound of 130 feet, capped by a detritus of 80 feet of shelly shingle, terminating upwards to the surface in fine sand.

A narrow valley, (the Gull stream,) lies between it and the Brake, which is *another chalk mound*, capped with coarser materials, and extending in small ridges or shoals to the Ramsgate Cliffs:—a section of these banks would closely resemble the excavated strata at Purfleet in the Thames, and the gradient extended onwards to Mount Pleasant, in Thanet, would show an altitude above the lowest depression, or *submarine valley* outside the Goodwin Sand of about 400 feet. Admitting then the fact of the dislocations investigated by Mr. Morris, it does not seem improbable, that the Goodwin Sand was an island, submerged in one of the severe convulsions recorded in Belgic, as well as in British history, and handed down by tradition. Changes still more extraordinary must have taken place at still more remote periods; or from what derivation are we to trace the gigantic specimens I have in my possession of teeth, tusks, and bones of the Mammoth and Rhinoceros, found in these submarine valleys between the shoals. Let us now compare the strata gone through at the Goodwin Sands, with the borings of the Minster

valley, presuming (agreeably with natural cause and effect in earthquakes,) that the depression of high ground raises the adjacent level.

Minster level—Vegetable earth	3 feet.
Quicksand	19
Bed of oysters	2
Indurated sand	3
Blue clay	73
Round pebbles similar to those on our present shores, and then chalk very solid, with tabular flints	} 2

From the surface to the chalk . . . 102 feet.

The difference of level, between Minster and the crown of the Goodwin has been estimated at 11 feet, and as the chalk was reached at 80 feet, by the cylinder, it follows that the substratum is at least 10 feet higher on the crown of the Goodwin Sand than in the Minster level. It is an admitted historical fact, that the oysters which are now 24 feet below the surface at Minster, formed the level of that estuary where Caesar anchored with his fleet, and these are covered up, with 19 feet of quicksand, which looks more like a sudden eruption by tempest or earthquake than a general deposition.

Similar features were exhibited when cutting the military canal at Hythe. Remains of shore nets with poles were found, which would never have been abandoned, and were evidently buried in the detritus by a sudden convulsion of nature. In our own day, the shock of an earthquake threw up a ridge of blue strata with pyrites, at the foot of the Galt Cliffs, between Dover and Folkstone; and the cliff at the signal station simultaneously *subsided* two feet. The double cliffs over which the railroad runs at the same place, were always deemed the land slips of an earthquake. Let us now observe in detail the strata of the Goodwin as the cylinder descended through it. The first 40 feet was achieved with great ease by exhausting the cylinder of air, upon the principle invented by Dr. Potts, and it is worthy of remark, that a sand perfectly quick, under this simple process, defied the efforts of every experimentalist, from Smeaton down to our own day, with the rammer or auger, and could not be pierced or bored into down to any considerable depth. The first 10 feet exhibited a clean bright sand, without any extraneous matter, as it rose in the cylinder; this continued to a depth of 24 feet, when it became tinged with a bluish cast, and emitted a sensible muddy odour. At 30 feet below the surface, it was of a deeper cast, still free from any other sedimentary matter; but smelling strong of sulphuret. This specimen, which I have preserved, has stained the inside of the phial with a brassy metallic lustre.

At 40 to 46 feet, it was still clear of any extraneous matter, but of a deeper tinge, similar in colour to the clyte, or blue clay. At 51 feet, the cylinder entered a layer of small stones, broken shells, and chalk nodules, which had been bored by the pholas, and decayed weed, in

every respect similar to the deposit of the present tides, daily thrown up on the high-water mark: some of these shells were perfectly black with age. At 56 feet, the sand succeeding to these was brighter, and at 62 feet a layer of broken shells was entered, which came up perfectly clean, as if levigated by a filtration of pure water; another layer of very dark and fetid sand succeeded to this, and at 67 feet, it was imagined that the workmen, had come upon a submerged wreck, several pieces of decayed wood and lumps of sea coal making their appearance, with broken shells and small stones, and the cylinder now descended very slowly, the process being merely that of emptying its contents, and allowing it to subside by its own weight. At 68 feet, the sand was dark, and fetid, and at 70 feet another layer of shells, with nodules of a perfectly black and tenacious clay, which effervesced strongly in common vinegar. Every one now believed this the approximation to the chalk, when at 72 feet to their astonishment, sand was again raised from the bottom, nearly as bright and clean as the first specimen at the surface. This, however, was succeeded by larger pebbles, stones, perforated chalk nodules, and water following up in the bucket of a milky hue. It is very evident that at 75 feet streams of water percolate this substratum, for these substances were clean, and the sand which accompanied them had no fetid odour. At 78 the cylinder stopped, it had reached the solid, and the bucket and augers brought up the pure chalk, and thus the long mooted question was set at rest, and the nature of the Goodwin Sand accurately determined.

We may here briefly recapitulate the foregoing:—

At 10 feet clean bright sand.

“ 24 “ do. do. bluish cast.

“ 30 “ do. do. deeper blue, sulphuretted.

“ 40 } do. colour of blue clay.

“ 46 }

“ 51 “ small stones, broken shells, and chalk nodules.

“ 56 “ brighter sand.

“ 62 “ clean broken shells.

“ 67 “ decayed wood, sea coal, broken shells, and small stones.

“ 68 “ dark fetid sand.

“ 70 “ shells, black nodules of clay.

“ 72 “ clean bright sand, pebbles, chalk nodules, and milky water.

“ 78 “ pure chalk.

Many have been the attempts to achieve this undertaking without effect, and thus stimulated and encouraged by Sir J. H. Pelly to persevere, much credit is due to Captain Richard Davis, and the men under his orders for their untiring energies. The cylinder is now capped for the winter months: it has four smaller cylinders with their scaffold poles, and answers the purpose of a warning beacon to ships passing along the back of the Sands.

In considering these dangerous shoals, we must not lose sight of their great extent. How different, geologically considered, is ten miles of

surface on the adjacent shore. Let us compare them from the North towards the South Foreland, taking a parallel line with the Goodwin Sands. And first as regards the chalk face of the cliffs from the North Foreland to Ramsgate, the rapid waste of which depreciates the value of the estates considerably. These cliffs are low compared with the South Foreland, and the chalk as a natural consequence is loose and rubbly so near the surface, letting in the rains and frost above, while that engine of destruction the sea, thunders along their base. On the contrary, the South Foreland from its greater altitude has a chalk base more firm, solidified in fact, by the superincumbent pressure of its noble and massive summit, and it is skirted by an extended line of shingle, the accumulation of ages. The lower cliffs of the Isle of Thanet dip suddenly beneath the alluvial deposit, in the Sandwich Basin; which soil as I have shewn is upwards of 100 feet in depth at Minster. We have here in some respects the features of the North Goodwin, which as a mound, or hill of chalk, dips also into Trinity Bay, which bay may possibly have been a continuation of one of the branches of this extensive Kentish estuary, and it is very probable that a cylinder sent down in that swatchway, would descend through similar strata. Then we have a counterpart of the South Goodwin in the extensive sand hills, between Sandwich and Deal, a sand of the same nature on the surface, without any admixture of extraneous matter, and from the skirt of which a long flat of fertile land, stretches to where the chalk rises again, into the ridge of hills of the South Foreland. Such are the parallel features, and therefore it is easy to account by analogy for some of the inconsistencies charged upon the Goodwin Sand.

First it has been said, it swallows up every thing that grounds upon its surface. Let us see! In May, 1841, the ship *Ellison* of Hull, got ashore upon the North Goodwin be-neaped, and lay there nineteen consecutive tides, and fled off with the loss only of her rudder and false keel; being an old whaler she was doubled, and a very strong ship. Captain Bullock's beacon remained on the crown of the Sand four stormy winters, and it was believed subsided only thirty inches. I have some doubt of its subsidence at all. I remember some old furnace bars being placed round the mast as a nucleus, and after disappearing two years they showed themselves again upon the surface, still resting undisturbed upon the plank platform. I therefore infer, that thirty inches of drift sand had accumulated round the mast, by the prevalence of some particular winds, and the prevailing currents of wind and tides in an opposite direction had sent it away again. In 1824, I landed there with a very large party and played cricket for an hour and a half. In 1829, I rowed over this same place in a galley. The timbers of a wreck on the South Calliper are seen at very low tides, and have been at intervals during the last forty years, the Deal boatmen repeatedly making attempts to clear away the sand from its interior. The abortion called the "Light of all Nations", a huge iron caisson, still protrudes its unsightly wreck, and for the safety of the luggers and their brave crews, who encounter its perils, to save life and property, it ought to be removed.

I could multiply instances, but we are met with the question,—What then has become of the numberless wrecks, which have for ages perished there, without any after trace of their whereabouts? Let us take one for example, the *Ogle Castle*, a ship with more than a thousand tons of cargo, besides guns, chain-cables, anchors, and other materials not liable to be washed away from the site where she went to pieces. I was looking at this ship from our cliff with a powerful telescope when it happened, and shall never forget it. It appeared that the persons in charge of this ship, fancied they could weather the South Sand Head, and fetch into the Downs anchorage, being upon the larboard tack under storm sails, in a south-west gale, for it is evident that they must have seen the large fleet anchored there, themselves being so clearly discerned by us, from the cliff at Ramsgate. I had the ship in the field of my telescope, when a mariner near me remarked “That ship will never clear the Sand Head,” and as I replied “I hope she will,” I saw all three of her masts bending forward, and precipitated over the lee bow: a few minutes only elapsed when the bowsprit exhibited an appalling and melancholy sight. It resembled a cluster of bees upon the branch of a tree; and in less than an hour, not a vestige of this illfated ship was to be seen: she had entirely disappeared. Of so large a crew and a number of passengers, not one I believe was ever picked up, not a gun, or an anchor found. How was this? Let us consider! This ship no doubt was of a heavy water draught, and would strike and ground in 18 to 20 feet water, on the *outer edge of the Sands*. As the heavy sea broke her up into sections, all her heavy material would roll down the precipitous face of the sand, over which the tide also rushes like a mill dam, and sinking mortality would be swept along in deep water towards the North Sea. In proof of which the fishermen who trawl about six leagues from the North Foreland, came into Ramsgate and Margate, loaded with bales of cotton, part of her cargo, and many of these bales washed on shore near Ostend, with part of the spars and raffle of the ship.

Such will always be the effect upon ships of heavy tonnage, wrecked upon the *outer edge of the sand*, and this will apply to all *beacons*, that have occupied similar positions. Mr. Walker's beautiful construction called the Trinity Beacon, is upon the edge of the hill, and is gradually subsiding, although its base is a platform (thirty feet on the square) of masonry upon timber flooring. It has descended seventeen feet from its first level, it is sliding down-hill. This is a matter of deep regret, as I know it has saved vessels from going on to the sands, and in one instance, two seamen saved their lives by refuge in its gallery. This is the opposite result to Capt. Bullock's Beacon, which was erected on the *crown of the Sands*. But it is a matter of doubt, whether any such structure at a distance from the sand edge would not deceive vessels into danger, and this argument was raised with great effect *against Mr. Bush*, with his proposed Light of all Nations. The loss of the *Ogle Castle* could not have taken place, if

the present South Sand Head light vessel had been there. What can be more effective than these noble vessels riding as they do upon the extremity of the shoals, and supplied with alarm guns and gongs, to warn ships when standing into danger, and rockets to summon assistance from the shore to ships in distress? To look at these guiding stars you would imagine it impossible for a ship to sail on to the Sands; and as chairman of the commissioners of salvage at Ramsgate, I unhesitatingly aver, that nine out of ten of such cases that come before us, are the result of the most *shameful carelessness*, on the part of those in charge; and who in Her Majesty's Navy, would be dismissed from the service with all hands concerned.

To return to the subject, there appears to be little doubt, that the Sand along the whole line of its steep face, in the vicinity of deep water, is quick, and shifting, and also probable that a large accumulation of heavy wreckage is resting in the deep water along its foot. As to smaller vessels that go on shore on the high part, their fragments are drifted away upon the sea, like a bundle of lathwood. Again, any structure intended to remain should possess prodigious strength, capable of resisting not only the sea, but *drift wreck*, which there is no doubt destroyed Capt. Bullock's Safety Beacon. Imagine the section of a ship, lifted on the shoulders of these gigantic seas, and hurled like a battering ram, against any building of the nature of a beacon, or an isolated tower. No shelving base or rock to break the blow, but a bodily assault, immediate, and with all its momentum! What could stand it? The engineer must decide.

Such are my opinions of the geological features of the Goodwin Sands, and their apparently contradictory state, I have endeavoured to explain. These sands have for many ages interested the geologist, the antiquarian, and historian. I have always leant to the belief that they were a submerged island, and in my "Oral Traditions of the Cinque Ports," published in 1832, I have given my reasons for such convictions; in as much as the filling up of the Minster, or North Channel, between Thanet and Kent, and through which the Sea Kings passed with their fleets, could not have been gradual, but sudden and decisive, as I think the tides will prove, when we consider how much the tide would have fallen in the Downs, when it was high-water at the Reculver, (or Northmuth of the Saxons,) and with what power the stream of ebb must have returned through *that channel*, increased as it would be by the land waters, out of the several havens, which branch into it.

This subject is not of sufficient consequence to pursue farther here, but I will add a few extracts from accredited authors, for the amusement of the readers of the *Nautical*, as follows: (Battely's Antiquities 1706,) "Now this port of Rutupium was more frequented by the Romans than any other in the early days of their intercourse with Britain, and the description applies to it remarkably. This port had two entrances, on one of them was built the fort of Rutupium, on the

other, that of Regulbium, the first to defend the eastern entrance, the other the northern end, and from these watch towers, they could discern afar off, the approach of pirates, or invaders, and make preparations against them, while they offered a secure asylum to the *ships of the Romans.*" The first Roman writer who mentions the Isle of Thanet is Solinus, his words are these. "The Isle of Thanet is washed by the Straits of Gaul being separated from the main land of Britain by a narrow estuary." The venerable Bede who died A.D. 735, tells us "that the width of this estuary was three stadia, 625 yards, being termed Portus Rutupinus by the Romans, and the Port of Sandwich by the Saxons." In Florence of Worcester, we read that "Surkill came to England with his fleet of Danes, and went to the Port of Sandwich," and again in the Saxon Chronicle, A.D. 1052, "the fleet of Harold having laid waste the eastern coast of Kent, advanced to Sandwich, at *Northmuth*, and thence proceeded through towards London;" or, as it is more clearly expressed by Henry of Huntingdon "Harold's fleet sailed from Sandwich, through Northmuth, and so to London." Simeon of Durham, A.D. 864, describes the Isle of Thanet as surrounded by the sea. 2, an ancient Saxon Mass engraved in the Monasticon, demonstrates its insular position, and in the year 1313, the Monks of St. Augustine, in Canterbury, "claimed the sea wreck in their Manors of Minster, Chistelet, and Stodmarsh, places now lying in the valley between Thanet and Kent." The testimony of John Swine (who died A.D. 1581) is conclusive on this point, he says in page 25 of his work, *De rebus Albionicis*, "that eight credible men, were living in his time, who declared that they had often seen not only small boats, but large ships with cargoes, pass and repass, between the island and main land, as a thing of ordinary occurrence, and also that there *had been* a mooring place for ships at Sair, not probably in recent times, but evidenced by the finding of anchors, and timber piers."

Battely gives reasons for believing "that Julius Cæsar's landing place was within the port and nigh to Richborough which at that time was an island. He thinks it probable that a British town, may have stood on the site, and that the port was frequented by merchants from Gaul; that Cæsar's ramparts were formed of earth, with palisades, and that the walls now standing, were built by Aulus Plautius, under the R. Emperor Claudius, A.D. 47. The town of Rutupium stood below the camp, the lines and crossings of its streets, were to be traced in Camden's time in the adjacent corn fields." From Speed's *History of the World*, 1636, article Kent, respecting the Goodwin Sands, 6, "*A conceit* is that Goodwin Sands were sunk for the sins of Earl Godwin himself, and his sons: Shellness also that dangerously lies on the north-east of this county, Kent, and are much feared of all navigators. These formerly had been firm ground, but by a sudden inundation of the sea were swallowed up, as at the same time a great part of Flanders, and the low countries were, and the like also befell at the same time in Scotland, as Hector Boethius writeth." Camden's *Britannia*, by Gib-

son, 1695, article British Islands, p. 1106. "Without the mouth of the Thames eastward, before the Isle of Thanet, lies a long shelf of quicksands, very dangerous, called the Goodwin Sands, where in the year 1097, an island that belonged to Earl Godwin, was swallowed up, according to our annals." John Irvine writes thus of it; "The Isle was fruitful and had good pastures, situated lower than Thanet, from which there was a passage for about three or four miles by boat. This island in an unusual storm of wind and rain, and in a very high sea, sunk down, and was covered with heaps of sand; and so irrecoverably converted into an amphibious nature between land and sea."

From Baker's Chronicles of the King's of England, casualties happening in the reign of William Rufus, 1087 to 1100: "Also in this King's reign, all the lands in Kent, sometime belonging to Earl Godwin; were by breaking in of the sea, covered with sands, and are called Godwin Sands to this day."

To conclude, it is a common observation with us tars, that where there is so much smoke there must have been some fire. The Godwins, as powerful Sea Kings, or Northmen, figured through three centuries in our early annals; and if the Goodwin was the low island mentioned by the Roman Historians as distinct from Thanet, it is probable they formed the safe anchorage in Trinity Bay, for these naval marauders. Godwin Tower in Dover Castle still bears his name, and there is no derivation for the Goodwin Sand, but the resort of so distinguished a race of naval and military commanders as the Earls Godwin.

K. B. MARTIN, *Harbour Master.*

The principle of Dr. Pott's for sinking his cylinders, has been already noticed in our journal. The reader will find the earliest account of it in 1846. It is one of those happy inventions of the day, (for some are not so happy as others) that most effectually answers the purpose intended, and without which we could comparatively do nothing. Of what use for instance have been all the efforts to obtain a foundation on the Goodwin until Dr. Pott's principle established it for us? The reader will find an account of Mr. Bush's caisson alluded to by Captain Martin in our volume for 1842 p. 723, and also a sketch of Captain Bullock's beacon alluded to in this very interesting paper in the same volume, and in the plate facing p. 129. The tube of the caisson we understand has been removed, and the body of it now only shews at low-water spring tides.—ED.

NOTES AMONG THE ISLANDS OF THE PACIFIC.—*Extracts from the Remarks of H.M.S. North Star: Capt. Sir E. Home, R.N.*

(Continued from page 456.)

THE hill before mentioned is the highest ground in Tonga, it is the village of Neckalofa, and upon it the church is built. The most remarkable objects to be seen in approaching this village are the boat-houses, five in number, two much larger than the rest, being 95 feet long, 33 feet broad, and 23 feet high: the gables are open at each end, and face the sea, forming a pointed arch.

The canoes require large houses, and like every thing else formed of wood, are made at the Feejees. The largest then at Tonga measured 102 feet in length, and had 5 feet beam, sharp at both ends; the second one secured to it by outriggers was 87 feet long, and 4 feet 6 inches beam; the length of the platform which is laid over the two vessels forming one deck is 48 feet, the breadth 18 feet. The canoes rested upon the ground, above which the height of the platform was 5 feet 7 inches; one side is sheltered from the rays of the sun and from rain, by a sloping roof, under which are two or three wooden drums, which are in appearance not unlike a very large hog-trough hollowed from a single log of wood, hard and very thick. They are open at the top, and the sound is given by striking quickly or slowly with a heavy stick upon the inner rim. In these canoes they carry earth stones and plantain leaves, and so cook on board as on shore. These large canoes are built with planks, and are paid for with tapa or cloth: they are expensive, for although at the Feejees they have saws and other European tools they still hold to their old methods. They divide the tree down the middle, (how I know not,) and then dub each side down until reduced to the two planks required: the butts are neatly and securely joined, and cemented with a substance like chinam; the different parts are all neatly secured with sennet, which sometimes parting in a gale of wind, the canoes separate, and both are upset. They are sculled by four or six men in the bow, who hold their paddles vertically placed in square holes made through the deck for that purpose. They are propelled at the rate of about $2\frac{1}{2}$ or 3 knots per hour: the noise which is made by the agitation of the water, the constant striking of the paddle which causes it, the sound of the drums, and songs of all on board are highly musical. The number of double canoes at Tonga are ten; four belonging to Neckalofa, three belonging to the Tur-Tonga, and the rest belonging to chiefs upon the island at other places. None but chiefs have double canoes. They are each capable of holding 100 men. In these they visit the Feejees and Navigator Islands. Men are absent from Tonga sometimes for three years building their canoes. Small ones are very numerous; twenty usually attend the ship every day bringing things to sell. The landing is not good: at about 100 yards from the beach when it is low water the boat is brought up by a reef which rises up from the bottom.

Over this space you must wade or be carried. At high water the boat can approach the beach, but care must be taken not to leave her there. King Josiah appeared to be about fifty-five years of age, walked perfectly erect, his hair slightly grey: he is a tall handsome man, grave and dignified in his manner.

The village of Neckalofa is a fortress, as all the principal places are, surrounded by a deep broad ditch, which time has nearly filled up. The church stands upon a grass-plot which is the highest ground in the island, a neat plain building, the roof thatched with the dry leaves of the pandanus, the sides are hung with mats which form a wall, the floor also is well matted. Its length is 105 feet, and it is 33 feet wide, and about 18 feet high. It is built in the native fashion. There is another church in the village: they are both under the direction of Mr. John Thomas, a very respectable Wesleyan Missionary, who has resided here for eighteen years, from whom I have gained my information. There are about 350 houses and 2,000 inhabitants; about 800 attend church: the houses are in form oval; the roof also is oval, like the longitudinal section of an egg. Besides the supporters of the eave-plates there are in large houses at least four separate pillars which support the roof. The sides are not more than four feet high, open all round when fine; in winds or rain, or at night they are closed with substantial mats, quite equal to keep out the worst of weather: the floor is thickly matted. Against one of the pillars hangs the kava bowl, a broad shallow dish of wood, having four substantial legs; the diameter of the bowl about two feet or eighteen inches, the legs are six inches in length. The beams of the roof lie in hollows cut in the uprights which support them, and are bound in an ornamental manner with sennet of different colours, made from the bark of the cocoa-nut, which they are proud of showing. Their light at night is kept by a little cotton wound round a reed, about a quarter of an inch thick, and two or three inches long; the half of a cocoa-nut with the kernal forms the lamp, into which cocoa-nut oil is poured—the light is excellent. Each house has a court yard, and is enclosed by a fence of reeds, neatly interwoven: they are about six or eight feet high; these fences joining form lines. Within the enclosures are the bread-fruit and cocoa-nut trees, with other useful plants which joining together form shady lanes when the space is left open for general accommodation. Within the court yard is also to be found a shed, covering a hole filled with stones; this is the oven in which they bake their yams, pigs, &c. There is generally another shed under which the women beat the tapa, if it is not done in the house: each habitation contains, I believe, an entire family, or all that are related, for when a man marries one in a family all the rest look equally to him for support. The house of Josiah was not superior to the rest, rather the reverse: upon the beams which support the roof were kept all the utensils for the canoes, nets, fish-gigs, paddles, arms, spears, &c.: it is the store-room. One end is fitted up and parted off for the women, the rest is common; this is the case with all.

The population of this island, and that of *Æoa*, is about 9,000, of whom about 4,000 are christian, 100 are papists, and the rest pagans. The king is a protestant of the sect of Wesleyans, as all upon the island are; there being no missionary clergyman of the church of England in any of the groups of islands which we visited: his name is Josiah Tuboo, and his title is Kanokubolu, which is king, not only of Tonga, but of the Friendly Islands, (as we call them,) including the Hapee Group. These islands have for a long course of years been governed by a regular succession of kings. The state of civilization to which the natives have attained is infinitely superior to any thing I have seen in the natives of New Zealand, (with whom they are by origin closely connected,) where each unruly tribe is governed by its own particular chief, if government it can be called.

The hereditary succession to the kingdoms in the Friendly Island Group seems complicated, and the highest rank is derived from the mother. Moamoor the great, who reigned when Capt. Cook first visited Tonga had three sons Tinan, Tukeralio, Tulia Toa, or Tuba the brave, and Tubo the present king. Tuba Tinan succeeded his father as Tuckanakubola which seems to me to be from all I can learn, king of all the islands. He was murdered about the year 1814, and was succeeded by Tubo Toa, father of the present king of Vavou and the Hapai Islands. Toa died about the year 1817, after which the office of Tuckanakubola was not filled for several years. Much disorder followed the death of Toa, and the disaffected under the chief Taky, who was master of the Bed Fort or Pah, drove away the governing chiefs and obliged them to take refuge amongst their friends at the Hapai Islands. The troubles increasing king Tubo in 1827 was by the chiefs of Tonga elected Tuckanakubola: the ceremony of inauguration took place at Hihip or Hekees, a place at the west end of the island; and the same year he embraced christianity, and has retained his office of sovereign over all the Friendly Islands since that period. His fault is extreme mildness, where there is opposition to contend against, and Taky now holds the Bed Fort in defiance of him. There is another Tur or king in Tonka, who is called the Tur-Tonga: he is a pagan, and is descended from the elder branch of the family from which Tubo sprung. Its origin was supposed to be the god "Hikuleo" and his successor the present Ton Tonga receives divine honours. He is the son of Tobourmougo, sister of Josiah Tuba, and according to the Tonga custom is superior in rank to Tubo. The father of the Tur-Tonga held the same rank before him and died in 1806. To continue the race of the Tur-Tonga he should have for his wife the daughter of the Tuckanakubola from the male children of whom a Tur-Tonga only can be chosen. The present is the last of his father's children, and as there is no female at this time proper to be his wife, in all probability the office will terminate at his death.

The Tur-Tonga has many children, nearly all of whom are christians, but as they were born of women of little rank they cannot succeed the father in his office. The people of this island are as fine specimens of

the human race as can be found. Except for the natural habit of idleness, they are particularly well disposed to improvement in all respects; they take readily to any thing European, and are anxious to receive religious instruction. The king is too mild and indolent, the consequence is the schools are not so strictly attended as they might be.

The formation of the island is coral; indigo is common, and sugar-cane is of very fine quality, being also indigenous: there are pearls; and they are beginning to make very good cocoa-nut oil for exportation in considerable quantities. Cotton goods would be readily received in exchange, both white and printed, as well as hoes, combs, razors, umbrellas, bonnets, ribbons, gunpowder, tobacco, long knives, and clothes ready made. They want many of the tropical fruits: they have the orange and shaddock; but there are not more than three or four trees. These are in the gardens of the missionaries, and are of a very fine sort; there are no lemons. They are good cultivators of the land, which is generally very good; but the pagans are more industrious, and take more pains with their plantations. These consist principally of yams, and the paper mulberry. From the bark of the latter, taken when the stem is about three inches in diameter, the cloth is made by which both sexes are clothed; it is called *tapa*. After it has been soaked in water it is laid upon a log of wood formed like the wooden axletree of a large cart, the extremities of which are supported from the ground by three pieces of wood, two parallel to each other, and one across; the ends of the log are laid upon the cross pieces which raise it three or four inches from the ground; the bark is beaten by the women with an instrument made with heavy wood like a rolling pin, only it is square: the beating commences at daylight, and continues without ceasing until 3 P.M., unless they are working against time, such as a marriage or some such events: the noise is loud and musical, they keep time in beating: there are usually two or four beaters in every house at work, so that the women of Tonga make more noise than any in any place I ever visited before. The breadths are pasted together with paste made of the flour of arrow root or taro; when dried it is printed; the pattern is devised by the king's family, principally from our cotton prints; the type or pattern is raised upon the leaf of the pandanus, and contrary to other prints the side which receives the stamp is the reverse side.

King Josiah Tubo to shew what could be produced had a piece of cloth made which was two miles in length and 120 feet wide; when made it was necessary to spread it and the ground had to be cleared to spread it upon. There was a great feast of pigs and yams; when the first piece was cut off, it was all distributed.

This is worn by the men round the waist in a large fold, which covers the body from above the hips to the knees; it is secured by a girdle of mat or *tapa*. The only distinction in dress worn by the king or his sons, differing from others is the girdle being of *tapa* in the raw uncoloured state, which is a dull white: by loosing this girdle the cloth can be drawn over the whole body, as it is worn in rainy weather. The hair

is black and worn bushy, not long nor very short; it is of equal length, and they are most particular in their attention to it, carrying a comb constantly about them to dress it; their appearance when undergoing the operation is rather absurd. Our pilots' heads resembled a bishop's wig, but they were black. I was not prepared to see them powdered, which I did on landing. I there saw several elderly men sitting upon a bank; their full heads of hair as well dressed and as white as any wig-maker in London could wish to make them, the individuals looking extremely grave, as if waiting for something, and perfectly motionless: excepting the folds of tapa round them they were naked.

They were waiting for the lime to dry with which their hair was filled. In some cases the lime was scraped from the temples precisely in the same way as I have seen it done in England, and perfectly fit for court. The lime is to stiffen and clean the hair and kill the insects. The lime is then brushed out, the hair dressed with the oil of cocoa-nut (the true Macassar,) combed up and set on end. This in time turns the end of the hair red.

Children are most numerous, in no place more so: in one group I once counted thirty-one. Until about thirteen they have their heads constantly shaved, excepting an ornamental tuft or two, which is usually left over the ears, upon the forehead and crown of the head; the larger portion is however always bare, and in this state without any covering whatever, are constantly exposed to a tropical sun. The children of Englishmen by native women are treated in the same manner, without any bad effect.

I saw no bald men at Tonga, nor one deformed in any way: they have the finest teeth. They tatoo from the loins to the knees, as in New Zealand; but not in curves. The pattern is very small, and so close that the natural colour of the skin is hardly to be seen; the lines are straight. At a little distance, without their cloth they would appear to wear blue breeches. The children go naked, except a piece of cloth, a few leaves, or part of a frond of a cocoa-nut tree tied round their middles. It is usual to cut off the little finger, or the two first joints of it, as a propitiation, or sacrifice to their God, when a friend is sick, that the life might be spared. This custom, with tatooing has been much left off since the introduction of christianity. Henry, the king's son, had lost the little finger of the left hand entirely, and the two first joints of the other. The queen had lost both her little fingers. I saw a boy, not sixteen, who had lost his finger entirely. It is as frequent as the loss of the front tooth to the natives of the north part of New Holland. They do not squat as in New Zealand, but sit tailor fashion: nor do they wear any ornament in their ears. I did not see an ear that had been pierced: their complexion is dark olive. I here saw some natives of the Feejees, they are tall and thin; wear their beards long—they are black. There was a boy also from the New Hebrides, he had much the appearance of a negro, or something between that and a New Hollander, and was marked on the belly with the same kind of remarkable

gashes, which are so common upon the natives of New Holland. They have here every where many dogs which they keep for guard. They are not tied by the neck, but wear constantly a sort of harness; some bark or tapa crosses over the shoulders and under the chest, by which they make them fast; they are very thin, as are their pigs, for the greater part; but I have seen here some as handsome as I ever saw elsewhere. They are generally black or white.

The Tur-Tonga having come to see me I returned his visit. His fort or pah the ancient seat of government is called the Moat: is situated at the head of the great Lagoon, a most intricate navigation for a gig in consequence of the coral reefs; it is a fortress surrounded by a ditch, and the stockade which is strong is covered on the outside by a neat close wove mat, so that from without no idea can be formed of what the strength or preparations may be within, whilst the others can with ease see through it what is going on without being seen. A method similar to this is used by the New Zealanders in war-time by hanging leaves of the native hemp, (*Phormium Tenax*) round the outside of the stockade. Upon landing we were met by a kind of guard, some having clubs, others bayonets stuck upon the ends of sticks. They ushered us to the fort or pah; a rough path about 500 yards from the landing place brought us to it, and a rude bridge of the trunks of trees laid over a deep broad ditch brought us in to the village. This is its only real defence. Passing some stiles and lanes betwixt the huts, not unlike those in a New Zealand Pah, we came to an enclosed space or square, in the centre of which stood the house of ceremony, a good sized building; the sides were open; it was filled with people sitting upon the mat, in a semi-circle, round one end of it. The Tur-Tonga sat with his back leaning against one of the posts which support the roof near the end opposite to that where the people sat; the centre of the room was clear; many persons of all sorts stood round on the outside; in the end of the building behind him were the nets, lines, and fishing apparatus: he was dressed with an enormous piece of new tapa which left little exposed below the arms, and almost covered his legs; he had no ornaments, and did not move when we entered. Mr. Thomas was the interpreter. Some of the gentlemen from the ship accompanied me. A large wooden drum was brought for me to sit upon, but I preferred the ground; the only native near him was an old woman, simply dressed, who sat by his knee. He had prepared as a present two spears, a club, a piece of cloth and a mat, being I suppose, all that is necessary for apparel, defence, and rest; he said "He knew we did not drink kava," but asked if I would have some made, which I accepted. A person being called from amongst the rest, he crouched down in a most humble manner as he received his orders, and touched both his feet which were tucked under both his hams, with his right hand, went on his errand. He shortly returned with a large root of the kava plant under his arm just as it was taken up, a stool as it is called, several stems rising from one spreading root, the stems about three feet long, the leaves were removed; he brought it in both his hands in a stooping

posture and threw it gently down on the mat before me and then withdrew. After it had lain there a few seconds it was removed by the man who brought it, to the other end of the hall; a large bowl was taken down from the pillar where it hung, and placed before a young man, I believe his son, who sat in the centre of the front row of those who were opposite, and appeared to be a principal person. A large bone resembling a tooth of the Narwhale was then brought in, with which the root was then divided into separate sticks by holding it in a vertical position, and pounding the root also held upright with the broad end of it, which done, the bone was handed out and the stems and root were distributed in pieces of about six inches long to the persons who sat near the bowl, who after scraping off the earth which adhered to the root, and cleaning it well with the fibre of the cocoa-nut husk, broke off portions with their teeth and commenced chewing it. Whilst this was doing two men came in, bearing upon a pole two baskets, one of them containing a baked pig and yams, the other, parcels of a kind of jelly made of arrow root, mixed with the juice of sugar cane. The parcels were tied in pieces of banana leaves, the size of a large pudding. The appearance of this dish was not inviting, but it was by no means to be despised. The pig had been sent to the boat, there was enough at least for twenty people. During all this time I was employed in answering many questions asked by the Tur-Tonga, the people round listening with great attention and apparent interest; he asked particularly after Captain Waldegrave who had visited the island some years ago. About the time the pig and yams were brought the kava root was masticated, the young man who presided over the bowl first threw his mouthful into it, those who were near threw in what they had chewed, and those who sat farther off put their morsels into small dishes made of banana leaves which were handed round to receive them, and they were all thrown into the bowl; water was then brought in calabashes, about six in number, containing together about two gallons, which was poured into the bowl, and the young man with his hands commenced mixing the masticated mash with the water. When this was thoroughly done he took a large bunch of the fibres of the bark of a tree called fow, resembling coarse tow: this he spread with both his hands along the margin of the side of the bowl opposite to him and drew it through the liquor which had the effect of straining, bringing away with it the broken fibres and pieces of the roots which had been chewed; it was then well rung over the bowl, the operation was repeated until the liquor was clear of the stems, which were all retained in the crater of the fow. Small square dishes made of the leaf of the banana holding less than half a pint were then produced, and the fow being filled with kava from the bowl over which the cup is held, the liquor runs from it into the vessel. The first dish was handed to me. *Étiquette* requires that it should be drank off, and the cup thrown into the room. I tasted it, and handed the cup to the Tur-Tonga, who sent it to be filled up, as if that which I had taken had diminished the quantity. He then drank it off and threw the cup into the room.

There is in all things respecting kava as much etiquette to be observed as in any of the ceremonies in the stiffest court in Europe; little circumstances which might pass unnoticed, or appear to be accidental, are studied, and done according to ancient custom. After the Tur-Tonga had drank his cup, others were served as they were called; each as he drank it throwing his cup into the room towards the boat. They were served sitting, and during the whole time that I was there no one spoke a word. When the kava was finished, the bowl was well wiped with the fow, which was frequently wrung; with it the young man wiped his hands and arms, and then having shaken it hung it up to dry, and the bowl resumed its station against the pillar of the house. There is a property in this vegetable which after frequent use stains the bowl to a colour resembling bronze, so much so that the first I saw I believed to be made of that metal.

Whoever came in, or went out, or held any communication with the Tur-Tonga first crouched down, and with his hand gently touched both his feet, most commonly the two great toes. The old woman who sat close behind him when she went away did the same, he not taking the slightest notice of the act, and the humble but sincere manner in which it is done exceeds any thing of the kind I ever saw. The old woman's action and expression of countenance was that of enthusiastic adoration. From what I saw he is looked upon by his people as something more than human. The same marks of respects were paid to Josiah, but he has obliged them to be discontinued towards him since he became a christian; he has also left off the use of kava.

Having expressed a wish to visit the governor of the fort, who was his brother, attendants were desired to go with us. I wished to ask him to go also; but it was explained to me by Mr. Thomas, it was contrary to etiquette for chiefs of his degree to visit those below him. I told him that having read of the tombs in that neighbourhood, I wished to visit them, and he promised to accompany me there on my return. The governor's house was at some distance, of the same sort as the other, but larger, and altogether better: it stood in the centre of a grass plat, enclosed by a fence of reeds. The governor was alone, and asleep upon the floor, with a musket by his side, a short English one of the best description; he jumped up in some confusion: we had nothing to say, kava was brought up and thrown down before me root foremost as before; being told it was a present to me I kept it as a specimen. The conduct of the persons about this chief was submissive and highly respectful, but there was not that distance kept, and fixed attention paid to his looks, that I had observed in those forming the group in front of his brother: he bears a high character for superior intellect and energy. It did not shew itself when I saw him. The Tur-Tonga says of himself that he has no officer, and does not meddle in matters of State; he is a chief to eat and drink, and they bring him clothes to wear when he wants them; but the chief for war and to govern is his brother Tungee, who commands the fort. The Tur-Tonga accompanied us to the

tombs of the kings. We walked along what had once been a sort of park well kept, but now overgrown with bushes, in this ground all public meetings and games were held.

The walk became more narrow, and the bushes thicker, and we were soon in a narrow path—the natural forest. Having walked some distance into the wood, we came to the remains of gate-posts with some very old doors half hanging to them, others fallen: the remnants of the fences made with reeds enclosed a wilderness, the ground overrun with bushes and trees, coming to perfection. This he told us was all that remained of the ancient houses of their gods; there was enough left to mark the spot, and that was all. Mr. Thomas produced a print from Cook of the "Feast of Yams," in honor of the king's son, held upon the spot. In the back ground of the picture are some iron-wood trees, (*casurina* sp.); the original trees were all that was to be seen to identify the ground.

The Tur-Tonga was exceedingly struck with it, he understood it perfectly, explained every part of it, and pointed out the spot where we were standing, he said "that the sight of it revived in him the feelings of his ancestors." He added, "that no such thing could be again got up, no person would understand it; such customs and their gods had been allowed to decay since the introduction of the new religion." He examined it for at least twenty minutes, and no part escaped him. We left him studying it, and went to see the tombs which were at a short distance. The tombs of the kings were as much neglected as the houses of the gods, and it was a work of no little difficulty scrambling through the bushes to them; so much so that we should not have noticed them at first had they not been pointed out by Mr. Thomas. They were in an enclosure formed by thick flat slabs of stone set edge-wise, which had been brought from a neighbouring island. The enclosed space contained the vaults; one large stone was pointed out as having been brought from Wallis Island; it was nearly as close as basalt and weighed some tons. This enclosure was filled with sea sand, and the ground round it for a great extent was covered with the same, it being the custom to bury the dead in sand, which is brought from the sea shore in baskets by the women.

Having asked the Tur-Tonga what was the age of this mausoleum? he answered "How can I tell, we could not then keep account as you do by writing; but they are beyond all tradition." He was surprised, and appeared pleased, when I told him that we had stones in England of which we could say the same. He attended us to the boat, and partook of our dinner, which was in the boat. He objected much to the sun, which was rather hot, and proposed the shade of a tree, which we should not otherwise have thought of. The same deep respect was paid by his attendants, who kept at a very respectful distance; yet there was no particular stiffness or restraint amongst them. It was respect, the effect of education, it seemed to be perfectly of free will and sincere.

The stock of the boat's anchor was gone, it had been sought for but could not be found: the Tur-Tonga promised it should be on board the

next day, and the next day he brought it, with the man who found it; and proposed that he should have a bottle given him for his trouble. He came in a small canoe with one attendant, an elderly man, who thought he spoke a little English: they paddled themselves on board. He was much pleased with the ship, they breakfasted with me, drank tea, and conducted themselves at table in a manner quite surprising, perfectly easy, and familiar in the use of the knife and fork, and like king Josiah could set an example of neatness and propriety of behaviour which might be followed, with advantage, by many European gentlemen I have seen. The manners, both of the king and of the Tur-Tonga, are above the ordinary stamp, they are refined and are fit for any society that I have ever seen.

After breakfast I gave them each some trifles: the slop-room was the most valuable magazine. There was a difficulty in putting on a Guernsey frock: it was the largest there was on board, and it must disturb his hair in drawing it over his head; it was however done; and immediately a comb was produced from their girdles, and the greatest care was taken for several minutes to restore their hair to its proper state: it was by them worn thick, and just long enough to stand on end, and was well oiled. He did not land to see Josiah, and I believe these chiefs seldom or ever meet, except upon urgent matters of consultation.

The Tur-Tonga intends some day to be a christian, his children are all converted, and nothing but ancient prejudices restrains him. Before leaving Tonga I went to the Bea fort to return a visit that had been paid to me by three Roman Catholic Priests: it stands upon a rising ground, is enclosed by a deep ditch which contains stagnant water; the entrance is narrow, and defended by a 12-pounder carronade, which stands in the opening. This is a place of some strength, having a good stockade; it is covered with mat on the outside. The chief who resides here was placed in it by king Josiah, but he had rebelled and holds it in defiance of him. Nothing was to be seen here except some boat-houses in which he keeps his double canoes. The priests live here in a miserable state, conforming to the customs of the natives, which they in no way try to check, showing an extraordinary contrast, with the neatness and comfort of the English missionaries, whose example all the well disposed natives are following with great advantage to themselves in all respects.

NAUTICAL REMARKS ON THE RIO GRANDE DO SUL.—*By Mr.
C. H. Dillon, Master, R.N.*

THE land in the immediate vicinity of the entrance of the harbour of Rio Grande do Sul, presents no sufficiently remarkable features to assist the navigator in making it. The coast being uniformly low, an almost uninterrupted range of sand hills, with only here and there a few

trees and bushes. The latitude then becomes the only certain guide, but as soundings extend some distance from the shore, ordinary precaution in the use of the lead is all that is necessary. During north-east and easterly winds, which prevail several months in the year, a strong current sets along the coast to the south-westward at the rate of forty miles a day. This makes it advisable to close the land a little to the northward of the lighthouse, which is the most conspicuous object, and will, together with the shipping lying at the bar, be, in all probability, the first seen.

The lighthouse is a square tower about 60 feet high, and shews during the night a fixed light all round the horizon, not particularly bright, but sufficiently good to be seen about eleven or twelve miles distant. It is in lat. $32^{\circ} 7' 15''$ S., and its meridian distance from Rat Island, Monte Video, as measured by H.M. Steam-vessel *Lizard's* chronometer (which was rated by equal altitudes immediately before and after the interval,) $4^{\circ} 9' 5''$ E. or its positive long. $52^{\circ} 4' 25''$ W. The interval was unfortunately long (eight days,) in consequence of a heavy gale encountered by H. M. Steam-vessel *Lizard* off the mouth of the River Plate, but as the chronometer had preserved an uniform rate, I do not think this result far from the truth. It differs $3\frac{1}{2}$ minutes from the longitude given in Raper's Table of Positions, which I believe places it a little too much to the westward.

It is unnecessary for me to repeat the signals made use of at the bar for the guidance of vessels, as they are described at length in the *Ethiopic Directory*,* and remain unaltered, but I would caution masters of vessels

* They first appeared in the *Nautical Magazine* for 1836, p. 580, with some good directions for the river, by Mr. James Harrison, Master of the brig *General Wolfe*. These were followed by further remarks by the same gentleman on the change in the bar in 1838, p. 297. Again in 1842, p. 790. Again in 1843, p. 131, by Mr. T. Houghton, and again in 1845 p. 47; and yet we meet with the following in the *Shipping Gazette*.

The brig *Shield*, James, of Arbroath, from Cadiz, on taking the bar, got on the north bank of the entrance, and became a total wreck; crew saved; nothing could be saved of any consequence. The ship was lying, when I came over the bar, on her beam ends, and nearly level with the water. As I have never seen any directions for entering the port of Rio Grande save those from Mr. Harrison, of the brig *General Wolfe*, to whom every one who visits that place is much indebted, you may insert that there are now signals made for 20 palms water (14 feet 7 inches), although it is a very rare occurrence to have so much, and then the wind is in the S.E. quarter, when no vessel can get out; there is likewise a powerful steamer for towing both in and out, but charges are enormous. The *Iddo* is 200 tons register, and paid £20 for steaming over the bar, drawing 12 feet 10 inches water. During my stay there (seven weeks), vessels were detained three, four and five weeks for want of water, drawing as low as 12 feet. I will not pretend to give any directions for making the land or entering the harbour, the latitude being the best guide, as justly remarked by Mr. Harrison; but I would not recommend any one bound out to load more than 12 feet, but with the assistance of the steamer you may load home to nearly 13 feet. This is in the winter season; in the summer months vessels seldom load to more than $10\frac{1}{2}$ to 11 feet. I was to get a copy of the new signals from a very much respected resident but I am sorry I have come away and neglected to get them.

of large draught, not to approach the bar into less than 6 fathoms, (even if the signal to close be flying,) unless the bar-boat is at anchor in the entrance, and there is a certainty of being able to get in, as the S.E. bank is very steep on the outer edge. Unless the weather is unusually fine, the sea breaks every now and then in eleven feet, and the deeper water is then plainly discernible. The best track in is close along the edge of the S.W. bank, which is the shoaler, and its edge shews more distinctly, as it is nearly always breaking. The tail of the S.E. bank projecting a little more to the south-westward rather overlaps it, making the course in, at first about N.b.E. or N.N.E.

It is to be observed that the channel is by no means a distinct and clear one, as there are several knolls or ridges of sand, rising a foot or two above the general surface of the ground; which it is almost impossible to avoid in so small a space, even supposing them to be stationary, which I think improbable. I fancy that every gale must make some change.

From all the information that could be gathered from persons acquainted with the port, it would appear that the channel is not nearly so deep or clear as it has been. I sounded at the time of some of the highest tides during the *Lizard's* stay, and 14 feet was the greatest depth, there being at the same time a swell for which it would have been necessary to allow $1\frac{1}{2}$ to 2 feet.

The bar is composed of very fine sand, which lies extremely compact and hard: from the passage the lighthouse bears N.b.W. $3\frac{1}{2}$ miles distant. The bar-boat is sometimes anchored on the tail of the S.E. bank, but more frequently a little inside of it, and on the approach of a vessel a flag is waved from the boat in the direction the pilot wishes the vessel to take; he having previous to anchoring sounded with a pole, and ascertained where is the deepest water.

During great part of the time the *Lizard* was lying at the bar, the weather was unfavourable for surveying, the water was never sufficiently smooth to allow a boat to cross over the banks. It was seldom that I could venture into less than eleven feet, even on the inner edge.

The south-west bank is much the shoaler of the two. It is apparently nearly dry in some places. Between its western edge and the shore is a channel which is sometimes used by the bar-boats in returning, if caught to leeward in the offing. There has been a fair channel in this direction, called the *Alfama Bar*, a great part of which is now some feet above water. This is also the case with the old north-east bar, or opening, which was close along the shore to the southward of the lighthouse, and by which vessels entered about ten years ago; it has gradually filled up since the present channel broke through. Further changes may be expected to take place at no very distant period; it appears probable that a passage will be opened a little to the north-eastward of the present one, as the bank is very narrow in that direction: the distance from sixteen feet on the inside to thirty outside, being very small.

From what came under my observation during the short time I was at Rio Grande, I do not consider that vessels of more than eleven feet draught, are well adapted for the trade of that port.

A great number of vessels passed both in and out, generally drawing ten to eleven feet: all above the latter suffered more or less detention; they were chiefly English, from twelve feet to twelve feet six inches draught. Six however, sailed, and one English brig the *Agestes*, arrived, (drawing twelve feet nine inches,) after having been forty-seven days off the port. The whole of these vessels were reported to have touched the ground on passing the bar.

The highest water occurs immediately before and during the continuance of the Ribajo or south-west wind, which blows occasionally, generally lasting a couple of days. Vessels may be towed out, at its commencement, and others may run in, if prepared to take advantage of it; but it soon raises a very heavy sea on the bar, and renders it impassible. The change of weather also alarms the masters of vessels in the offing, they frequently stand off the land and lose the most favourable opportunities of entering.

Vessels above the usual draught for this port should get pilots on board as soon as they can. The ship's ensign hoisted at the fore-top-gallant-mast-head, is the signal for wanting assistance, when one of the bar-boats will be despatched with a pilot, and having some casks of water in case of its being wanted. The pilots generally anchor vessels about one mile and a half south-east of the bar, in about seven fathoms sand and mud.

The pilotage of the bar is entirely in the hands of the Brazilian Government. The bar-master has the temporary rank and pay of a Lieutenant in the navy, and the pilots and all others employed in that department, are part of the naval establishment, and subject to naval discipline. They appear to be very well provided with boats and gear for the performance of their duties.

A very good steam-tug of 100 horse-power lies at the buoy off the lighthouse, ready for service. This vessel belongs to a company of merchants: she is sometimes very actively employed, but the great expense prevents many from availing themselves of her services.

Vessels waiting to sail, anchor abreast of the lighthouse rather over on the western shore in 7 fathoms, very good ground, sand and mud; they are expected to be ready to start at the shortest notice, and to keep the flags answering to their draught always flying, as soon as sufficient water is shown at the tower: having been visited by the bar-master, they are at liberty to sail. The pilots do not always go on board, but keep a head in their boats, directing any necessary change in the course by waving a flag.

The pilotage to the north, when past the shoal part of the bar, presents no particular difficulty, the water deepening rapidly, and the channel widening considerably, the bank on either side, showing distinctly. On getting inside the points of the river, it is only

necessary to keep the western shore aboard. It is steep to, particularly abreast of the sand hills. An extensive flat stretches out from the eastern shore leaving a deep channel of about half a mile. On the elbow of this shoal is a large red and white buoy, which you must pass to the westward of; another similar buoy lies in the channel to the north-eastward which should also be passed on the westward side. From this buoy the channel runs across to the eastern bank, a very remarkable tall house among trees kept a little on the starboard bow, is a good guide through the deepest part of the channel. A black buoy will be observed some distance to port, which lies on the west side of the entrance to the channel to St. Pedro. There is also a red buoy on the tail of the eastern flat, after passing which you may run close along the eastern shore to the northward, anchoring as convenient in from 8 to 6 fathoms abreast of the tower of St. Jose de Norte, where vessels of more than ten feet draught, are obliged to discharge part of their cargoes, to allow them to pass through the narrow and shallow channel to the city of St. Pedro do Sul, or Rio Grande, where they discharge the remainder, and having loaded to ten feet, return to complete their lading at the North Town. This shifting is one of the inconveniences attending the situation of the principal town, it sometimes causes considerable delay from vessels remaining aground in the channel for several days.

The channel to St. Pedro is not entirely a natural one, a portion of it having been excavated by a machine. Since its formation, it has partly filled up from the slipping down of the sides, and vessels constantly grounding have added to the evil. A vessel is now constructing at the arsenal for the purpose of deepening and improving it.

The shipping at the south, as it is called, lie moored head and stern, alongside a low wharf, in a narrow strip of deep water sufficient to accommodate three or four tiers of vessels.

The town is built on the north side of a very low peninsula, not more than three or four feet above the water: it is of some extent, containing about 6,000 inhabitants: its extremely low situation subjects it to occasional floods.

The trade of the Rio Grande appears to be very considerable; the interior navigation alone, employs between three and four hundred small craft.

A few vessels of burthen navigate to Port Alegre, the seat of Government of the Province, at the head of the great lake; but a bar obstructs the navigation for vessels of more than nine feet and a half draught.

A few small steam vessels are kept in pretty constant employment in towing vessels between the anchorages, and carrying passengers to Petotos, and other places in the interior.

The tides in the harbour sometimes run very strong, but are very irregular as to time; their direction and velocity appear to be entirely governed by the wind. One and a half to two feet is the greatest ordinary rise and fall.

In a small plan of the harbour of Rio Grande on Norie's General Chart of the Coast of Brazil, several forts and batteries are marked: one of them exist at present, nor any remains in the positions assigned. The only battery is one on the beach to the south-west of the lighthouse commanding the entrance, which was not quite finished when the *Lizard* left; it is a simple breast work of bricks five feet in thickness, intended for twelve 24-pounder guns, mounted *en barbette*. Some of the guns were mounted during our stay, and the remainder were lying ready.

Adverting to the frequent complaints which have been made of unnecessary detention, negligence of the pilots, and mismanagement of signals, I can form but a very imperfect opinion. The trifling detentions that came under our notice appeared unavoidable; the pilots are not on such a footing as to induce them to incur any particular responsibility, as they receive regular pay without reference to the service performed. In shewing the depth of water on the bar, they make an ample allowance of from three to four palms for the swell, which may be sometimes more than is necessary, but it is not generally so. It is supposed by some that the pilots can run out in any depth they please, and that they mystify the pilotage. This opinion I consider absurd: they can have no marks to assist them in keeping clear of the knolls, which they assert frequently shift, and their only resource is that practice of groping about with poles to find the best channel. The only appearance of negligence I observed, was in their not having the bar-boats out on two or three occasions sufficiently early in the morning, when vessels were off the port, and others waiting to sail, the water being favourable for passing the bar, and the weather moderate. Great complaints are made of the signals not being understood; that the red flag to approach the bar is frequently hoisted and hauled down without any apparent reason. The bar-master told me, that he was frequently obliged to haul down the flag, in consequence of one or more vessels running into danger, this obliging all to haul off, some losing their chance of getting in, through the mistakes or stupidity of others.

There is a great desire among the mercantile community of Rio Grande to get the management of the bar into the hands of a private company, who would employ a superior class of men as pilots under a different system. They also believe that it is possible to materially improve, or keep clear any opening in the bar, by artificial means. I am inclined to this opinion myself, the sand is so very fine and easily stirred up, that I think raking it during ebb tides would ensure an even channel of moderate depth.

Considering the great importance of this very fine harbour from the very extensive interior navigation, it is to be hoped that private enterprise will be engaged in removing as far as possible any natural obstacles to its navigation.

A new iron lighthouse of greater elevation than the present one, is shortly to be erected near the new battery.

On approaching and leaving Rio Grande, a look-out was kept for shoals said to exist to the southward, but nothing suspicious was seen. From the number of vessels engaged in the cattle trade to Monte Video that have traversed this part of the coast lately without making any discoveries of dangers, I am inclined to doubt their existence.

(Signed) C. H. DILLON,
Master of H.M.S. Raleigh.

THE SORELLI ROCKS.

(Continued from p. 539.)

Mr. John Larcom, the gunner of the *Avenger*, gives the following narrative of this event:—

The land seen broad on the bow was, I supposed Cape Ferro, but I am not certain, bearing about S.E.b.S. At the time she struck I was in bed and asleep: as soon as I awoke, it seemed to me as if the vessel had run into some other. I jumped out of bed immediately with the intention of dressing myself, but the ship falling down on her broadside I laid hold of my cabin door to get out but found it jammed. A sea lifting the ship nearly upright again, I got my door open and ran on deck in my shirt. When I got on deck every one was on deck or coming up. I then heard the captain, I think, give the word of command, something about the boats, which I understood to be "Out boats." As soon as ever I heard that I ran down below to get my clothes, and while in the act of doing it, a sea struck the ship which seemed to make every timber in her complain. I ran on deck with my clothes under my arm, when I met Lieut. Rooke on the quarter-deck getting some hands to clear away the cutters. He seeing me, said, "Come, Larcom, come, lend a hand, for we have to take the cutters under the lee bow, and pick up any one that may be washed off from the ship as the sea is making a clean breach over the fore-castle." We managed to get the port cutter down, but previous to this I heard Mr. Rooke say to some one on the opposite side of the deck,—“Join me as soon as you can.” Those are the last words I heard spoken in the ship.

As soon as the boat was down we were forced to shove off from the ship, or else I think it was Mr. Rooke's intention to wait for some other orders more than what he had received. We had scarcely been clear from the ship more than two minutes when the mainmast fell over the side, taking the mizen top-mast and funnel with it, and scarcely a minute afterwards the foremast with bowsprit went; and she then was on her starboard beam ends lying broadside on with her head about south, the sea making a clean breach over her; which cut off all possibility of getting the boats out. We saw the gig swamp astern. The cutter must have shared the same fate, for we saw barricas floating past us. We

kept up to the ship as well as we could, but the sea increasing with the wind, we found it impossible to keep the boat any longer in the way that we were keeping her. The moon coming out at the time shewed us the Island of Galita, when I immediately asked what course we were steering when the ship struck, when the second-master told me E. b. S.

Previous to this time there were one or two in the boat who wished to bear up, but Lieut. Rooke said "I am the commanding-officer of this boat,—pull towards the ship;" which we still did for about twenty minutes after, but finding it utterly impossible to regain the ship it was agreed amongst the whole of us to run to leeward of Galita. I laid my oar in immediately: the second-master at the same time was steering the boat, and I stepped the bumpkin for a foremast, close reefed the mizen, and hoisted it about two-thirds up, so as the yard-arm might drop down afore all, for there was too much wind to carry it close reefed. We then stood on towards the Island of Galita, and got to the north side of it between 12 and 1 o'clock.

We were scarcely there before we could see a squall rising to the northward and eastward of us, and I said "We shall have the wind from this quarter before long." We got the boat round, and I relieved Mr. Betts, who was steering with an oar ready to meet the breeze, as we could hear it coming along the water. We had scarcely got her round before the wind caught us, and it was so heavy that it seemed impossible for the boat to live. It rained and hailed very heavy at the same time. We were that way for about two hours and a half in this squall, when the moon shone out a bit, and we could see the Island of Galita quite plain on the port quarter, and some one in the boat said, "That is the island;" which we all thought we must have been out of sight of, as the boat was going through the water so fast; which convinces me that there was a very strong current setting to the northward and eastward.* A short time after we passed over a shoal which I shall always think was where our ship ran on shore. But it being so dark we could not see very far; the wind so strong we were forced to keep before it.

At daylight in the morning we made out the land. We looked to see if we could find any place where it was possible to beach the boat, which seemed to me such that it would be next thing to an impossibility without being capsized in the surf. As we neared the land, the sea still rose, and we had partly filled no less than twenty times during the night.

As soon as the land was reported on the port bow I piped watch, trim sails, and immediately ran down to tell the captain and master that land was on the port bow; they at the same time were looking at the charts. They immediately ran on deck, and hardly before they got on the top of the paddle-box the ship struck. He said of course I did not trim sails, as I was waiting orders from the captain. Several times during the night Lieut. Rooke asked me whether he should relieve me in steering

* This proved true by the pieces of wreck which were washed on shore at Bastia as we shall hereafter shew.—Ed.

the boat, which I declined and said I could steer best myself, but just before daylight feeling my hands sore he said that he could lend me a hand which he did until his hands were worn so sore that he was forced to leave off. Then the steward relieved him, and about nine o'clock or a little after in the forenoon, seeing a bit of a sandy bay which looked to us at the time to be a mere spot, running in round a bit of a point. We found it was about fifty yards and the sea did not seem to break so heavy there. We were determined that that should be the place where we would beach the boat.

We ran in until we got within about 150 yards of the beach when the rollers set in. The first one lifted the boat upright perpendicular. There not being water enough for the whole length of the boat, her stern touched the bottom, which stopped her all of a sudden; the roller taking the boat broadside on, broke into her and filled her. I immediately jumped out of the boat, and on coming up another sea broke over me, and took me in towards the shore. Recovering myself I saw the boat about twenty yards on my left bottom up: I was going to make for her, but seeing my cap about twenty yards inshore of me, I thought if the sea would take my cap in it would take me in also, so I swam for the shore; and having reached it I looked round and could see no one.

I thought at the time I was the only one that was saved; but a few seconds afterwards I saw the steward and Lieut. Rooke coming out of the water, laying hold of each others hands, the steward having picked up Lieut. Rooke when about up to his knees; the drawbacks having taken him off his legs. At the same time I saw the boy Morley coming in in the boat, she having righted and he got into her. When we all four met on shore we sat down for a few seconds, and then determined we must walk. We had not been on foot but a quarter of an hour before we met with an Arab, who took us to his hut, and gave us some milk, and made a large fire and dried our clothes. Being too much fatigued to travel that afternoon, we thought it best to remain there all night. During our stay Mr. Rooke had made the Arabs understand what we were, and what we wanted to do. One agreed to set out with us the next morning to a place called Bizerta, that being the nearest place where we were likely to get any assistance to take to our ship.

Previous to our starting next morning the Arabs made signs to us to say that we ought to have some shoes, as we should have to travel over some very prickly roads; we did not know what to do for any. Lieut. Rooke having a pair of boots on, he cut the legs off, from which we made two pairs of a kind of slippers to lace over our feet. The boy, Morley, taking the sleeves of his jacket for a similar purpose. We set out early the next morning, and arrived at Bizerta about eleven the next forenoon. We met the English Vice-Consul there, and he told us there was nothing large enough in the bay to take to our ship; and after having had a little refreshment he gave us some shoes, and some handkerchiefs to tie round our heads.

We then started in a small boat for Tunis, at which place we arrived about one o'clock the next morning; but being refused admittance into the town, Mr. Rooke sent for the Vice-Consul, who immediately came. Mr. Rooke made the case known to him; he said we could do but very little that night, but the first thing after daylight there would be nothing wanted, for he was certain that the Bey, and likewise Sir Thomas Reade, would render every assistance. It was no sooner known to the Consul-General, before he hired three vessels; one to come to Malta, and the other two to come to the Island of Galita: Lieut. Rooke having chosen a large boat for himself in case of a calm, that he might be able to pull, which he could not do in a schooner or brig.

We started about one o'clock in the afternoon, the Bey of Tunis having ordered the whole of his squadron to proceed to sea, and cruize where the ship was lost; we all went in the same boat with Lieut. Rooke. The second day we arrived off the place where our ship ran on shore, and we saw no sign of her whatever, or any thing belonging to her. In the morning we saw afterwards, off the island, three steamers, two to the north-eastward, and one to the southward, and likewise several Tunisian vessels. Lieut. Rooke wanted to go to the Island of Galita, but the Maltese said, that their boat was too large to go there, and the weather seemed to be coming on bad; they would not go in spite of all entreaties, so we were forced to put back to Tunis, where we remained until the *Hecate* brought us on to Malta.

William Hill, the captain's steward, makes the following statement:—

About nine o'clock in the evening of the 20th of December, the captain sent for me, and said he should go to bed: he took a candlestick from the fore cabin table, and retired to his sleeping cabin, which is situated on the starboard side of the fore cabin: He desired me also to send the officer of the watch and the master to him. I went on the quarter deck and informed Mr. Betts, second-master, who was officer of the watch, that the captain wished to speak to him, also to Mr. Archer, the master, whose cabin was in the gun-room. They both immediately went into the captain's cabin, and remained some two or three minutes. The captain called for me shortly after, and desired me to take away the light, and to leave a small lamp burning in the fore cabin, which was always kept alight at sea during the night; I did so and returned to my berth. In about half an hour afterwards I heard some one come down from the quarter-deck, and go into the captain's cabin; about five minutes after I heard the captain come out and go on the quarter-deck. He remained there about ten minutes, when he came below, went into his cabin and shut the door. He had not been there above five minutes when the officer of the watch came down, Mr. Betts, and the captain immediately went on deck. It now struck four bells; I had taken off my jacket and waistcoat and hung it in the berth when the ship struck, and by the sensation I fancied she had run on a sandy shore; she was quite steady and motionless for about a minute. I immediately ran on

deck where I saw the captain and master on the bridge. Mr. Betts second-master, on the quarter-deck, Mr. Ayling, master's-assistant, a quarter-master and two men at the wheel. I heard the captain call out "Stop her" and also the chief engineer. The ship now gave a heavy plunge forward which made every timber creak. Lieutenant Rooke now came on deck and asked me what was the matter; I made answer and said "We are wrecked, sir". He immediately ran below again, having no jacket or waistcoat on, and I followed. I had just got in my berth when Lieutenant Rooke passed me with a monkey jacket under his arm running up the after ladder. I took a monkey jacket and cap from my berth, and called about to the captain's servant. He came running up with his clothes under his arm; I told him what was the matter, and desired him to run and look after the captain. I saw him (the servant) no more. I cast one look through the gun-room, and every thing seemed creaking or crashing, and every moveable article was rolling from one side to the other. I immediately ran on deck again and the ship appeared to be leaning to starboard. I heard the captain call "Out boats" "Lower away the boats". The master now came running past the quarter-deck, down the after ladder and up again immediately saying to himself "I told him not ten minutes ago" what the other words were I could not distinctly make out. Mr. Rooke now had given the order on the quarter-deck to lower away the cutters. The sea then commenced breaking over her fore-castle, and she leaned heavily over to starboard. Mr. Rooke was endeavouring to lower the starboard cutter, Mr. Bett's second-master, on the port side endeavouring to lower the port cutter. The few men on the starboard side of the quarter-deck were about eight or nine, and those were in their shirts. Mr. Rooke was entreating of them to lower the starboard cutter, but the men seemed paralyzed and commenced clinging around him, and saying "Oh my God, sir, we are lost, we are lost." Mr. Rooke still entreating, and finding it no avail rushed to the port side. Mr. Larcom, the gunner, now made his appearance on the quarter-deck. He was in his shirt, and asked what was the matter, when he was told, and ran immediately below again. He came running up again immediately after with his clothes under his arm. Mr. Rooke said to him you are the very man I want, when he put his trousers on on the quarter-deck, and Mr. Rooke and the officers on deck, which were Dr. Steele (with his coat under his arm) Mr. Betts second-master, Mr. Ayling, master's-assistant, Mr. Larcom, gunner, and Lieutenant Rooke got into the boat, and commenced lowering the best way they could themselves, after calling in vain for the men to assist them.

John Owen, stoker now came up from towards the engine room, and James Morley the boy, they both got into the boat. The spray then was coming over the quarter-deck; Lieutenant Marryatt, second-lieutenant, now made his appearance on the quarter-deck; he asked me "What was up now" he appeared to be very cool at the time, he was

perfectly dressed, had his rainy proof hat and coat on ; he had hardly said so before the ship gave a heavy lurch to starboard, and took him off his heels ; he went on the broad of his back into the lee scuppers close to the gangway ; I saw him no more. There seemed now to be a crashing at the wheel ; the two men left the wheel directly. I cast one look round the ship when I hesitated what to do for a moment. I then jumped over the port-quarter into the bows of the cutter which the officers had commenced lowering. The port-cutter had not reached above half way down the ship's side when she banged against it. I got out an oar forward and shoved her from the ship's side. She then reached the water, and I gave one shove with the oar, and we were clear of the ship. Mr. Rooke then gave orders to lay on the oars and keep the boat's bow to the ship to be ready to render assistance to the ship or pick up any of the survivors. The sea then was breaking heavy over her quarter-deck ; sea increased ; the ship then appeared to labour at the bows and to lean more over to starboard. We remained about an hour or an hour and a half, I should say, keeping the boat's bow towards the ship, when the sea and weather coming on so bad, Lieutenant Rooke consulted what was best to be done, when it was proposed that we should run under the lee of the island of Galita and remain for the night, and at daylight return to the wreck. We had run some two hours or two and a half when we were under Galita, I think the inner side on the right hand as we were making towards it.

The weather still increasing we were under the mizen-sail with the mizen-mast put forward and reefed. We were obliged now to allow the boat to go before the wind, which she did during the night, with very heavy squalls. It thundered, rained, and lightened, and for one hour there was hardly a word spoken in the boat. We now prayed for daylight, but the weather was worse or still the same as it was the night before. The second-master now appeared to have lost all reason, when Mr. Rooke asked him a question relative to where we were or where it was best to steer for, he seemed hardly to take any notice. The doctor was the same, the master's-assistant and the boy Morley were lying in the bottom of the boat nearly the whole of the night, and the stoker, John Owen, had wrapped himself in his monkey jacket, and seemed to have lost all power, when he was asked to do any thing ; he appeared to take no notice at times what was said. It now being about ten o'clock the next morning, Mr. Rooke proposed a landing, and steered for the shore, seeing a place he considered that he could beach the boat, which was about three or four miles to windward of two rocks, I think they were called the "Two Brothers", to the left hand of this we saw the rocks quite plain. We had shifted the sail from the port side to the starboard. I now gave up the sheet of the sail which I had had in my hand ten hours. The sheet was not fastened during that time all the night before with the wind on the port side. The sail now was set to starboard, and the sheet was fastened to a thwart, and Mr. Rooke who

appearing exhausted with assisting with the oar, which he had been doing the time we were under sail with Mr. Larcom gunner, Mr. Larcom entreated him to give up the oar, he did so. I went into the sheets of the boat and assisted in steering with the oar.

A short time after as the boat was making for the shore, she shipped a heavy sea on the quarter. We had been bailing the boat during the night with our caps, boots, and shoes, there being only one bailer in the boat. We were now within 150 yards from the beach. Every one was bailing except myself and Mr. Larcom, who were steering with the oar. It was found now through the heavy sea that the plug had come out of the boat and the boy Morley was trying to stop the hole with a jacket which he had found in the boat. A heavy roller now struck the quarter of the boat and capsized her, throwing Mr. Larcom and myself out, the rest remaining underneath. When I came to the surface of the water, I saw Mr. Larcom making towards the shore, and the boat which was on the left of me with four or five hands clinging to the bottom of her, bottom upwards. Inside towards the boat I had got within two yards of her when I thought there could be more safety in endeavouring to swim to the shore, I had got about half way to the shore when I perceived a piece of board on the water, which I think was a thwart of the boat. I threw my arms around it thinking it would be a safeguard for the shore. I had hardly done so when the next roller that came carried me and the piece of wood some short distance when I seemed entangled in the breakers and the wood struck me on the head, when by some means I struggled to the shore. I reached the shore and looking round Mr. Rooke was close behind me, I assisted him to the shore. Mr. Larcom was on shore first, and making motions to an Arab; then the boat came on shore with the boy Morley in her. Saw nothing of Mr. Betts, Dr. Steele, Mr. Ayling and Owen, after I landed. We went down to the beach the next morning with the Arab but saw nothing of the bodies.

THE ARCTIC EXPEDITIONS.

IN the whole history of Arctic Discovery it would be difficult to find a period of more general or more painful interest than the present regarding the fate of our adventurous voyagers. It was now that we were to look for the return of Sir James Ross, or one of his ships with tidings of Franklin;—it was now that we were to expect the return of the North Star, sent with provisions for their relief;—and it is now that the anxious minds of those who have friends and relatives absent with either of the Expeditions, are expecting them with a solicitude not to be des-

cribed. As yet they have come not, although while we write these lines they may be hastening on their way.

The recent report of the Esquimaux brought home by the *Truelove* Captain Parker, has opened all these considerations and invested them with a freshness which unless they are realized in some degree, will render the disappointment severer than it otherwise would have been. And yet we are unhappily in the painful condition of acknowledging that, however confident of the truth of that report the person who has brought it may be, there are reasons for doubting its authenticity! Accidental these might be, but no less real. The following letter contains the report to which we allude:—

Hull, Oct. 4th, 1849.

The following letter has been this day received at the Admiralty, from the owner of the vessel which yesterday brought to Hull the welcome news respecting the missing voyagers:—

SIR.—I had the satisfaction of making a short communication this morning by telegraph, relative to Sir John Franklin's Expedition. I have now to forward for the inspection of their Lordships the Admiralty chart of Baffin's Bay, &c., which Captain Parker, of the "*Truelove*," has put into my hands, together with his remarks, which will, perhaps, convey better information than any lengthened detail of mine; and a rough sketch made by an Esquimaux, given to Captain Ker, of the Chieftain, who handed it over to Parker.

It appears that the Chieftain and other ships got to Pond's Bay a day or two before the *Truelove*; immediately they reached that place, some of the natives went on board, and without questioning, the man drew the sketch, and by signs and in words of his own language, understood by the masters of the whalers, stated that two of the ships had been frozen up for four years on the west side of Prince Regent's Inlet, and that the other two had been frozen up on the east side for one year—that the two ships which had been there the longest had tried to get beyond Cape Rennell, but not being able had come into Prince Regent's Inlet to winter, where the ice had not broken up since—that he and his companions had been on board all the four ships in March last, and they were then all safe. After receiving this account from the master of the Chieftain, Mr. Parker turned his attention to the endeavour to reach Prince Regent's Inlet, or at any rate to examine Lancaster Sound, for the purpose of giving such information as might be obtainable of the state of the country, &c., and of using his utmost efforts to carry out the instructions of their Lordships. He accordingly left his fishing ground off Scott's Bay and proceeded north on the 22nd of July, on the passage to Lancaster's Sound, and having met with the *Advice of Dundee*, Captain Penny (with whom he was on friendly terms) agreed to accompany him. At that time both the ships were well fitted, the *Truelove* having 145 tons of oil on board, and the *Advice* 140 tons; but the masters judged (and rightly too) that although the risk was great with such valuable cargoes on board, they would be disgraced if the attempt were not made to render all the assistance which they were capable of doing.

On the 5th of August they got as far as Croker's Bay, where they were stopped by a solid body of ice stretching across the Straits to Admiralty Inlet; and no water being visible to the westward, they were compelled to return, coming close in with the edge of the ice, and on the 8th of August Mr. Parker landed a cask of preserved meats, and 30 bags of coals (which

had been sent on board by Lady Franklin) upon Cape Hay, deposited the letters, cylinders, &c., according to the instructions of their Lordships, and having erected a high pole to attract the attention of the ships or boats which might pass at a future time, they made the best of their way back to the fishing ground, which they reached on the 17th of August.

I trust their Lordships will consider that this attempt to reach the Expeditions may be worthy of favourable consideration, and be disposed to recommend some compensation for the risk run and the loss of time occasioned thereby; but this is a point which the present is not a fitting time to urge, and I merely allude to it lest it might be imagined that any future application was an afterthought not worthy of notice.

The innumerable interruptions arising from the anxious inquiries of the public generally, on the subject which so long has interested them, must be my apology for any errors or omissions which I may have made; and all that I would venture to add, is the expression of my earnest hopes that this information, however imperfect, may ultimately lead to the adoption of such steps as may extricate those brave men from a state of danger and difficulty.

If their Lordships wish for further information, or to submit specific questions, my humble endeavours shall be used to obtain correct answers; and if they would prefer that Mr. Parker should attend in London, he is ready to do so, on receiving orders to that effect.

I am, respectfully, Sir,

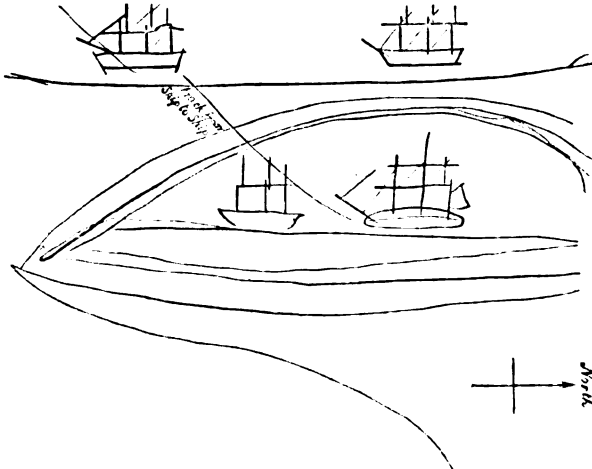
Your most obedient servant,

THOMAS WARD,

Owner of the *Truelove*.

No trace was seen of the Investigator's launch,—neither did there appear to be any reason to doubt the correctness of the statement made by the Esquimaux, that the upper part of Lancaster Sound was a solid mass of ice.

The following is the Esquimaux sketch of the positions of Franklin's and Ross's ships in Prince Regent's Inlet brought home by Capt. Parker.



On the 8th of August, which was a clear day, Mr. Parker landed on high ground at Cape Hay, with his telescope, to see if any thing could be discovered of the North Star, but no ship of any description was visible in Lancaster Sound except the Advice.

Capt. Hamilton R.N., Admiralty, London.

Should the reader not have a copy of the Admiralty chart of Baffin's Bay by him, the annexed outline and references from Arrowsmith's map will assist him in forming his opinion of the relative geographical positions of the places mentioned hereafter.

- a, Disco Island.
- 1 2, 3 Places of H.M.S. North Star on the 18th of June, and the 6th and 19th July.
- B Loose ice in Baffin Bay expressed by jagged lines.
- b Melville Bay.
- c Jones Sound.
- d Smith Sound.
- e Lancaster Sound.
- f Croker Bay.
- g Barrow Strait and entrance of Prince Regent Inlet.
- h Navy Board Inlet.
- i Admiralty Inlet.
- k Ponds Bay.
- m Reported positions of Sir J. Ross's ships, near to which is Port Bowen where Parry wintered in, and Port Jackson.
- n Reported position of Sir J. Franklin's ships on the coast of North Somerset.
- o Gulf of Boothia.
- p Victoria Harbour of Sir J. Ross.
- q Place of the magnetic pole.
- r Banks Land of Parry.
- s Melville Island of Parry.
- t Wellington Channel.
- v Whaler Point at west side of entrance of Prince Regent Inlet
- w Agnes Monument in Baffin Bay.
- x Cape Walsingham of Davis.
- y Cape Rennel in Barrow Strait.
- z z Davis Strait.
- W Wager Inlet,
- R Repulse Bay.
- L Lyon Inlet.
- X Fox Channel.
- T Strait of Fury and Hecla of Parry.



It would appear that before any doubts were expressed here as to the authenticity of this information, there were misgivings about it at the very seat of enquiry in Baffin's Bay. We read in the Athenæum of the 13th of October that on board the *Advice* was a Mr. Robert Goodsir, a brother of the assistant-surgeon of the *Erebus*, Sir John Franklin's ship, who had gone out in her, with the view of seeking information of his relative, and the following is Mr. Goodsir's account of Capt. Parker's story.

"We this morning had what might have been considered as cheering intelligence of the Expedition:—Mr. Parker, the master of the *Truelove*, of Hull, came on board to breakfast, and informed us that some Esquimaux, who had been on board the *Chieftain*, of Kirkaldy had sketched a chart and pointed out to Mr. Kerr where both Sir John Franklin's and Sir James Ross's ships were lying,—the former being at Whaler point, the latter at Port Jackson, at the entrance to Prince Regent's Inlet. Sir John Franklin had been beset in his present position for three winters. Sir James Ross had travelled in sledges from his own ships to Sir John Franklin's. They were all alive and well. The Esquimaux himself had been on board all *the four ships* three moons ago,—*i.e.* about the end of April or beginning of May. Mr. Parker seemed confident as to the correctness of this information; and as his ship is nearly full, and he will proceed homewards very shortly, Mr. Kerr had given him the Chart which he said he intended to forward to the Admiralty, and to inform them of what he had learnt. All this was very pleasing intelligence; but when I began to consider, I soon saw much to throw doubt upon its correctness and authenticity. First, there was the extreme difficulty of extracting correct information of any kind from the Esquimaux even by those best acquainted with their habits and language. A leading question they are sure to answer in the affirmative. Then, there is the great unlikelihood of Sir John Franklin's being beset at a spot so comparatively near to the constant resort of the whalers during the months of July and August—Pond's Bay and its neighbourhood—for three summers and three winters, without sending down despatches to them by the light boats fitted on sledges."

Here we have doubts expressed as far back as the 1st of August, and at the very seat of enquiry. But on the other hand it is strongly maintained that four fingers held up, and the Esquimaux word for moon uttered at the same time would be fairly rendered as expressing the month of March, when such signs are made in the month of July. Thus then there appears a slight difference in the two accounts. But the attempts to penetrate to Regent's Inlet were soon given up, as we find in the next extract of Mr. Goodsir's letter dated August 10, from Navy Board Inlet.

"Since I last wrote we have had such a series of gales and storms that I have been unable to put pen to paper. At about 4 o'clock on Saturday morning the 4th it came on to blow from the eastward with thick weather. We had little or no ice hitherto, and what we had seen was exceedingly light. Everything looked well, and we were very sanguine that we should be able to gain some intelligence of the Expedition. Before it came on thick we could make out what we took to be Prince Leopold's Island at the mouth

of Prince Regent's Inlet, and the ice apparently stretching right across the Sound: but the thickness came on so rapidly and the gale increasing to a perfect hurricane prevented us making out anything accurately.'

Here then is the extent of the information we have obtained of the two Expeditions, and most meagre and unsatisfactory it certainly is. One feature, however, may be added which has not yet appeared. It has been stated that an Esquimaux settlement of some 400 souls that four years ago was located about the shore of Pond's Bay has removed to Prince Regent Inlet to be near the ships. There is probability in this; indeed we look on it as the most favorable feature of the case, although we can not conclude that Franklin has been shut up in Prince Regent's Inlet, so long as stated. He might have been driven there, and have attracted the Esquimaux to him, and the appearance of his ships would stop Ross's western progress, and account for his being on the opposite side of the inlet. Perhaps this is the most favorable conclusion that we can come to at present, for which we have some authority, and we must cherish the hope of its truth while we look for arrivals, yet from the field of discovery.

But there is another difference between this account and that furnished by the master of the *Truelove*: Mr. Goodsir says, that they saw from the *Advice*, land which appeared to be Prince Leopold Island. This island is on the western side of the entrance of Regent Inlet, and a ship to sight that island should scarcely be less than 30 or 40 miles from it. But the track of the *Truelove* furnished by Capt. Parker does not bring that vessel within nearly 70 miles of that distance from Leopold Island; and it moreover does not place her at any time nearer than 55 miles from Cape York on the western side of the inlet, while we read in her log on the 5th of August, "at 3 P.M., fine clear weather: ship close in with the ice; the ice being solid from the north to the south side of Lancaster Sound; Admiralty Inlet solid ice from side to side; Cape York bearing north, distant 25 miles,—not possible to get any further, plied the ship down Lancaster Sound along the edge of the ice." This at least is a serious disagreement between the two accounts.

It is, moreover, considered by the first Arctic Authorities, that had Franklin been at the entrance of Prince Regent Inlet, he would have managed to communicate with the whalers in Lancaster Sound, before this last season, and they therefore consider him further to the westward. Still then we are left as much in doubt as to his actual position as we have been hitherto; and still then we are left to entertain hopes that the whalers which have yet to return, will bring us some further intelligence of our countrymen. The *Advice* it is reported would again make her way up to Lancaster Sound before she left the bay. The *Chieftain*, which was the first to receive the information from the Esquimaux, has yet to make her appearance; also the *Regalia*, and possibly others. By these we may confidently anticipate some further intelligence as they will come from that side of the bay along which our absent ships

would pass, admitting that they made their way out of Lancaster Sound since the *Truelove* and *Advice* left it in August. In the mean time our last dates from each are these—Sir John Franklin, 26th July, 1845; Sir James Ross, 23th August, 1848; Mr Saunders, *North Star*, 19th July, 1849; and Sir John Richardson, who must be now very near home, on the 12th of August last was at Norway House, Lake Winipeg, and on the 24th September, at St. Marie, foot of Lake Superior. Again of the *Herald* we have intelligence up to the 19th May, on which day she left Oahu for Bhering Strait.

The following are extracts of these:—"Prince of Wales, whaler, has brought an account of the Expedition so late as July 26th, in lat. 74° 48' N., and long. 66° 13' W., when both ships were fast to an iceberg; the crews in high health and spirits, and the officers from the state of the sea quite hopeful of a successful voyage."—*Naut. Mag.* 1845, p. 720.

The next is the last account of Sir James Ross, from our volume for 1848, page 688.

Stromness, Orkney, November 7th, 1848.

SIR.—We have the honour to forward the enclosed letter, picked up by Mr. Thomas Lee, of the Hull whaler, *Prince of Wales*, off Cape Hooper, Davis Straits, in lat. 68° 10' N., long. 64° 30' W., on the 1st of October.

The *Prince of Wales* arrived here last evening, and we beg you will lay these before the Lords of the Admiralty.

We have the honour to be, &c.,

DAVIDSON & SINCLAIR, Agents.

Secretary of the Admiralty London.

The following is a copy of the paper alluded to:—

"H.M. ships *Enterprize* and *Investigator* cleared the main pack in Melville Bay on the 20th of August, and after examining Pond's Bay on 23rd, passed to the northward in search of the expedition under the command of Captain Sir John Franklin.

"The cask which contains this paper was thrown from H.M.S. *Investigator*, on the 28th of August 1848, in lat. 73° 50' N., and long. 78° 6' 30' W., all well, *Enterprize* in company.

"Whoever may find this paper is requested to forward it to the Secretary of the Admiralty, London; with a note of the date, latitude and longitude in which the cask was found.

"EDWARD BIRD, Captain."

It has been said that the *North Star* was late; she was rather unfortunate in getting up the bay, as will be seen by the annexed letter. The *North Star* left Orkney on the 24th of May, and was left by the *Stromboli* off Cape Farewell early in June:

H.M.S. North Star, July 19, 1849.

Lat. 74° 3' N., long. 59° 40' W.

"Sir—I addressed a letter to their Lordships on the 18th ult., when in lat. 73° 30' N., and long. 56° 53' W., detailing the particulars of my proceedings up to that date, which letter was sent by a boat from the *Lady Jane*,

whaler, which vessel was wrecked, and whose boats were proceeding to the Danish settlements. Since then, I regret to state, our progress has been almost entirely stopped, owing to the ice being so placed across Melville Bay as to render it perfectly impassable.

"On the 6th inst., finding it impossible to make any progress, I deemed it advisable to run as far South as 72° , examining the pack as we went along. At $72^{\circ} 22'$ the pack appeared slacker, and we entered it, and after proceeding about twelve miles found ourselves completely stopped by large floes of ice. We accordingly put back, and steered again for the northward.

"Having this day reached the latitude of $74^{\circ} 3' N.$, and long. $59^{\circ} 40' W.$, the ice appeared more open, and we stood in towards the land, when we observed two boats approaching, and which afterwards, on coming alongside, were found to belong to the Prince of Wales whaler, which vessel was nipped by the ice on the 12th inst. in Melville Bay.

"By the captain of the Prince of Wales I forward this letter to their lordships, he intending to proceed in his boats to the Danish settlements.

I have the honour to be, &c.,

J. SAUNDERS,

Master and Commander.

"P.S. Crew all well on board."

We consider then that we have learnt nothing yet of Sir John Franklin and his companions, and that the present has been a most disastrous season among the whalers the following will testify.

DESTRUCTION OF WHALERS BY ICEBERGS.—Intelligence received from the "fisheries" at Davis Straits, communicates the total loss of four whaling ships—the *Superior*, 400 tons burthen, belonging to Peterhead; the *Lady Jane* 390 tons, of Newcastle; the *Prince of Wales*, 380 tons, of Hull; and a large American ship—the whole crushed to pieces by icebergs. On the 12th of June last, the above vessels were fishing in Melville Bay, Davis Straits. About eleven o'clock in the forenoon the floating ice set in upon them, and the *Superior*, the *Lady Jane*, and the American ship, were speedily cut to pieces. After remaining on the ice till the 16th of June the provisions were divided, and the crews got the boats ready and launched them. After encountering many hardships, they reached Lively, a Danish settlement, five hundred miles from Melville Bay, on the 29th of June, where they were kindly received. Not a life was lost, and eventually they were forwarded to the Orkney Islands. The *Prince of Wales* whaler was wrecked in another part of Davis Straits, under precisely similar circumstances. The value of the four ships is estimated at about £50,000.

STEAMERS CAN'T STOP FOR SOUNDINGS.

MR. EDITOR.—I much fear that, if truth were known, the words at the head of this paper would be found to have cost a frightful loss of human life, to say nothing of property! I certainly never heard them uttered, but I certainly also never met with an intelligent sailor of the old school,

who did not agree in their probable truth, when he heard them; and in many cases of shipwreck, so far as we have been allowed to know those details which enable a seaman to form a judgment, the conclusion is irresistible that due attention *cannot* have been paid to the lead. I forbear for brevity's sake to specify instances which will occur to every one.

Now, why is the lead not attended to in steamers?

1st. Because it loses too much time (*i.e.* distance).

2nd. Because we can back off if we get too near the danger.

Now, the first is the temptation, and the second a great encouragement to yield to it, and both together are perhaps too strong for poor human nature. But, if we put the question of—How *much* distance do you really lose when you take a cast of the lead under such and such circumstances? to our brethren of the “tea-kettle,” how many of them think you there are, Mr. Editor, who can give any precise answer from having subjected the question to the simple timing and calculation it requires? They have all, no doubt, a vague notion that a good deal of time, and therefore of distance, must somehow be lost, and they are, we must also allow, often so bound by contracts, and urged on by rivalry of all kinds that they are very naturally jealous of losing even a mile on any account.

I have thus been induced to calculate for them the following very simple table, which shews at a glance what the real distance lost for every cast of the lead may be for steamers going from 7 to 12 knots, according to the time which they lose from full-way to full-way again, under various circumstances of wind, sea, power, rate of sailing, depth of water, &c.

It is evident that if a steamer is going 10 knots, and she was six minutes at a dead stop, she would lose one mile; but as she eases and stops her engines, and so gradually loses her way to 2 or 3 knots or more when she takes her cast, and gradually gains it again when she goes on, the actual loss in distance will be about one half; so that if she takes four casts in the hour going 10 knots, and being six minutes from full-way to full-way again, she really loses only two miles in the hour. If she has the wind or sea, so as to help to check her way quickly, it is probable she may manage in less time. I need not observe that in such manœuvres a smart officer will take advantage of every circumstance, and contrive to lose much less ground than the dullard who has nothing ready. Steamers vary so much in size, power, and rates of sailing that we can only give a table which will probably embrace the ordinary limits of these circumstances, and of winds, weather, and sea, and when, as in strong blowing weather the course must be altered, due allowances will of course be made by every experienced seaman.

By multiplying the decimals in the following table by the number of casts per hour, the actual run lost will be at once found.

Steamers rate per hour.	5'	6'	7'	8'	9'	10'
Knots.						
7	0.29	0.35	0.41	0.46	0.52	0.58
8	0.33	0.40	0.47	0.53	0.60	0.67
9	0.37	0.45	0.52	0.60	0.67	0.75
10	0.42	0.50	0.58	0.66	0.75	0.84
11	0.46	0.55	0.65	0.73	0.83	0.91
12	0.50	0.60	0.70	0.80	0.90	1.0

Example:—A steamer going 11 knots takes four casts of the lead an hour and is 8 minutes from full-way to full-way again, What ground has she lost in the hour? Opposite to 11 knots and under 8' is the decimal 0.73 the loss in one cast.

$$\begin{array}{r} 0.73 \\ \text{Multiply by 4 casts} \quad 4 \\ \hline \end{array}$$

Answer. 2.92 or say 3 miles lost in the hour.

Again going 9 knots and being seven minutes from full-way to full-way, what ground is lost in six casts of the lead.

$$\begin{array}{r} \text{Under 7 and opposite 9 knots is } 0.52 \text{ the loss in one cast.} \\ \text{For 6 casts } \dots \quad 6 \\ \hline \end{array}$$

Answer miles. 3.12 per hour.

Where from accidents to machinery, a heavy sea, a very fast boat or the like, more or less time or rate of steaming than those to which the table reaches is to be taken, the half, or double of any of the numbers may be used. Thus for 4 knots take half the decimals opposite to 8 miles, and for 12 or 20 minutes even, take double the decimals under 6 or 10, or double the result.

Surely, Mr. Editor, when passing dangerous shoals like the Alacranes where the lead must guide, no man of common sense with these figures before him can hesitate to sacrifice what at most will amount to an hour or two hours, or even three hours steaming? as to putting on a little extra power, if he has it, when past the danger, for the sake of safety; surely if he arrives at noon instead of at 10h. A.M., he is "time enough if safe," and surely an entry in his report or table of passages to this effect, "lost in all 11½ miles of way in sounding while passing the—shoals," must be more satisfactory to the Admiralty, or to his owners and the public, than the sad tales of grounding, loss, ruin and death which we are now so frequently obliged to listen to and to grieve over, and yet to expect again and again.

Calcutta, July 30th, 1849.

H. P.

THE PASSENGERS' ACT.—Order in Council.

A recent number of the Gazette publishes an order in council, rescinding the order of the 15th of April, 1848, and instituting the following rules for securing ventilation and cleanliness on board every passenger ship proceed-

ing from the United Kingdom to any place in her Majesty's possessions abroad out of Europe, and not being within the Mediterranean.

1. All passengers who shall not be prevented by sickness, or other sufficient cause, to be determined by the surgeon, or in ships carrying no surgeon, by the master, shall rise not later than seven o'clock A.M., at which hour the fires shall be lighted.

2. It shall be the duty of the cook, appointed under the 26th section of the said "Passengers' Act, one thousand eight hundred and forty-nine," to light the fires and to take care that they be kept alight during the day, and also to take care that each passenger or family of passengers, shall have the use of the fire-place, at the proper hours, in an order to be fixed by the master.

3. When the passengers are dressed their bed shall be rolled up.

4. The decks, including the space under the bottom of the berths, shall be swept before breakfast, and all dirt thrown overboard.

5. The breakfast hour shall be from eight to nine o'clock A.M.; provided that, before the commencement of breakfast, all the emigrants, except as herein before excepted, be out of bed and dressed, and that the beds have been rolled up, and the deck on which the emigrants live properly swept.

6. The deck shall further be swept after every meal, and, after breakfast is concluded, shall be also dry holystoned or scraped. This duty, as well as that of cleaning the ladders, hospitals, and round-houses, shall be performed by a party taken in rotation from the adult males above fourteen, in the proportion of five to every one hundred emigrants, and who shall be considered as sweepers for the day. But the single women shall perform this duty in their own compartments, where a separate compartment is allotted to them, and the occupant of each berth shall see that his own berth is well brushed out.

7 Dinner shall commence at one o'clock P.M., and supper at six P.M.

8. The fires shall be extinguished at 7 P.M. unless otherwise directed by the master, or required for the use of the sick, and the emigrants shall be in their berths at 10 o'clock P.M., except under the permission or authority of the surgeon; or, if there be no surgeon, of the master.

9. Three safety lamps shall be lit at dusk, and kept burning till 10 o'clock P.M.; after which hour two of the lamps may be extinguished, one being nevertheless kept burning at the main hatchway all night.

10. No naked light shall be allowed at any time or on any account.

11. The scuttles and stemports, if any, shall, weather permitting, be opened at 7 o'clock A.M., and kept open till 10 o'clock P.M.; and the hatches shall be kept open whenever the weather permits.

12. The coppers and cooking utensils shall be cleaned every day.

13. The beds shall be well shaken and aired on deck at least twice a week.

14. The bottom boards of the berths, if not fixtures, shall be removed and dry-scrubbed, and taken on deck at least twice a week.

15. A space of deck-room shall be apportioned for a hospital, not less, for vessels carrying one hundred passengers, than forty-eight superficial feet, with two or four bed-berths erected therein; nor less, for vessels carrying two hundred or more passengers, than one hundred and twenty superficial feet, with six bed-berths therein.

16. Two days in the week shall be appointed by the master as washing days; but no washing or drying of clothes shall on any account be permitted between decks.

17. On Sunday mornings the passengers shall be mustered at 10 o'clock, A.M., and will be expected to appear in clean and decent apparel. The Lord's day shall be observed as religiously as circumstances will admit.

18. No spirits or gunpowder shall be taken on board by any passenger; and if either of those articles be discovered in the possession of a passenger, it shall be taken into the custody of the master during the voyage, and not returned to the passenger until he is on the point of disembarking.

19. No loose hay or straw shall be allowed below for any purpose.

20. No smoking shall be allowed between decks.

21. All gambling, fighting, riotous or quarrelsome behaviour, swearing, and violent language, shall be at once put a stop to. Swords and other offensive weapons shall, as soon as the passengers embark, be placed in the custody of the master.

22. No sailor shall be allowed to remain on the passenger deck, among the passengers, except on duty.

23. No passenger shall go to the ship's cook-house without special permission from the master, nor remain in the fore-castle among the sailors on any account.

24. In vessels not expressly required by the said "Passengers' Act, 1849," to have on board such ventilating apparatus as therein mentioned, such other provision shall be made for ventilation as shall be required by the emigration officer at the port of embarkation, or in his absence by the officers of customs.

25. And to prevent all doubts in the construction of this order in council, it is hereby further ordered that the terms "United Kingdom" and "passenger ship" shall herein have the same significations as are assigned to them respectively in the said "Passengers' Act, 1849."

NAUTICAL NOTICES.

RIVER HOOGHLY—*Directions for approaching the Pilot Station during the South-West Monsoon.*

Experience of the New Pilot Station off the South Channel having established that it can be made by vessels from False Point with the greatest facility, and that pilots can also be readily supplied, and the same causes existing which originally rendered necessary the removal of the Pilot Station from off Point Palmyras to a position about fifteen miles S.W.b.W., of the Outer Floating Light in lat. $20^{\circ} 56'$ N., long. $88^{\circ} 03'$ E., and in from 17 to 22 fathoms water, Notice is hereby given, that this latter Station will in future be continued during the S.W. Monsoon, viz. from the 15th March to the 15th September.

No difficulty can possibly be felt in passing from False Point to the present Station, if common attention be paid to the lead and to the following Directions, prepared by Capt. Lloyd, late Officiating Marine Surveyor General, after a careful Survey of the ground between the two Points:—

"False Point Light House is in lat. $20^{\circ} 19\frac{1}{2}'$ N., and long. $86^{\circ} 47'$ E., and the South Channel Buoy in lat. $20^{\circ} 59'$ N., and long. $88^{\circ} 4'$ E., and bears from the lighthouse N. 61° E. true, or N.E.b.E. $\frac{1}{4}$ E., by compass, distant 83 miles, and is laid in 12 fathoms.

"A bank of soundings extends from off Point Palmyras in a direction

towards the tail of the Western Sea Reef, and the nature of the bottom (as distinguished from that of the Hooghly deposit, which is sand and mud, with shining specks) is a gravelly substance composed of sand, shells, and small pebbles discharged from the 'Kunka', and other rivers near Point Palmyras, the lighter material of which, being carried further out, is deposited, and forms what is called the 'Pilot's Ridge', which, in crossing to the north-westward shows a little less water than on either side. In coming from seaward, you shoal rather suddenly from 28 to 23 fathoms, upon its eastern edge. It is composed of a shelly sand, or minute gravel, of a reddish or rusty brown colour.

"The best guide, therefore, to enable a vessel to direct her course from False Point to the pilot vessels at the present station, will be to run down the edge of the Pilot's Ridge, which can readily be done by making the light house, and bringing it to bear about W.S.W., or S.W.b.W., distant by computation from 10 to 15 miles, then steering to the E.N. Eastward and having gradually increased the depth of water to 23 fathoms upon the eastern edge of the Ridge, regulate the course to keep between it and 27 fathoms, when, by attention to the lead and nature of the soundings, course, and distance run from the lighthouse, it is almost impossible to miss the Pilot Vessels (if the above limits are kept within), either by getting too far to windward or falling to leeward; for the soundings increase so rapidly to seaward from the present station, that 28 fathoms will not be more than 3 or 4 miles to the southward of it, and 23 fathoms the same distance to the westward of it.

"The soundings to seaward of the Ridge are in general a greenish or olive-coloured mud, with occasionally a few bits of broken shells mixed with it".*

Vessels approaching the station during the day are required to show the usual signal for a pilot, and by night to give as early and as much warning as possible by firing guns, burning blue lights, and by exhibiting two lights in a vertical position, where best seen; but commanders are strictly enjoined to avoid as much as possible making the station during the night.

Ships have been lost from running for the station in the dark, or threatening, or bad weather. In such weather, the pilot vessel cannot be made out, and if fallen in with, cannot board the inward-bound vessel, nor could the pilot take her in if he was on board. No advantage, then, is gained by attempting to get a pilot in such weather, while the danger is imminent. It is strongly recommended, therefore, to commanders, under such circumstances, to put their ships under snug canvas while well out in deep water, and keep to sea.

To mark the station one of the pilot vessels will show during the day a large St. George's Jack (white with red cross) at the main-top-gallant-mast head, and a good mast head light during the night, and will burn a blue light and a maroon alternately every half-hour, and fire a gun at 8 P.M., at midnight, and at 4 A.M. Vessels approaching the station, and while there, as well as when approaching the light vessels† and buoy station vessels, are warned to be careful in avoiding collision by night or by day; and in commu-

* The only alteration made in the above admirable directions of Captain Lloyd, is that of substituting the expression "*present station*" for "*proposed new station*," which, as more than five years have elapsed since the change so indicated was adopted, might mislead.—J. S.

† The Light vessels are directed, when another vessel is approaching during the night, to show a light at the Gaff end, to mark the way they are riding.

nicating with either of the above vessels, either at anchor or hove to, when it is necessary to cross her, to pass under the stern: several instances of serious damage have occurred during the S.W. monsoon, whereby the outer floating light was more than once compelled to leave her station for repairs, to the great inconvenience and risk of vessels entering and quitting the river.

East India-House, Oct. 10th, 1849.

J MELVILLE, *Secretary.*

LIGHTS IN SEA REACH, RIVER THAMES.—In accordance with the intention expressed in the Advertisement from the Trinity-House, dated the 8th of August last, two lights are now exhibited nightly on the north side of the navigable channel of Sea Reach, that is to say,—One off the Chapman Head, near to the spot on which the beacon stands, and one at Mucking Flat.

Mariners are to observe, that the light off the Chapman Head is exhibited on board a vessel, pending the erection of a permanent structure, and is of the usual or natural colour of a floating light—and that the light at the Mucking which is shewn for the present from a temporary erection close to the land side of the sea wall, and bears from the westernmost beacon of the Blyth Sand, about N. $\frac{1}{2}$ W., burns at 25 feet 6 inches, above the level of high-water spring tides; this light is also of the natural colour, until it strikes the Spit of the Owens Shoal, a short distance outside the 9 feet mark of low water spring tides, and on the bearing of S.W.b.W. nearly, to the westward of which the colour of the light is red.

A black beacon buoy of large size will be forthwith placed on the Spit or the Owens Shoal, respecting which farther particulars will be published in a few days.

LINDSAY ISLAND, *Pacific*.—Mr. Lindsay, Master of the British schooner *Amelia*, reports having discovered a rock in the Pacific Ocean, not laid down in the charts. He says, "On the 25th of December, 1848, during a calm, I discovered an island or rock, in lat. 19° 20' N., long. 141° 15 $\frac{1}{2}$ ' E. It appeared about 40 feet high, and four miles in length, very barren, and of a dark brown colour. I feel confident of its position, as I proved the rate of my chronometer only two days previously at the island of Grigan and Assumption."—*Shipping Gazette*.

SHOAL IN THE ANDAMAN SEA.

Per *Ripsima Anna Maria*.—On Thursday, May 10th, 1849, at 5h. 30m. standing E.S.E., with a light wind from the southward and smooth sea, observed rocks under the vessel's bottom, took a cast of the lead and found 11 fathoms, kept the lead constantly going, and had over-falls from 13 to 18 fathoms, at 7h. 30m. had 30 fathoms, another cast no ground with 50 fathoms. Whilst passing over the shoal, observed the bottom to be very uneven and some of the pyramidal rocks apparently with much less water on them, land in sight from the mast head bearing about E. $\frac{1}{2}$ N., long. by chronometer 97° 10' E., and lat. deduced from noon 10° 24' N. Roe's bank is 96° 45' E., and 10° 02' N., and ninety-five miles west of St. Mathews. I consider that shoal out thirty-five miles of its true position, or the shoal passed over by me to be a discovery. The portion passed over appeared to extend E.S.E., and W.N.W., about five miles, but as I was on the shoal at day light I am unable to state its full extent. At 8h, A.M. tacked with a light air to the W.

S.W., at 8h. 30m. got the jolly boat out, and tried the current and found it setting slightly to the northward hoisted the jolly boat in again at 11h. shoaled again to 17 fathoms, the rocks plainly visible, and a light breeze having sprung up, braced on the starboard tack, and at noon had 30 fathoms. With reference to the above I would observe, that the position assigned to it by me is correct to a mile, allowing that the great Seyer Island to be correctly laid down, as we saw that Island on the following day, and had sights of chronometer before and after noon.—*Calcutta Englishman July 23.*

A NEW HARBOUR OF REFUGE IN THE UNITED STATES.

By the following report of the Superintendent of the United States Coast Survey to the Secretary of the Treasury, it will be seen that a good harbour has recently been formed, by the action of the winds and waves, about twelve miles south of Cape Hatteras. As a place of shelter to vessels on that dangerous coast, when a storm is coming on, it will be of great value to commerce. The least depth of water at low tide is fourteen feet.

*Coast Survey Station, (Near North Deerfield, N.H.)
July 25, 1849.*

SIR.—In consequence of the information received from Lieutenant Commanding Maffit, and already reported to you, in regard to the importance of the inlet opened in 1846, south of Cape Hatteras, I have had a reconnaissance made of it by Lieutenant Commanding James Alden, U.S.N., Assistant in the Coast Survey, which confirms the previous statement of the value of this inlet as a harbour of refuge. The report of Lieutenant Alden contains the following statements of interest to navigators:

“This opening bears from Hatteras Light S. 70° W., distant about twelve miles. It will be easily recognised by the remarkably round hummock covered with trees on the east side of the entrance. The least depth at low water on the bar is fourteen feet. It should be approached from the northward and eastward, and as the breakers seldom extend entirely across the entrance, it can be readily discovered by the smoothness of the water between them. At that point steer N.W.b.W., keeping along the breakers on the starboard hand until well in, then haul more to the northward, and anchor soon after inside the sand-pits, which form the entrance, and which, together with the bar outside, afford sufficient protection against all winds from that quarter. The best anchorage, however, for a vessel drawing ten feet of water is where the schooner's first position is marked on the chart, and where the current will be felt much less than in mid-channel. The currents and tides are influenced very much by the winds; the greatest velocity we found was three knots between the two sand pits; the mean rise and fall was 2.2 feet. There are two openings, the one to the westward is small and has a very narrow and intricate channel, and must be considered of little or no importance, while so near a much finer and better one. Good pilots can be obtained for Hatteras Inlet at any time.”

The sketch of Lieutenant Commanding Alden's reconnaissance has been reduced to publication, and will be at once placed in the hands of an engraver.

Very respectfully yours,

A. D. BACHE, U.S. Coast Survey.

Hon. W. M. Meredith, Secretary of Treasury.

From the Shipping Gazette.

Vessels' Names.	Belong to.	Masters.	From.	To.	Wrecked.	When.	
Active	273 Whitehaven	Murphy	Dublin	Whitehaven	Strangford	Nov. 30,	cs
Admiral		Crisp	Liverpool	St. John	C. Negro	Aug. 17,	cs
Ann	275 Seaham	Patterson	Grangemuth	Middlesboro'	Off Caister	March 15,	cs
Arienes		Roberts			Plymouth	Feb. 28,	cs
Atholl		Hutcheson	Mirlinichi	Glasgow	Newfund'nd	July 24,	cs
Bess		Austin	Colchester	Shields	Newcome	Feb. 28,	cs
Blonde			Montreal	Glasgow	Sable I.	August 25,	cs
Caroline	280 S. Shields	Sinclair	Constat'nopl	Cork	30° N. 17° E.	Feb. 9,	cs
Cato			Liverpool	Trieste	Burbo bank	March 10,	cs
Challenge		Long	Cocaigne	Liverpool	Entry I.	Sept. 5,	cs
Chieftain	abandoned		Sunderland	Quebec	Near Bird I.	April 29	cs
Clementina	London	Symons	St. Michaels	London	Maplin	Feb. 28	cs
Como	285 Blyth	Stannard			Sow & Pigs	Feb. 28	cs
Coverdale			Liverpool	Montreal	In the ice	May 13	cs
Damsel		Robertson	run foul of	off	Humber	Aug. 26,	cs
Dacon			Westport	Ireland	Trepassy	Aug. 15,	cs
Elizabeth			Quebec		In the ice	May	cs
Elizabeth Ann	290 S. Shields	Wright	Sunderland	Alexandria	Off Scilly	Feb. 28,	cs
Emulation	Newport	Thomas			Aberdovey	Feb. 28,	cs
Enterprise	Yarmouth	Passed	abandoned	timber laden	lat. 41, lon ⁴⁴	March 21.	
Fanny		Leggatt	Ayr	Runcorn	Copeland I.	April 4,	cs
Frances		Hodge		Cork	P. St. George	March 15	cs
George	295 Liverpool		Liverpool	West Indies	Angedra R.	Feb. 1,	cs
Gov. Douglas		Locke	St. John	Plymouth	44°N. 56°W.	Aug. 7,	cs
Hamburg Packet	Leith				Off Newark	Sept. 18,	cs
Hannah Grayson	Workington	Penrice	Archangel	Bideford	Ballwalter	Sept. 12,	cs
Harriet Ann	Weymouth	Newman	Portland	London	N. Foreland	March 17	cs
Henry	300		Launceston	Adeaide	Symonds M.	Sept. 9,	cs
Iris					Off Zembra	April	
Jane		Williams	Liverpool	California	37°N. 23°W.	Sept. 9	cs
Joseph and Mary		Hubbard	Greenwich	Sunderland	Founded	March 6,	cs
Joy		Scarling	Jamaica	Halifax	G. Bahama	Aug. 31,	cs
Lady Jane	305 Hull	Patterson	Whaler	Greenland	Melville B.	June 12,	cs
Liffey		Power	Newport	Grenada	Cobles R.	Aug. 21,	cs
Lord Collingwood		Horn	Alexandria	Falmouth	43°N 12°	Feb. 28.	cs
Lord Ravensworth			Mirlinichi	Liverpool	P. Edward I.	Aug.	cs
Louisa	310 Ipswich	Zinge	Antwerp	Tralee	Kent Knock	Feb. 25,	cs
Mameluke		Dixon	Quebec	Sunderland	Trepassy B.	Aug. 16,	cs
Margaret & Emily		Wattley	Seaham	London	Gunfleet	Sept. 22,	cs
Maria		Quebec	Sunderland		In the ice	May	cs
Mary Ann		Bryce	Maryport	Newry	Killard Pt.	Sept. 22,	cs
Mary Ann	315 Sunderland		Cullenburg	London	Lisson	May 14,	cs
Mary Ann		Morris	Newcastle	Barcelona	Off I. Wight	Sept. 10,	cs
Mary Jane			Bristol	Boeton	At sea	June	cs
Mary Whitney			Singapore		Yangtseking	July	cs
Minerva		Murchison	Richebucto	Liverpool	Try on Reef	July 23	cs
Mutual	320 Newcastle	Forster	Newcastle	London	Off Bawdsey	Aug. 22,	cs
Morton		Kelly			Nicks H.	May 15	cs
Numa		Weighill	Nova Scotia	England	39½N 58½W	Aug. 9.	
Per:ian		Holmes	Singapore		Yangtseking	July	cs
Prince of Wales			Shields	Whaler	Davis Straits	July 12.	
Raven	325 Maryport	Milmore			Ballyhorn B.	Sept. 30,	cs
Rob Roy		Kemp	Pentewan	Liverpool	Foundered	Feb. 28,	cs
Robert and Ann			Cadiz	St. John	Black H Bay	May 24,	cs
Romulus		Bavidge	sprung leak	foundered	Off Dudgeon	Aug. 18,	cs
Sarah		Lewes		Shields	Foundered	Feb. 28,	cs
Shield	330 Arbroath	James	Cadiz	Rio Grande	Rio Grande	June	cs
Simon Taylor		Brown	Jamaica	London	Shingles	June 6,	cs
Sisters			Miguelor	Pictou	Off Scatterie	Sept.	cs
Star		Burnes	Liverpool	Halifax	K. Lorraine	Sept. 1,	cs
Stella		Foreman	Shields	Hamburg		March 8.	
Stewart	335 Belfast	Campbell	Workington	Belfast	Off Barra H.	June 1,	cs
Superior				Whaler	Baffin Bay	July	cs
Susanna				Alexandreta	Off Latakia	May 17	cs
Town of Drogheda	Waterlogged	abandoned	passed 50° W	of Cape de	Gatte	March 28,	cs
Two Sisters		Fullen	Newcastle	Satterton	Straits Point	March 28,	cs
Tyneside	340 Newcastle				Off Sundrind	Oct. 1,	cs

THE ROYAL NAVAL FORCES.

The following is an elaborate statement of the Royal Navy and Dockyards, compiled expressly and exclusively for the *United Service Gazette*.

[The ships are placed according to the seniority of their respective Commanders. Those vessels with "s." appended to their names are steamers, and those with "sc." are vessels propelled by the screw; "a" signifies "acting."]

PORTSMOUTH.

Commander-in-Chief—Admiral the Hon. Sir Thomas Bladen Capel, K.C.B.
Superintendent of Dockyard—Rear Admiral Prescott, C.B.;—*Superintendent of Clarence Yard and Haslar*—Captain Sir E. Parry;—*Superintendent of Royal Naval College*—Captain H. D. Chads, C.B.

Ships.	Gns.	Men	Captains.	Service, &c.
Victory (104).....	22	224	Capt. F. P. Blackwood	Stationary flag ship.
Illustrious (72) ;..	10	420	Capt. R. A. Yates	Depot flag ship.
Excellent	46	690	Capt. H. D. Chads, CB.	Gunnery ship.
Superb	80	468	Capt. Purcell	Spithead, ordered to Cork.
Victoria & Albert	2	118	Capt. Lord Fitzclarence	Royal Yacht, laid up.
Leander	50	500	Capt. S. C. Dacres	Fitting.
Blenheim (sc) ...	60	260	Capt. H. Austin, CB.	Screw guard ship, ready.
Encounter (sc) ...	14	175	Capt. R. Gordon	Sailed for Lisbon.
Cuckoo (s)	2	34	Com. Dumaresq	Guernsey.
Scourge (s).....	6	160	Com. Lord F. Kerr	Fitting.
Seaflower	6	28	Lieut. Warren	Tender to Cuckoo.
Rolla	6	150	Lieut. W. H. Fenwick	Apprentices' tender.
Black Eagle (s) ...	38		Master S. B. Cook	Admiralty yacht.
Fairy (sc)			Master Welch	Royal yacht tender.
Sprightly (s)	29		Master J. Allen (a)	Tender to flag ship.
Fanny	4	19	Master J. Scarlett (a)	Tender to flag ship.
Elfin (s)			Master A. Balliston (a)	Royal yacht despatch tend.
Myrtle (s)	25		Master S. Braddon [a]	Tender to flag ship.

DEVONPORT.

Commander-in-Chief—Admiral Sir W. H. Gage, G.C.B.
Commander of Ordinary and Superintendent of Dockyard—Vice Admiral Sir John Louis, Bart., to be superseded on promotion;—*Superintendent of Hospital and Victualling yard*—Captain J. T. Nicolas, C.B., K.H.

Impregnable	78	207	Capt. Sir T. Maitland	Stationary flag ship.
Agincourt [74]...	10	475	Capt. Hope Johnstone	Depot of Ordinary, flag
Ganges	84	750	Capt. Smith, CB.	Refitting.
Trident [s]	2	65	Lieut. Risk	Refitting.
Conflict [sc]	12	170	Com. Drake	Fitting.
Spiteful [s]	6	160	Com. Carmichael	Fitting.
Nautilus	6	150	Lieut. Dolling	Apprentices' tender.
Confluence [s].....	1	20	Master Martin [a]	Tender to Agincourt.
Sylph	4	20		Tender to flag ship.

FALMOUTH AND BRAZIL PACKETS.

Crane	6	44	Lieut. J. Parsons	Left Falmouth Sept. 6 Rio.
Express	6	44	Lieut. W. Lory	Left Falmouth Aug. 6 Rio.
Linnet.....	6	44	Lieut. T. James	Left Falmouth Oct. 6 Rio.
Penguin	6	44	Lieut. W. Leslie	Rio Aug. 12.
Peterel	6	44	Lieut. T. Creser.	Falmouth.
Seagull	6	44	Lieut. J. Smail	Devonport refitting.
Astrea.....	5		Master Yeames	Store ship, Falmouth.

SHEERNESS.

Commander-in-Chief—Vice Admiral the Hon. G. Elliot, C.B.

Commander of Ordinary and Superintendent of Dockyard.—Captain D. Price.

Ocean [80]	46 160	Capt. G. Elliot	Stationary flag ship.
Wellington [72]	10 275	Capt. Price	Depot ship of Ordinary.
Dasher [s]	2 35	Lieut. Parks	To be paid off.
Advice [s]	2 23	Second Master	Tender to flag ship.
Wildfire [s]	2 23	Second Master Brockman	Tender to flag ship.
Hart			Tender to flag ship.

WOOLWICH.

Commander of Ordinary and Superintendent of Dockyard.—Commodore H. Eden.

Figard	26 106	Commodore Eden	Flag ship.
Firebrand [s] ...	6 200	Capt. Knox	Fitting.
Stromboli [s] ...	6 160	Com. Lord Beauclerk	Fitting.
Lightning [s] ...	2 29	Master J. E. Petley	Ready.
Monkey [s]	2	Second Master Bryant [a]	Tender.

CHATHAM.

Superintendent of Dockyard & Commander in Ordinary.—Capt. Sir P. Richards, C.B.

Poitiers [72] ...	10 290	Com. Camillieri	Depot ship in ordinary.
Wolverine	12 125	Com. M. Falcon	To go to Devonport.

PEMBROKE.

Superintendent of Dockyard and Ordinary.—Capt. Sir T. Pasley, Bart.

Saturn	51	Capt. Sir T. Pasley	Guard and depot ship.
Prospero	13	Lieut. Oke.	Tender.

Mr. Brownswell, of the Dock-yard, having, in conjunction with the Master Shipwright, Mr. Abethel, proposed a new method for stowing timber, the Admiralty have been pleased to approve of the plan, and to allow the former gentleman £50. per annum in lieu of house accommodation.

DEPTFORD.

Captain Superintendent.—Sir John Hill, of Dockyard and Victualling Establishment.

Magicienne, screw sloop, is ordered to be removed from the East India Docks to Penn's premises at Deptford.

QUEENSTOWN.

Commander-in-Chief.—Rear Admiral Manley Hall Dixon.

Crocodile	22 70	Lieut. Protheroe	Flag ship, Queenstown
La Hogue [sc] ...	60 500	Capt. Macdougall	Queenstown.
Shearwater [s] ...	2 50	Lieut. E. E. Turnour	Queenstown.
Lucifer	2 50	Lieut. E. Lloyd	Coast of Scotland.
Dwarf [sc]	1 33	Lieut. S. Osborn	Kinsale.
Gipsy	1 11	Second Master J. North	Tender to flag ship.
Gossamer	1 130		For exercise of apprentices

HOME SURVEYING SQUADRON.

Admiralty Hydrographer.—Rear Admiral Sir F. Beaufort.

Widgeon [s]	1 20	Capt. Bullock	Mouth of Thames.
Sparrow	4 42	Com. Fraser	Youghal.
Sylvia		Com. G. A. Bedford	Galloway.
Comet [s]	3 30	Com. H. Otter	Hebrides.
Woodlark	2 20	Lieut. Thomas	Orkneys.
Speedwell	2 16	Master Calver	Harwich.
Jasper	1 12	Second Master Leatham	Woolwich.
Fearless [s]	1 20	Second Master	Bristol Channel.

TROOP AND STORE SHIPS.

Adventure	4	39	Master P. Wellington	Left Devonport for Ascen.
Apollo.....	8	116	Com J. Rawstone	Rio for Hong-Kong July 4
Atholl.....	2	49	Master J. Pearn	Lft Madeira fr Cape Aug 18
Hercules	12	140	Master R. Fulton	En route fr Mediterranean

Apollo reached Rio August 7th, and proceeded to an island some miles distant, to clean the ship, the troops having suffered from cholera. The *Apollo* has been unfortunate in her endeavours to obtain supplies. At Madeira the Portuguese would allow of no communication with her, and neither water nor fresh provisions would they afford her. At Tenerife she was better served, for the Consul did everything that he possibly could to ameliorate the sickness among the soldiers, and to promote their comfort. At Rio they could not hear of her being in sight of the place; and it was only with the greatest difficulty that permission was obtained for her to proceed to Ilha Grande, an almost desolate place, 50 miles distant, to land any one, or to receive anything. It was expected that the troops would go ashore and remain under canvas, whilst the ship was thoroughly cleaned out, fumigated, whitewashed, and painted, when they would re-embark, and proceed on their voyage to Hong-Kong, calling at the Cape for supplies. The greatest care and attention had been paid to the troops by Captain Rawstone and his officers.

Hercules arrived at Spithead. She is taking on board various stores from the Dock-yard and Victualling-yard for the Mediterranean squadron.

ADMIRALTY STEAM PACKETS.

Holyhead conducted by Commander Charles Fraser; *Dover*, by Commander Thomas Baldock; *Portpatrick*, by Commander Edward Hawes.

Ships.	Gns.			Commanders.	Stations, &c.
	Gns.	HP.	Men		
Garland	1	128	17	Lieut. E. Wylde	Dover
Caradoc	2	360	31	Lieut. C. P. Ladd	Holyhead
Onyx	1	128	17	Lieut. G. Raymond	Dover
Pike	1	50	11	Lieut. A. Boyter	To be paid off.
St. Columbia ...	2	360	31	Lieut. A. S. Symes	Holyhead.
Asp	1	50	11	Lieut. W. Oke	To be paid off.
Flamer	1	100		Lieut. Jones	Holyhead.
Llewellyn	2	360	31	Master J. Grey, (a) ...	Holyhead.
Vivid	1	183	17	Master D. Smithett, (a) ...	Holyhead.
Banshee	2	360	31	Master W. Smithett, (a) ...	Holyhead.
Violet	1	128	17	Master R. Sherlock, (a) ...	Dover.
Princess Alice	1	120	6		Dover.
Undine		106	7		Woolwich.
Otter	1	102			Holyhead.

FORCES ON FOREIGN STATIONS.

WEST COAST OF AFRICA.

(Mails for Madeira, San Nicolas, Sierra Leone, Ascension, and at St. Helena, from Devonport, by Conflict, Nov. 2.)

Commander-in-Chief—Commodore Arthur Fanshawe, c.B.

Ships.	Gns.	Men	Commanders.	Service, &c.
Centaur [s]	6	200	Capt. Buckle	Flag, left St. Helena, Aug. 9
Tortoise	12	92	Capt. Hutton	Store ship Ascension 21.
Cyclops [s]	6	195	Capt. Hon. G. Hastings ...	Bight of Benin, August
Scalark	8	80	Com. Monypenny	St. Helena, Aug. 9.
Kingfisher	12	130	Com. H. Harvey	Bight of Benin
Phoenix [sc] ...	6	120	Com. Wodehouse	Left Devonport, Aug. 5.
Alert	8	80	Com. H. Dunlop	Sierra Leone Division.
Firefly [s]	4	60	Com. J. Tudor	South Coast.
Heroine	8	80	Com. J. B. Marsh	Ascension from Madeira
Britomart	8	80	Com. Chamberlain	Congo.
Cygnets	8	80	Com. D. Robertson	Congo.
Waterwitch	8	80	Com. R. R. Quin	Off Caguar, July 13.
Rattler [sc]	8	100	Com. A. Cumming	Bight of Benin.
Flying Fish	12	125	Com. G. E. Patey	Left Madeira, Sept. 16.
Hecla [s]	6	135	Com. W. Beauchamp	Left Oct. 1 for Coast Afr.
Star	8	80	Com. F. L. A. Selwyn	South coast, Congo.
Ranger	8	80	Com. T. Miller	Left Devonport July 4.
Spy	3	65	Lieut. G. Western	Sierra Leone Division.
Teazer [sc]	4	40	Lieut. J. Selwyn	Bight of Benin.
Bonetta	3	65	Lieut. F. E. Forbes	Congo.
Dart	3	65	Lieut. E. Hill	Ambriz.
Dolphin	3	65	Lieut. Hon. C. Boyle	Loando.
Pluto [s]	3	55	Lieut. W. K. Joliffe	Sierra Leone.
Snap	2		Tender to the flag ship	
Dover [s]	1	25	Lieut. A. R. Harward	Gambia.
Albert [s]	1			Gambia.

WEST INDIES, HALIFAX, AND NORTH AMERICA.

Commander-in-Chief—Vice Admiral the Earl of Dundonald, G.C.B. Halifax, September 25, Commodore Bennet second in command, Port Royal, September 7.

Wellesley	72	600	Capt. Goldsmith	Halifax, Sept. 25.
Imaum [72]	10	111	Com. Bennett	Commodore's ship
Trincomalee	25	240	Capt. Warren	Halifax
Alarm	26	230	Capt. G. Ramsay	left Plymouth for P. Royal
Sappho	12	125	Com. Michell	Vera Cruz Aug. 14.
Helena	16	130	Com. De Courcy	Cruizing off Cuba
Persian	12	125	Com. A. G. Bulman	Halifax, Sept. 25.
Vixen [s]	6	160	Com. Jenner	St. Lawrence
Plumper [sc]	12	100	Com. Nolloth	Left Port Royal 6.
Cherokee [s] ...	1	38	Lieut. Davies	Kingstown (Canada)
Viper	4	50	Lieut. Bernard	Barbadoes (sen. Offr.)
Bermuda	3	44	Lieut. A. D. Jolly	Bay of Fundy
Mohawk [s]	1	21	Lieut. F. C. Herbert	Lake Huron

Trincomalee arrived at Halifax from Newfoundland and Labrador, where she has been cruising for several months, September 25.

SOUTH-EAST COAST OF AMERICA.

Commander-in-Chief—Commodore Sir Thomas Herbert, K.C.B., Monte Video, July 23.

Raleigh	50	500	Capt. Hon. E. Hope	Flag Monte Video July 23.
Tweed	18	145	Com. Lord F. Russell	Left Rio July 6.
Hydra (s)	6	135	Com. G. Skipwith	Rio, August 16.
Cormorant (s) ...	6	160	Com. H. Schomberg	Left Devonport Sept. 15.
Spider	6	36	Lieut. Tomlinson	To Monte Video from Rio
Griffon	3	60	Lieut. Thurburn	Bahia ord. to Devonport
Kestrel	4	45	Lieut. I. Baker	<i>En route</i> to River Plate
Rifleman (sc) ...	8	80	Lieut. S. L. Crofton	Rio
Harpy (s)	1	53	Lieut. Waddilove (a)	Buenos Ayres
Crescent		30	Master S. Bradley	Store ship at Rio

Raleigh, was at Monte Video, July 23. The *Commander-in-chief* was daily expecting the *Tweed* from Rio. On her arrival he intended to proceed to Rio, and wait there until relieved by Rear Admiral Reynolds, C.B. Lieut. the Hon. F. Foley was doing duty as First and Gunnery Lieut. of the *Raleigh*. The French Admiral was at Monte Video.

MEDITERRANEAN.

Commander-in-Chief—Vice Admiral Sir W. Parker, Bart., O.C.B., returned to Corfu, Sept. 24. *Second in command and Superintendent of Dockyard*—Rear Admiral Harvey, Malta, Oct. 2.

Caledonia	120	250	Capt. Carter	Flag ship, Corfu
Ceylon [42]		42	Lieut. H. Harvey	Depot ship, Malta (flag)
Howe	120	970	Capt. Sir J. Stirling	Corfu
Prince Regent ...	90	820	Capt. W. F. Martin	Corfu
Powerful	84	750	Capt. R. S. Dundas	Corfu
Vengeance	84	750	Capt. Lord Hardwicke	Corfu
Bellerophon	78	650	Capt. Baynes, C.B.	Leghorn
Thetis	36	330	Capt. Codrington, C.B.	Corfu
Arrogant [sc] ...	46	450	Capt. FitzRoy	Lisbon and Gibraltar
Odin [s]	12	270	Capt. Hon. F. Pelham	Corfu
Dragon [s]	6	200	Capt. W. H. Hall	Left Malta for Corfu
Queen	116	970	Capt. C. Wiss	Corfu
Growler [s]	6	160	Com. Stoddart	Alexandria
Frolic	16	130	Com. Vansittart	Ancona, ord. to Argostoli
Racer	12	125	Com. Beddoes	Argostoli
Bulldog [s]	6	160	Com. A. C. Key	Naples
Rosamond [s] ...	6	160	Com. H. R. Foote	Corfu
Sharpshooter [sc]	4	80	Lieut. Bailey	Corfu
Antelope [s]	2	65	Lieut. F. Smith	Malta
Triton [s]	3	65	Lieut. C. J. P. Glinn ...	Malta
Oberon (s)	3	65	Lieut. Gardiner	left Malta for Leghorn 13.
Ardent (s)	3	65	Lieut. Nowell	Venice, ordered home
Janus (s)	4	55	Lieut. R. A. Powell	Gibraltar, Sept. 26.
Tartarus (s)	3	60	Lieut. Sir G. Webster, Bt.	Constantinople
Porcupine (s) ...	2	55	Lieut. E. F. Roberts ...	Leghorn
Medina (s)	4	65	Lieut. A. Darby	Marseilles to Malta
Medusa (s)	4	65	Lieut. J. O. Bathurst ...	Malta, from Marseilles
Merlin (s)	4	65	Lieut. J. H. Turner ...	Arrived at Malta Oct. 2.

Dragon arrived at Malta on the 28th Sept., and immediately on the arrival of the *Medusa* with the outward India mails, got up her steam to join the Admiral with dispatches received by her.

Howe, it was expected would proceed to Lisbon; but since this arrangement the Admiral received his Constantinople dispatches.

Merlin was going into Malta from the Admiral, as the French packet was leaving, so that the news could not be forwarded.

Prince Regent was ordered away suddenly from Naples on the 6th ult., by dispatch from Sir W. Parker, the *Bulldog* towing her through the Straits of Messina. As she got in sight of her anchorage at Corfu, the *Vengeance* gave her orders to proceed to Cephalonia to join the Admiral. She proceeded thither, and returned with the fleet to Corfu. It was expected that she and the *Thetis* would leave for Lisbon, Oct. 1st; but they had not then received the news from Constantinople.

PACIFIC.

Commander-in-Chief—Rear Admiral Phipps Hornby, C.B.

Asia.....	84 750	Capt. R. F. Stopford	Fl. sh. at Callao.
Constance	50 500	Capt. Courtenay	Left San Blas, July 5.
Inconstant	36 330	Capt. J. Shepherd	San Francisco, June 14.
Dædalus	20 230	Capt. G. G. Wellesley	Left Devonport Sept. 15.
Amphitrite.....	25 240	Capt. R. Eden	Honolulu, May 23.
Daphne	18 187	Capt. E. G. Fanshawe.....	Valparaiso.
Champion	14 130	Com. Hayes	Callao.
Gorgon (s)	6 160	Com. Paynter	Valparaiso.
Driver (s)	6 160	Com. C. R. Johnson.....	Valparaiso.
Swift	6 66	Com. Aldham	En route to Pacific, July.
Naiad	6 46	Master W. L. Brown	Callao, store ship.
Nereus.....	3 24	Master F. Bateman	Valparaiso, store ship.
Cockatrice	2 20	Master J. R. Rundle	Valparaiso, tender to Asia.

EAST INDIES, CHINA, AND NEW ZEALAND

Commander-in-Chief—Rear Admiral Sir F. A. Collier, C.B., K.C.H., Trincomalee, Aug. 7; Commodore J. H. Plumridge.

Hastings.....	72 300	Capt. W. Morgan	Fl. sh. to China.
Cambrian	4 350	Com. Plumridge	Trincomalee.
Mæander	42 360	Capt. Hon H. Keppel.....	Labau for Pacific.
Amazon	26 240	Capt. Troubridge	Hong-Hong, July 26.
Cleopatra	26 230	Capt. H. L. Massie	Left Rio August 11.
Albatross	12 130	Com. Farquhar.....	Labuan, ordered to Sydney
Mariner	12 130	Com. Matheson.....	Shanghai.
Arab	12 130	Com. W. Morris	Ningpo.
Columbine	12 130	Com. C. J. Hay	Whampoa, ordered home.
Fury (s)	6 160	Com. Wilcox	En route to China.
Pilot	12 120	Com. E. Lyons	Amoy.
Medea (s)	6 135	Com. Lockyer (a).....	Hong-Kong,
Reynard (sc).....	9 100	Com. Cracroft	Left Rio Aug 11 fr H-Kon.
Royalist		70 Lieut. Everest	Borneo.
Minden		26 Master Mitchell.....	Store ship Hong-Kong.
Alligator		Dr. Bankier	Hospital ship Hong-Kong.

NEW ZEALAND DIVISION.

Havana	19 240	Capt. J. E. Erskine.....	Sydney (Sen. Offr.) May 7
Fly	14 130	Com. R. Oliver	Expected at Sydney.

Albatross was to come direct to England, if the *Mæander* had taken charge of the schooner to be navigated to Port Adelaide.

Fly was hourly expected at Sydney, May 7, from New Zealand.

Hastings and *Fury* were not to proceed to Bombay as at first intended, but to return to China.

Pilot.—It appears our ships, though ostensibly employed to protect British

trade, are really employed in suppressing Chinese piracy against the Chinese coasting trade; and at this the Chinese mandarins are very jealous; in fact, if British activity and honesty put down the pirates, the mandarins will starve; their pay is little or nothing, and irregularly doled out; and they, therefore, in reality encourage the pirates, and receive douceurs for licence to cruise.

These pirates cruise in the same description of junks as that in which the coasting trade is carried on, for the better deception; they, however, never molest English or American merchantmen, because a good look out is kept, and the opium and other smugglers are too well armed, and are too wary to be caught asleep. Very recently the Pilot fell in with them; she boarded one, ten of the crew of which jumped overboard, of whom seven, were drowned. She then chased another, and drove it ashore; the vessel was burnt, but what became of the crew no one knows.

The Pilot subsequently fell in with more, one of which allowed her to run alongside, when she threw twenty smoke-pots on board the Pilot, each pot containing loose gunpowder; fortunately the hatches were covered, and, therefore, no mischief was done. Our men boarded her, and drove the long-tails overboard, leaving ten men dead in the vessel, two of whom had been killed by the second lieutenant (Hallowes). On this occasion, four junks were destroyed, and the Pilot was left looking after a squadron of five, of which they boasted that the commodore's ship was armed with 16 guns, and he was an able and valiant man. When the mandarins go out to cruise, and each has the care of a certain extent of coast, they make a great display, and carry all their force with them, seldom less than 20 to 25 vessels.

All our opium clippers are described to be in most excellent order and commanded and officered by most generally respectable and able men. They never give cause for offence, nor do they allow the slightest liberty to be taken with the British flag.

Our seamen get paid for all the men taken, and all the men killed; if any are taken to give an account of how many are killed. Thus, in the vessel in which ten men jumped overboard, the crew of the Pilot will benefit £250.; and in proportion for each of her other affairs with these sea kings of the East.

DISCOVERY AND SURVEYING SHIPS.

Erebus (sc)	2	69 Capt. Sir J. Franklin c.b.	Arctic Expedition
Terror (sc)	3	68 Capt. Crozier	Do.
Enterprise	4	71 Capt. Sir J. Ross	Do.
Investigator	4	70 Capt. Bird	Do.
North Star.....	2	63 Master R. Saunders	Do.
Herald	8	150 Capt. H. Kellett, c.b.	Left Oahu for Behring St.
Plover	4	52 Com. Moore	Behring Straits
Pandora	4	90 Lieut. J. Wood	Oahu, May 22. ord. home
Rattlesnake	8	190 Capt. O. Stanley	Sydney, May 1.
Bramble	10	Lieut. Yule	Tender to Rattlesnake
Acheron (s)	4	184 Capt. J. L. Stokes	New Zealand coast.
Scorpion	4	48 Lieut. Lawrance	Bahamas
Columbia (s)	6	70 Com. Shortland	Bay of Fundy.
Volage	12	160 Capt. Graves	Cyprus
Research	1	Lieut. Lord J. Brown	Tender to Volage
Auxiliar	1	Lieut. Geary	Tender to Volage

Rattlesnake, and her tender were to leave Sydney May 7th, for the most easterly point of the Louisiade.

CAPE OF GOOD HOPE.

Commander-in-Chief—Rear Admiral B. Reynolds, c.B., Simon's Bay, Aug. 7, to be relieved by Commodore Wyvill.

Southampton.....	50	450	Capt. N. Cory	Flag ship, Simon's Bay.
Castor.....	36	330	Com. Wyvill	Left Ascension, Aug 4
Eurydice	26	240	Capt. T. Anson.....	Mauritius.
Geysler	6	160	Com. F. T. Brown	Simon's Bay.
Orestes	14	130	Com. W. S. Hawker	Boyanna Bay.
Pantaloons	8	80	Com. Hyde Parker	Left Devonport Aug. 2.
Seringapatam ...	27		Master J. Russell.....	Simon's Bay.
Dee	4	100	Master E. Filmer.....	Simon's Bay.

The Admiral was daily expected to be relieved by the *Castor*. The convicts had not arrived.

The *Eurydice* was daily expected from the Mauritius, *en route* to England, to be paid off.

PENINSULAR AND ORIENTAL COMPANY'S STEAM SQUADRON.

Hindostan, Captain Lewis, arrived at Malta on Saturday, the 29th ult., at half past four A.M., having made the run from Southampton to Gibraltar and Malta in 8½ days—the quickest passage on record. She left with the Overland Mail, for Alexandria, on the following day, a few hours after the arrival of the *Medusa* from Marseilles. The long sea run of the *Hindostan* is almost as quick as the passages from Malta to London, *via* Marseilles, only three years ago.

Euxine, Captain Evans, from Constantinople, arrived at Southampton, on Monday morning, at eleven o'clock. The *Euxine's* news has, of course, been anticipated. She left Constantinople on the 19th; Smyrna, 22nd; Malta, 26th ult; Gibraltar October 3rd. The *Euxine* has specie to the amount of £60,000 on board, and a very full cargo, consisting of figs, silk, goat's wool, leeches, scammony, &c. There were twenty-three first class passengers, four second, and four deck ditto. *Sultan* exchanged colours with the *Euxine*, Oct. 4, 30 miles north of the Cape St. Vincent.

Jupiter, commanded by Captain Mehan left Southampton on Monday afternoon, with the mails for Spain, Portugal, and Gibraltar. She had a full cargo of general merchandise, specie to the amount of £3,000., and twenty passengers.

REDCAR REFUGE HARBOUR.

On this day four weeks since we had a Redcar Harbour gale, and your list of wrecks for next month will give a fearful account of it.* A Middlesboro' man, an ancient opponent of the refuge harbour (because of the then contemplated base for the lights and refuge,) wrote to me on the 16th, "Had this harbour been made all the lives lately lost would have been saved"; and an immense amount of property would have been preserved.

On Sunday, 22nd of September, gale from N.E. to E.N.E., twenty vessels were lost in the immediate vicinity of the refuge harbour proposed by Mr. Brooks at Redcar; seventeen vessels went ashore on the north side of Tees Bay, and were therefore to windward of the proposed refuge had it been ready for them. Two vessels were wrecked upon the Redcar rocks, and one was seen to founder off the rocks. That more were broken up in the dark night of that fearful gale is but a reasonable supposition, as well as that

* They will appear in our next number, our list for the present having been previously made up.

others might have been saved, which our columns shew were wrecked at the shoal harbour on that coast while vainly seeking refuge.

We recommend this subject to the attention of those honourable members who took part in the debate on the second reading of the Redcar Harbour Bill in the Session of 1839. Since which many a good ship, and many lives have been lost for want of the refuge, then denied by the vote of a British Parliament, which refused one remedy without providing another. We remember that on the conclusion of the debate the honorable member for Montrose, who voted against the Bill, said "We trust that it will be thoroughly understood, that those gentlemen who vote against this measure do so solely because they think it ought to be executed as a public measure, and at the national expense."—*Oct. 22nd, 1849.*

METEOROLOGICAL REGISTER.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, Royal Observatory, From the 21st September to the 20th of October, 1849.

Month Day.	Week Day.	Barometer In Inches and Decimals		Thermometer In the shade			Wind Quarter Strength				Weather.		
		9 A.M.	P.M.	9AM	3PM.	Min	Max	A.M.	P.M.	A.M.	P.M.	A. M.	P.M.
21	F.	30.21	30.19	54	59	47	60	NE	NE	6	4	qbcp [1 [2	bc
22	S.	30.12	30.10	58	63	52	64	NE	E	5	5	qbc	qbc
23	Su.	29.97	29.92	58	57	52	58	E	E	3	3	or [2]	or [3
24	M.	29.91	29.87	55	61	51	63	E	E	1	1	bc	bc
25	Tu.	29.88	29.88	52	63	47	64	SE	N	1	1	bcm	bcm
26	W.	29.88	29.86	56	63	45	64	E	NE	2	2	bef	bc
27	Th.	29.81	29.78	59	64	54	65	E	E	6	6	qbc	qbc
28	F.	29.92	29.88	56	65	54	66	W	W	1	2	bcp [1	bcp 4)
29	S.	29.70	29.68	61	65	53	65	S	SW	4	3	o	or (4)
30	Su.	29.96	29.94	58	68	55	59	S	SW	3	4	or [1] [2]	op (3 4)
1	M.	29.50	29.52	42	55	49	56	N	NE	2	3	or [2]	or 4)
2	Tu.	29.71	29.73	47	50	45	51	NE	NE	2	2	od [1] [2]	o
3	W.	29.54	29.36	47	59	43	59	SE	SW	1	6	or [1] [2]	qor 4)
4	Th.	29.06	29.31	52	50	50	54	S	NW	2	4	or [1] [2]	op (4)
5	F.	29.74	29.75	42	50	36	52	W	W	3	3	b	bc
6	S.	20.78	29.78	43	51	42	53	NW	E	2	1	bc	or (4)
7	Su.	29.31	29.22	56	58	44	59	SE	NE	2	1	bcp [1]	or 4)
8	M.	29.58	29.79	50	51	49	52	N	NE	6	5	qo	qbc
9	Tu.	30.02	29.97	39	48	34	49	NW	NW	1	1	bm	bcm
10	W.	29.88	29.80	35	50	32	51	NE	NE	1	2	bf	bc
11	Th.	29.54	29.50	46	51	36	52	NE	NE	5	5	qbcp [1	qbc
12	F.	29.52	29.58	45	50	42	51	NE	NE	6	5	qbcp [1]	qbc
13	S.	29.71	29.76	41	45	39	47	NE	NE	7	6	qop [2]	qop (3) (4)
14	Su.	30.01	30.01	43	45	37	46	NE	NE	4	5	o	qo
15	M.	30.08	30.08	44	48	40	49	NE	NK	5	4	qo	bc
16	Tu.	30.08	30.04	42	51	36	52	NW	E	2	1	bc	bc
17	W.	29.93	29.94	53	49	44	60	SW	S	3	3	bcp [1] [2	o
18	Th.	30.19	30.21	56	61	52	63	SW	SW	4	2	b	b
19	F.	30.10	29.96	53	63	49	64	SE	S	2	4	bm	bcm
20	S.	29.92	29.94	58	61	53	62	SW	W	3	2	bc	bc

September 1849.—Mean height of the barometer = 29.939 inches; mean temperature = 56.1 degrees; depth of rain fallen 3.22 inches.

NOTICE TO CORRESPONDENTS.

STORMY JACK's communication received. Letter on the Cordovan Light in our next.

Hunt, Printer, Church Street, Edgeware Road.

THE
NAUTICAL MAGAZINE

AND

Naval Chronicle.

DECEMBER 1849.

TURKISH TOPOGRAPHICAL NOMENCLATURE.—By Mahmouz Effendi.

To a "green hand" on the coast of Asia Minor, the names of places ever seem for the first month or two to belong to the *genus* "crack-jaw," and they pass from a Frank's memory with inconceivable rapidity. The same occurs with the *outré* names of villages in the interior; and when having been at last acquired by ear they come to be written down in a log or a journal, divers mistakes still occur, which a very slight acquaintance with the Turkish tongue would rectify, if not prevent. But Turkish is unfortunately not yet taught in England, and *par consequence*, travellers, in the volumes they give to the circulating libraries, cannot venture much on penning phrases in the Turkish tongue. Of Persian especially, and perhaps of the Arabic language, Englishmen are anything but ignorant; but Turkish is as yet almost unknown to them. This is not as it should be. Steam has brought Stamboul and Southampton within sixteen days of each other; yes, within *sixteen days!* The Rhine has been over-worked, and John Bull and his unveiled wife may now well affect the Bosphorus. Miss Pardoe's "*City of the Sultan*" first set honest John mad about houris and harems, and Turks and turbans, and White's "*Constantinople*" followed up the blow. Those two books have certainly much to answer for: they are most excellent books, nevertheless, and it is to be hoped our good and jolly friend Cap-

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tain Brooks has more than one copy of them in the cabin-library of his superb Southampton steamer the *Sultan*, for the special use of passengers to the sunny Ottoman dominions; and if he can add thereto the too-much-neglected "*French and Turkish Dictionary*," of Kieffer and Bianchi, we warrant the whole three works will be—as they ought to be—considerably and advantageously bethumbed on every passage out.

Now, with regard to Turkish geographical and topographical names many difficulties are easily to be cleared away by simply charging the memory with about a mere score of words; which words will be found pretty plentiful in all proper charts and maps of the Levant; these are:—A cliff, *yar*; a rock or reef, *kaia*; a cape, *bouroun*, or *bournu*; a head, *bash*; an island, *ada*; a strait, *boghaz*; a city, *shehr*; a village, *keuy*, or *hioi*, or *chiuy*; a river, *irmak*, or *tchai*, or *su*, or *soo*; a lake, *gueul*, or *gule*; a castle, *hissar*, or *kalé*, or *herman*; a fort, *tabia*; a bridge, *keupri*; a gulf, *keurfeuz*; a plain, *ova*; a mountain, *dagh*; a pass or defile, *guedouk*, or *dervend*, or *capi*; a valley, *déré*; a port or anchorage, *liman*; a seaport, and also a landing-place, *ishêlé*, (from the Latin *scala*.)

It would be easy to add at once to this list of terms, but our present object is to be concise, and to recommend a little study rather than to solve difficulties by a mere page or two of explanation in a Magazine. Yet to the above Turkish words a few adjectives may here be added, as they so very frequently appear on the face of modern Anatolian maps, viz. *eski*, old; *yeni*, new; *ak*, white; *kara*, black; *kizzil*, red; *sarou*, yellow; *kutchuk*, little; and *buyuk*, great. Now, with these mere thirty words the exact signification of very many Turkish topographical names is at once ascertainable; names answering to the English Newcastle, Newmarket, Newton, Richmond, (or Red-mount,) Newport, Blackwater, Whitehaven,* Redcliff, Clifton, New River, and so on.

And when the meaning of a name is known the name itself is the more readily remembered; thus Magnesia, where Themistocles expired, is now called by the Turks *Inek-bazaar* which signifies literally the Cow-market, as *Inek-kapi* would mean the Cow-gate.

The terms island, strait, cape, etc. follow in Turkish, while they precede in English. Thus in the one language we generally say Cape Black; but in Turkish Black Cape or *Kara Bournu* or *Kara Bouroun*. Yet although *kara* means black, and *bouroun* cape, English map-makers too frequently write down *Cape Kara Bouroun*, where either the word cape, or *bouroun*, should of course be omitted, since cape, is but a literal translation of *bouroun*, or *bournu*. Near Falmouth there is a spot called Black Head which if turned into Turkish would become *Kara Bash* not *Kara Bouroun*.

To the words *bouroun*, *ada*, *boghaz*, etc. etc. it is sometimes grammatically correct to add *i* or *si*, thus, *balta limani* for *balta liman*; *kara bourouni* for *kara bouroun*; *kara adasi* for *kara ada*; Stamboul *boykazi* for Stamboul *boghaz*.

* Ak Liman.

The Turkish rule is in such cases to add *i* where the word ends with a consonant, and *si* where it terminates with a vowel. English (and American) travellers however are not always content with *si*, but often double the *s* and change the *i* into *y*, or even into *ee*; thus we find the word *Kalési* written *Kalussy* or *Kalessee*, and sometimes *Kalasi*, or *Kaléci*. By-and-bye, however, a more strict and uniform orthography must obtain in charts and maps at least. The *Nautical Magazine* would be a very proper work to commence the reform.

The present paper must be considered but as an after-dinner "Fly Leaf," marked with a few rough memoranda, deemed by the author likely to prove useful in a small degree to British naval officers on the coast of Turkey, whose general knowledge of French, and Italian, and Spanish, will of course prove to them that such languages have no affinity with Turkish, and therefore render them possibly the more likely to accept even such meagre hints as are now diffidently offered for their consideration.

When on a visit to the shore, the blue-jackets spring into the saddle, and penetrate into the interior, they will among other causes find villages taking their names in frequent instances from the abundance of a particular sort of fruit, originally growing or still plentiful in their immediate vicinity. A glance at the excellent map given at the end of the second volume of Professor Forbes and Lieutenant Spratt's "Travels in Lycia, Milyas, and the Cibyratis" (A.D. 1847) will show this. In that map appear *inter alia*—

Armoutlee, the "Village of Pears," *armoud*, or *armout*, and *emroud*, signifying in Turkish a pear; and *ki* or *lee* being but a particle added to any word to express possession, or a possessive quality as *djan*, a soul; *djanli*, one who has a soul. Thus from *Armout* we have *Armout-li*. *Almalee* is distant six hours from *Armoutlee*, and probably takes its name from *alma*, an apple. It is the modern capital of Lycia, and possesses beautiful vineyards and gardens. And apples are not unknown in Lycia, for in the work (above mentioned) by Messrs. Forbes and Spratt the village of Seydeleer is recorded as "buried among plum, apple and walnut trees," (vol. i. p. 276, and vol. ii. p. 156). Thus, I take *Almalee* to mean "Village of Apples" as *Armoutlee* signifies "Village of Pears". I coincide with those who suppose the Turks prone to eschew old names and to select new names for themselves. I cannot myself see an Hellenic root in the name of all present spots which the old Gresks happen to have trodden.

Having referred to Messrs. Forbes and Spratt's Travels, I venture to suggest that the Lycian stream near Cydna, which they call the *Uzlan* river, should henceforth be written as the *Arslan* river; or, to put both words into Turkish, as the *Arslan Tchuy*, which being literally translated means the Lion River. I suggest this, although I find it stated in the Travels, (vol. i. p. 19, and vol. ii. p. 63,) that "the *astlan*, or lion, certainly does *not* inhabit Lycia now, if, indeed, he ever did." *Astlan*

here must be a mistake of the printer; there is, I believe, no such word in Turkish; but *arslan* and *aslan* will both be found in Kieffer's *Dict. Ture-Franc.* (vol. i. pp. 23, 53.) and these words actually signify a lion. I throw out this orthographical hint as the talented authors themselves say in their *introduction*,—"In obtaining the names of the villages, and other places, and writing them down from the dictation in most cases of uneducated peasants, it may easily be conceived we made many errors: for these, under the circumstances, we hope due allowance will be made."

In addition to "Villages of Pears," and "Villages of Apples," Asia Minor shows many a "Village of Olives," *Zeitoun Keuy*; and in the plain behind Smyrna stands *Nar-li-Keuy*, which signifies the "Village of Pomegranates." One place called *Zeitoun*, stands within fifty miles of Samsoun on the Black Sea, and in Eastern Greece there is another *Zeitoun*, a little to the southward of the Turkish frontier at Volo. The Turkish name for the biblical Mount of Olives would be *Zeitoun Daghi*. The Arabs and Syrians have other names for it in their respective languages; which three tongues differ much more from each other than even learned Englishmen are yet pleased to admit.

Fearing to occupy more space than the *Nautical Magazine* can in due consideration to its countless contributors afford in one number, I must reject all impulses to state more on "Forbes' and Spratt's Lycia," beyond briefly referring to a name or two of places mentioned in that interesting work.

Kara-gatch.—This place (Forbes and Spratt, vol. ii. p. 22.) is I presume but *kara-aghadj*, i.e. black tree, literally, but meaning also an elm. A village of such name stands on the Bosphorus. The dropping of the initial vowel of the second word in *kara-gatch* is quite the Turkish system; which yet goes further and even "cuts" the word *at-esheek-Kaighy* into *at-esh-Kaighy* (D. T. F. vol. ii. p. 430). *Hass-Keuy*, or *Khass-Keuy*, is the name of a village not only in Lycia, as given by Forbes, but this name appears also on the left bank of the Golden Horn at Constantinople, as the quarter inhabited by Jews. The word *Khass* or *Hass* (vide D. T. F. vol. i. p. 447,) signifies "proper" or "unmixed," or "private" or "privy". Thus *Khass oda* would be the Privy Chamber. In *Khass-keuy*, at Constantinople, the Jews reside "unmixed" with Christians or other religionists. *Khass* may also mean retired, or inner, or separate.

Turkish towns having the suffix of *khan* or *bazaar* speak for themselves; the latter arising from the *locale* being at one time a market; and the other, viz. the *khan*, signifying a lodging-place for travellers, better known to Englishmen as a caravan-serai. The word *khan* or *han* is also seen in combination in the words *kaf-haneh* a coffee-house; *ters-haneh*, a naval arsenal; *divan-haneh*, a council-chamber; and so on.

With one word more I shall now conclude this paper, viz. as to the *Urook* tribes (so spelt by Forbes) which word is the *Yuruk*, defined by

Kieffer and Bianchi, (vol. ii. p. 1287) as a vagabond, qui n'a pas de demeure fixe.

I believe the *Jaf* (or *Djaf*) tribes referred to in Rich's *Koordistan*, (A.D. 1836) take their name of *Jaf* from being wanderers, even as the *Yuruks* do. The word *Yuruk* is Turkish, but *Jaf* Persian. They seem however to be synonymous.

Yet, let me add, that the traveller in Lycia will occasionally fall in with animals, possibly, but little more wild than these, our wandering friends the *Yuruks*. Forbes names the *Kaplan* (vol. ii. p. 63,) and translates it a leopard. Kieffer calls a *kaplan* a tiger, and possibly the Turk uses one word for both animals. Kieffer assigns the word *nemir* to a leopard. The *sertlan* which Forbes sets down as a cat, is I imagine the hyæna, which certainly thinks too much of himself to answer to the name of "Pussy" (D. T. F. vol. i. p. 660, 663.) Authors should note that the Turkish word for ibex or wild goat is *gucik*, not *caik*, which latter signifies a boat. (D. T. F. vol. ii. 683), *Gucik* only, seems to mean a stag, and *dagh gueiki* the Ibex.

It may here in conclusion be useful to give the Turkish names of some of the animals common in Lycia, viz.—Bear, *aïou*; beaver, *koundouz*;* wolf, *kourd*; donkey, *esheck*; horse, *at*; camel, *dèvè*; mule, *kateer*; fox, *tilki*; jackal, *tchakal*, or *kara-koulak*, or *sieh guioush*; hog, *domouz*; hare, *tavshan*; squirrel, *teiyoun*; porcupine, *tessi*; bat, *sheitan-koushu*, or *yaresè*.

Where any of these animals abound it will probably be discovered by future travellers that hills, and valleys, and villages, take their names from them. Thus a *Domouz Dèvè* (valley of hogs) may yet be lighted on in Lycia, as well as the one of that name on the European shore of the Bosphorus. The *yaban domouz*, the wild boar, is seen in great numbers in Lycia, and by-and-bye our gallant Mediterranean middies may become as famous for hogging as their brother officers of the sister service in India. And now that there is a British Consul at Adalia there will be no difficulty in learning the most favourable region for this exciting sport.

NOTES AMONG THE ISLANDS OF THE PACIFIC.—*Extracts from the Remarks of H.M.S. North Star: Capt. Sir E. Home, R.N.*

(Continued from page 589.)

ON the 6th of August the *North Star* left Tonga Taboo, attended by King Josiah and a great number of the inhabitants in the large double canoes. She was piloted outside the reefs by his son Henry, who brought us in. The evening was very fine, and a course was steered to

* Vide the word *Castor* in Kieffer's *Dict. Franc. Turc* A.D. 1845.

pass eastward between the Hapai and Eooiagua Islands, and southward of the reefs which extend from the Hapai Group, which are supposed in Krusenstern's chart to reach as far south as $20^{\circ} 34' S$. The usual precautions had been taken for look out; the way of the ship was no more than to enable her to stay, if necessary: at midnight no soundings were obtained with 30 fathoms of line; at half an hour after midnight her way having decreased to $2\frac{1}{2}$ miles per hour, the foresail was set, and in ten minutes after breakers were seen upon the lee beam. The helm was instantly put down, when the ship struck forward, the sea lifted her over it, her heel touched, and she was in deep water—not hanging an instant. The moon was rising, there was a moderate breeze, and as the way appeared clear in the gleam of the moonshine upon the water, sail was made, and she stood to the eastward. At the last cast before she struck there was no bottom with 30 fathoms of line; she struck, and the next cast was 7 fathoms, sand and coral: the water deepened quickly to $7\frac{1}{2}$, 8, $8\frac{1}{2}$, 9, 10, and 18 fathoms, and the breakers, which were not seen by any person until the ship was in them, were when passed, clearly visible. At 5h. 30m. on the previous evening the Island of Eooiagua bore S.E. $\frac{1}{2}$ E. 10 or 11 miles. The courses steered were N. 54° E., 17 miles, at which time she struck: upon this taking place a look-out man was placed upon the main top-gallant yard, as a check upon the man on the fore top-gallant yard; the deep-sea lead was ordered to be hove every half-hour, and 50 fathoms of line run out, and certain persons were excluded from the look-out entirely.

At noon on the 7th, the latitude observed was $20^{\circ} 23' S$., longitude $176^{\circ} 13' E$. At eight in the morning the breakers were seen bearing W.b.S., and between that and noon she stood N.E. 16 miles; no bottom with 80 fathoms: a long heavy swell from S.E., the weather hazy and breeze light from S.E. In the morning of the 8th stood N.W. for the passage between the Hapai Islands and Vavou, much less swell than usual, it being probably broken by the reef which extends southward of Vavou: at noon the latitude was $19^{\circ} 42' S$., longitude $173^{\circ} 59' E$.: at 1h. 30m. saw the Island of Kao W.b.N., it is of conical form: at 6 p.m. Kao was S.W.b.W., and the Island of Lette N.W. $\frac{3}{4}$ W. with breakers in the passage. Standing N.W. $\frac{3}{4}$ W. at eight, breakers were seen ahead, and westward, the course was altered, and she stood S.E., under easy sail—no bottom to be got, with from 50 to 75 fathoms: the night perfectly dark. The weather in these seas is certainly fine, but there is a constant swell from S.E., causing the ship to strain much. The weather is frequently hazy, and the wind blows with considerable force at all times, what in the West Indies is called a fiery sea breeze, such as is met with upon the coast of Carthagena, but the really fine weather was left when we crossed the tropic. The morning of the 9th was hazy, the barometer at 8 a.m. had fallen from 29.96, at which it stood at eight last night to 29.90, it came on extremely thick so that we could not see 100 yards from the ship; the wind freshened with heavy rain, the appearance very

threatening. The Islands of Havo and Koa had been seen at daylight for a moment S.W., and S.S.W.; they are nothing more than sandbanks very low, the cocoa-nut trees with which they are covered giving them their apparent height. At 10 it cleared, the barometer rose to 29.95, a long heavy swell, the wind freshened from E.N.E. to a gale with constant rain, and so thick that nothing could be seen 150 yards from the ship: a little after noon the wind fell light and calm, the haze continued with the rain. At 3 P.M. we were standing W.b.S, supposing ourselves westward of the reef extending from Vavou, and S.E. from the Island of Lette, no bottom with 100 fathoms. At 4 it cleared up, and the land seen in the morning again appeared S.b.W., and an hour after the peak of the mountain of Koa was W.S.W., off which we remained with little wind all night.

On the 10th the wind was from E.b.N., which shifted about six to N.E.; Koa bearing south we stood N.W., the weather beautifully fine; at noon the latitude was $18^{\circ} 51' S.$, longitude $178^{\circ} 24' E.$ At 1 P.M. discoloured water was seen bearing east; a boat was sent to sound upon it, the coral bottom was seen, the depth 9 fathoms, the swell upon the shoal considerable. At 3 P.M. another patch of discoloured water was seen about two miles to leeward of us; the evening fine and clear; the wind N.E.—cloudy in the S.W.

At daylight on the 11th the Island of Lette bore east, and discoloured water was seen all round, or nearly so. There was, however, no bottom, with 100 fathoms; at noon the latitude was $18^{\circ} 51' S.$, longitude $175^{\circ} 24' E.$: at 4 having sailed E.b.S. $\frac{1}{2}$ S., 10 miles; the peak of Koa bore S. $5^{\circ} E.$, the peak of Lette N. $61^{\circ} E.$ On the morning of the 12th the Island of Lette was seen bearing N. $27^{\circ} E.$, and a line of breakers at a considerable distance west of the island. The breakers appear to be caused by an extensive reef stretching east and west. Lette is a high island, formerly a volcano. The peak is in the centre of the island from which the hill falls with a pretty gradual slope into the sea. Bearings of all these objects were observed, and are registered.

At 5 P.M. the island of Vavou was seen with breakers extending from it. From midnight until nearly 8 A.M. on the 13th it was calm: at daylight the Island of Lette was seen bearing N.W. $\frac{1}{2}$ W.; the air was light all day from S.E., E.S.E., E.b.N., and N.E., with fine weather. At 8 A.M. a small island was seen bearing north, and soon after the Island of Vavou was seen: in the afternoon stood in for the land, which is of very remarkable appearance, having several abrupt heads towards the north, each appearing to be the entrance to a harbour or opening in the land, which indeed they are. The night was fine, and in the morning of the 14th, the wind was light from the N.E., we worked to windward to gain Port Refuge: thus nearly a week was spent in getting to a place which is commonly gained in twenty-four hours. We went by the unfrequented route, and agreeably to our usual fortune we have found the opposite to that which we had been led to expect—northerly and north-westerly winds instead of southerly and south-easterly, generally strong when foul, and light when fair.

The Island of Vavou when approached from the west has a very remarkable appearance, it is highest towards the north, sloping gradually to the south, the whole is a group of numerous islands, which, with few exceptions, shew abrupt sides: towards the north steep cliffs, forming angles 70° or 80° with the horizon. The extreme point north is of moderate height, but south of it there is a bold head of considerable height forming an angle with the horizon of 75° or 80° . This is on part of the main Island of Vavou, two others like it to the southward are islands, the land gradually sloping to the south. Towards the northern end of Vavou there is a remarkable piece of table land, the highest, and from which the land slopes off; all southward of it being islands of regular form and low: the entrance is south of the highest head before mentioned. The peak of the Island of Lette bore S. 68° W., the north head or highest head N. 25° E., and the south head bore south, this head is the north extreme of a larger island, the southern extremity of which bore S. 55° W. When standing in with the north head on the larboard hand two remarkable round rocky islands will appear, their tops are flat, and covered with brushwood, the lower half to the waters edge bare rock, they cannot be mistaken. Between the northernmost of the two islands and the main there is a detached rock: passing between these two large rocks or small islands a rocky point will be seen upon the left, bearing S. 83° E.; after rounding which at about a cable's length, another point more high and covered with trees to the waters edge will appear also on the left, bearing N. 47° E.; the passage appears narrow; southward and eastward, the land is composed of islands very numerous, and showing several openings to the sea, between some of which the breakers extend quite across: the eye guided us in. A lumpish hill covered with trees will soon open, and a small low green island which is left upon the right hand. At six we anchored under this hill in 30 fathoms water, sand, with a sandy point N.E., and the hill north, the village is to be seen upon a rising ground; there is a hill at the back of it. These islands are all formed of a hard rock quite white, and as I believe of coral origin; they are thickly covered with trees of various sorts, and all of a very deep green. Cocoa-nuts appear to be most numerous. These islands, clothed as they are, and the rocks often showing between the foliage, the variety of their forms, tints, and sandy bays, give the harbour a most beautiful appearance. Passing on, the natives are seen in numerous groups, lying under the trees; and canoes are seen passing and repassing in various directions. A few, and a very few, patches, of cleared ground are to be seen upon the hills.

A gun had been fired, and the pilot-signal was made when entering the Heads, but no attention was paid to it. A little after 2 P.M. a canoe came out from the town, and returned immediately on learning what the ship was, to report the circumstance to King George.

The winds during this passage were principally from N.E., varying to E.b.N., N., N.b.W., and N.N.E. The barometer ranged between 29.88 and 30.02, but its general height was 29.95; the thermometer between 82° and 72° ; the water varied from 78° to $80\frac{1}{4}^{\circ}$. On the 8th,

the variation per azimuth A.M. $9^{\circ} 40'$ E. On the 11th in the evening by the same it was $9^{\circ} 12'$ E. On the 12th by amplitude at setting $8^{\circ} 15'$ E. The ship remained at Vavou from the 14th until the 20th, during which time the winds were from N.W., S.S.E., S.E., S.W., S., and E.S.E., fresh in the day, falling light generally towards evening; the breezes light, sometimes calm, and for the most part very fine; one day it rained heavily. The barometer varied between 30.14 and 29.50, its usual height being 30.05; the thermometer rose to 83° , the lowest was 72° ; the latitude of Sandy Point was found by observation to be as follows:—

15th August M. Alt. ☉	2 observers	°	'	''
15th " "	"	18	39	10
15th " "	"	18	39	15
16th " "	• a Aquilæ	18	38	35
18th " Mer. Alt. ☉		18	39	6
18th " "	"	18	39	7
<hr/>				
18 39 2 S.				

The variation observed by azimuths upon the same spot by card No. 1, at 4 P.M. was $6^{\circ} 30'$ E.; by card No. 2, $5^{\circ} 54'$ E.; the mean variation $6^{\circ} 12'$ E.

The village of Neafu, like Neukulofa at Tonga Taboo, is rendered conspicuous by the large boat-houses upon the beach, their gables open to the sea. From the anchorage to the village the water is deep, the shoalest being 5 fathoms, but the bottom is bad. The usual anchorage above Sandy Point is secure, the bottom is sand. As soon as the ship was anchored, a large canoe well manned and in high order came to the ship, bringing an Englishman, a servant to the Mission, with a message from King George requesting to know what he could do for us, and offering any assistance in his power. I replied, "I should call upon him the next day."

I landed upon a good stone pier built by king George, and was met on landing by the same person who had been sent to the ship; he was an assistant in the printing-office of the Missionary establishment there, and acted as interpreter. The king was waiting in the house, which, as at Tonga, is used for public meetings, and was of the same form as those at Tonga: the king sat upon the ground with a few of the principal chiefs. Near one end of the house a semi-circle of inferior natives filled the end of the building opposite to him, leaving the space clear in the centre; and men with long sticks sat at the place of entrance to keep back intruders. The king sat in the middle, and was dressed in a white shirt and waistcoat, had a coloured handkerchief round his neck, the lower part of his body being clothed as usual in *tapa*. No other person present wore European clothing. He rose when I entered and stood still. I went up and shook hands with him, and sat upon a chair which had been placed against a pillar near him. He is a tall stout man, but not at all corpulent, his age I think about thirty-eight; he is darker than the generality of natives; his countenance is grave and thoughtful, his

features regular and handsome. He is nephew to king Josiah of Tonga-Taboo, being the son of his elder brother Toa; his name is Fanfaaban, and was christened George, by which name he is commonly known. He is king of Vavou and of the Hapai group, but acknowledges Josiah to be his superior chief, with whom he acts in concert in all matters of great importance. George is a man of strong mind and great natural ability. His first enquiries were respecting the transactions at Tahiti, in which all the natives of these islands have taken a most lively interest, and considerable alarm.

He then spoke of a schooner which he was intending to buy from a firm at the Navigators Islands, that he was to pay for her in cocoa-nut oil, which was then making for that purpose; when he had possession of her it was his wish to trade to Sydney. The schooner is 23 tons burthen, with gear complete. She was to become his property for 25 tons of cocoa-nut oil; he was not, however, to have possession until he had transmitted 12 tons of the oil to the firm he made the purchase from at the Navigators, after which he was to be put in possession of her, receiving £2. 10s. freight upon the remainder, which, if required, he was to send to them. After which he wished to dispose of the schooner with a cargo of oil upon his own account, and with the proceeds purchase a larger vessel, and commence a trade in European manufactures most useful to his people, towards which he has already got nearly £200 collected by the sale of wood and water to the vessels putting in for refreshments. He has great influence with the chiefs of the Fejees who will assist him. Kava was not offered, nor is it used.

There is here a neat church formed like all the other native buildings. It is larger than that at Tonga, and is ornamented only by the coloured sinnet which binds the timbers; a large building near it is the schoolroom. The king's house is the third building of any magnitude which is enclosed by a closely wove fence; they all stand upon a lawn of grass; the cottages of the inhabitants were upon the lower ground surrounding these buildings. The houses of the missionaries are in a sort of street at no great distance from the church; there are three, having good gardens enclosed by a regular fence of reeds, they are neat and comfortable: one Missionary is a printer, and here is a very good press, where the testament and prayer books having been translated, are printed, with the best school books, and from hence are distributed, neatly bound, over the neighbouring islands.

I am informed by Mr. Turner, the principal missionary on the island, that the population of the island is above 4,000, but does not amount to 5,000; they are all protestants. The only persons upon the island not natives are the three missionaries, the compositor, and a carpenter, who are English, one Spaniard, and one Portuguese.

The natives not only support the Missionaries, but contribute to the Missionary Fund; they build their houses and fences, for which they are paid; and afterwards keep them in repair without further charge; and supply yams, fowls, and pigs for their support; besides which they have

this year contributed in the above, and in dollars, about £40, which is the largest contribution that has been made.

In the school for adult males there are about 100 pupils, and of females 70. In the girls' school there are 55; in the infant school, which is of mixed sexes, there are 190. There is another infant school at some distance where there are 100 children; every village has a school, and there are in all about 2,300 of both sexes under tuition. There are about 140 native teachers, and 30 chapels served by native teachers, of whom the king is incomparably the best. He is chief judge as well as chief priest; there are besides him two established judges. On the first Tuesday in every month the sinners, as they are called, are brought up, when the king is present; he decides the case; the judges are also magistrates. There is no prison.

The deepest crimes which come before him are theft, fornication, and adultery. The punishment is labour, making roads, piers, and working in the plantations for two or three months; if they behave well this is remitted, or a fine of a certain quantity of cloth is substituted: the punishment of the females is making mats, mat sails, or beating tapa. Women of rank conducting themselves improperly are fined in pigs, yams, cloth, &c. Rank here as in the other islands is derived principally from the mother.

On the day after the arrival of the ship, the annual school meeting took place in the church, ropes extending along the building on each side, parting off the space between the pillars which support the roof and the walls into aisles, which were for the public; the centre was reserved for the king and those attending him; chairs were placed for the missionaries: this church is 110 feet long and 45 feet wide. I was prevented from being present at this interesting examination, but Mr. Sutherland, the purser, who was there gave me an account of it. There were 400 children of both sexes drawn up in double rows within the reserved space, the missionaries and their wives being present, and King George having entered the enclosed space, with them, which surrounds the pulpit, silence was desired by ringing a small bell, which was attended by so profound a silence, that to use Mr. Sutherland's own words "You might have heard the buz of a fly." The king then rose and addressed the children, expressing his pleasure at seeing so many of them assembled together: he explained to them how thankful they should be to persons who had left their own country and friends and come so far to teach them a true religion, by which they would be brought out of the darkness and sin that their forefathers had remained in, a blessing which he would maintain; and hoped that they would do the same to the utmost in their power against all who might attempt to turn them from it. He admonished some of the young men for vicious and bad habits, and for disturbing the younger ones who were anxious to learn, by loitering round the school house and drawing off their attention. This was the second anniversary of the schools meeting. The ages of the children were from nine to sixteen, there were besides them 200 adults.

(To be continued.)

COMMAND AND OBEDIENCE.

“Act right and fear nought.”

COMMAND, to be beneficial, should be exercised with that dignity which does not enlist a haughty deportment for its support, nor require the aid of intemperate language to enforce the deference which it claims from all who are within the sphere of its power.

Obedience, which is a necessary condition in all who are subordinate, should be practised cheerfully from a moral sense that it is right, not merely because it is obligatory, and without reference to the conduct of a superior, whether considerate, or oppressive. This must not be confounded with what is called “passive obedience” which is the result of necessity; this, of principle.

Upon these two conditions discipline mainly depends; and that will ever be considered the best which can be attained and maintained by the least possible degree of rigour.

Unhappily, however, it is one of the errors which officers of a certain temperament imbibe, to believe, or to suppose that, nothing short of austerity and severity can keep a body of men, isolated from general society, in good order.

Those fancied conditions, which of themselves, must be irksome to the possessor, are founded upon a misconception of human nature, entirely at variance with every generous feeling of the heart; and therefore, incompatible with that good government and strict discipline that shall be established by a wise system, and supported through the cheerful and willing regard of the governed, as well as from principle.

We should consider that, whatever good we may imbibe from example or precept, must add to our happiness, if we have any soul within us, not past receiving impressions. The reverse of this, has a tendency to create and to augment misery.

Is it not, therefore, a subject, morally speaking, worth considering, whether we should place any confidence in an estimate, we suppose to be formed by others, relating to our deportment which we choose to “carry high”, and from the effect of our disposition to severity, there from expecting marked deference and implicit obedience? For we may be assured that, seeing and hearing are reflected back upon the heart, and form the judgment from the feelings; and that judgment may have great influence on the conduct of an inferior. A consequence of so rigid a disposition of any person in authority is, to fall into the habit of watching for, and taking offence at every trifling incident. “How much happier are they, who go through the world with an easy good humour, passing over every trifle; and thereby placing themselves above all such peevish follies, maintaining more real dignity than those who are the proudest.*”

* Talbot's Reflection.

There is no sight, where a body of men are congregated and form a society, more pleasing than in a well constituted ship-of-war. The order, regularity, cleanliness, and cheerfulness observed, must strike the mind of an observer with astonishment, if a stranger; and be extremely gratifying to his feelings as an Englishman, proud of his country's glory; for, here he sees the perfection (as far as that is attainable) to which human laws and observances may be brought in consummating the discipline of the mind of man, by judicious care in their application. It is doubly pleasing from the conviction that, an unanimous desire to excel, must pervade the whole community; and wherever this result does not become apparent on ship-board, we may reasonably believe there is a radical error somewhere.

It is scarcely necessary to remark that, in the use of gross language a superior lowers himself to a level with the vulgar; loses the dignity which was his shield; and casts away that moral force which was his support. To strike an inferior, even the least in position or the youngest, is always considered as an act of cowardice; at all events it is unmanly; because the blow may not be returned, and therefore, the giver lays himself open to contempt, though that may be felt and not expressed. How guarded therefore, we ought to be, not to allow impulse or passion to master our better feelings.

As a necessary stimulus to command, and to obedience, we should never lose sight of the fact that, all have a mutual dependence on one another. That, at least, should make us reasonable, and ought to make us contented under the various circumstances in which we may be placed. It is the key-link running through the whole chain of society, joining its framework; and should not only abate pride, but induce kindness, so that "society may be the better for every one of us."

This is a general principle; but in particular, it bears on the reciprocal duties of small communities, such as are found in ships of war. But it is of higher importance even than the comfort which may be derived from its observance therein. It has a bearing on the character and well being of the noble service at large, which, if all who are intrusted with command, and all who, being subordinate, are voluntary servitors, would always make the principle to action, we should less frequently hear of discontents and of courts-martial. So says the voice of **EXPERIENCE.**

NAUTICAL RETROSPECTS OF THE WAR.

"Would I had fallen upon those happier days,
That poets celebrate; those golden times,
And those Arcadian scenes that Maro sings,
And Sidney, warbler of poetic prose."

There are a thousand things learnt, incidents of the past,— which lie

eribbed in that wonderful immaterial store-house termed "the memory". It is a curious gift, but a valuable one, for which nations as well as individuals may be thankful,—a monitor well worth attending to, if only to abate state pride, and control its power when in action:—to teach moderation and the practice of justice. A moral poet thus apostrophizes Britannia :—

"It shakes the sides of splenetic Disdain,
Thou self-entitled ruler of the main,
To trace thee to the date when yon fair sea,
That clips thy shores, had no such charms for thee,
When other nations flew from coast to coast,
And thou had neither fleet nor flag to boast."

Our modern "*Punch*", perhaps, according to the prevailing taste, could not point a shaft with a finer edge at the undeserving; but the sort of "dirty-water" thrown in the face of the "plumed dame", as to original condition, is an insult not merited; for, apply it to individual genius, though "flighty" and the point is lost: all must have a beginning in career, and the nation, as the individual, which rises by energy and honesty, can never be dishonoured by obscurity of origin, or meanness of pristine condition. Arrogance and pride in such may deserve censure, but the above reproach is entirely neutralized from the fact that all nations and all men have one common origin.

The pre-eminence which England attained at sea during the late wars was, one of those remarkable advances made by nations, that create universal wonder. The high hand, however, with which she exercised this plenitude of power, among the neutral wanderers of the Ocean, generated a spirit of deep-rooted anger against her, and she may depend that that fact, is stowed away in the dark shroud of the memory of nations, to flash forth whenever future opportunity shall call it into light.

Perhaps, it was not so much the exercise of that vague authority understood as the "Law of Nations", as the manner in which she carried out those arbitrary measures practically. To avoid excesses, therefore, on any future occasion, it may not be altogether useless to show the mode by which that practice was performed; for it is highly probable that, even among naval officers, there are many who have no knowledge of the truth.

Indeed, as to the future, who can speak? Though the "Peace Societies" should eventually exercise a moral force successfully over the ambition, jealousy, weakness, pride, and inclination to hasty resentment of potentates and their ministers, whether hereditary or elective, so as to dissuade them from war,—what nation would disarm? Far distant yet, we imagine, is the time when such a desirable event may be expected, although, in that prediction, opinion is worth absolutely nothing. An old historian speaking of the period of 1673, says :—"The English have chiefly applied themselves to sea affairs, and in this the French cannot hitherto be compared with the English; yet England can scarce reap any great advantages from France at sea. For, suppose they should beat the French fleet,

yet they would scarce venture to make a descent upon France, as having not any footing there; and the French privateers would certainly do great mischief to them."

England, it is true, had enough to do at that period to keep down faction, and to preserve internal peace at home; but the future proved that she could and did reap very "great advantages"* from her successes against "France at sea". She not only beat the French fleet and made a "descent upon France", but, in conjunction with her allies marched in and took possession of Paris!—in which, the mischief done by French privateers was entirely absorbed.

Our old author adds a remark which, though written for a particular period long since passed, would seem to have some force in our day on events which lie veiled in the future. "But," says he, "if the English should once miscarry at sea, and that the French should once get a footing in England, it might perhaps prove fatal to that kingdom, since the fate of the war must be then decided by the issue of one battle, England having no inland strong holds." Very doubtingly expressed, but worthy to be held in recollection. All, however we feel called upon to say on that score is, that it will be England's own fault if ever the French or any other people get a footing on the shore of her sea-girt isle.

According to the reputed "Laws of Nations," it would appear that a neutral shall not supply a belligerent with warlike stores; and this specification has been rigorously enforced by the seizure and condemnation of the vessels (or their cargoes) transgressing.

I am unaware whether we acted in strict conformity with the prohibitions contained in the "Code Universal"; but certain it is that in the category of prohibited articles, salted beef and pork were included by us; thus increasing the liability to seizure of vessels belonging to neutral nations:—a proceeding, with reference to the islanders of the West Indies on "short commons," very humane, and otherwise as an action, highly complimentary to the refined civilization of the British ministry of the day!

Whether the Americans of the United States subscribed to these recognised general laws of Europe, or not, (we believe they did not acknowledge them,) their speculations among the islands of the Carribean Sea were carried on with a most active and persevering spirit; and not only in that direction, but in all parts of the world; their vessels becoming the carriers for the merchants of those nations involved in the general war. As England however, may be said to have held the absolute command of the Ocean at the time, they were met by a corresponding activity and unceasing vigilance on our part to frustrate their designs. Indeed, had the Americans been actually at war with England, their vessels could not have been more eagerly sought for; and so rigorously was the system of search observed, that, their very ports and estuaries

* What were these? The national debt, and, especially, the "Dead Weight" Peace, &c., &c.

were blockaded by our men-of-war up to the time of their declaration of war.

The right of any European nation to force the Americans into the compact of acknowledgement of Vatel, Puffendorf, &c., as binding upon them as a neutral power, is not apparent; and it is clear that the Congress thought so by issuing protests, and declaring for "Free Trade, and Seamen's Rights"; their complaints however, were unavailing,—the Britishers played on their games to the end!

Truth and justice alike demand that the case be viewed with candour; It then must be admitted that the transactions on the immediate coast of the states were of an unparalleled nature, unjustifiable, and as exercised against civilized unarmed beings, monstrously offensive! The Americans, whose forbearance was for a long time wonderful, were, at last, completely worn out in patience, and becoming desperate,—though in no proper condition to resist a great naval power, boldly declared war against their oppressor. They were wrong in one thing, however excusable in others. Their hatred and resentment should not have been vented on the instruments: they should have recollected that the first principle to be observed by a good officer is that of strictly obeying his orders, the effect of which should not be cast in his teeth.

The unprejudiced historian of strict integrity of principle, would not shield the policy of his country from reprehension where the measures adopted were either tyrannical or otherwise unjust. Why should the mere journalist prove himself less a lover of truth? How far the Americans were wrong in not subscribing to the acknowledged laws observed in warfare by the European powers, and in defiance persisted to trade with a belligerent state, in articles prohibited by the enemy of the latter, is a question on which as a seaman I am not inclined to offer an opinion; but we all know that policy often casts all morality aside, and where the power is great that the assumption of might constitutes the right.

But, I might go on in this strain of moralizing until a good sized volume be filled, and arrive at last only to the conviction that, the affairs of this world, in a political sense, are managed without the slightest regard to justice, when that interferes with State interest;—a point, by the way, in which, it must be admitted, the Americans themselves, have shown the very worst of examples!

The Leeward station, in the Carribean Sea, being rather "out of the beat" of the American vessels in their intercourse with the French colonies, the number detained was not so great as on the Windward, and Halifax stations. Many were, however, sent into Port Royal, Jamaica, for adjudication, upon the suspicion of having false papers, or carrying prohibited articles; some were condemned; but in the majority of cases, I believe, it was found no easy matter for the detainers to bring the facts of transgression clearly before the Vice-Admiralty Court.

Perhaps, at no era was there a more extraordinary display of vigilance, activity, and daring on the ocean manifested, than during the latter portion of the war of 1803; and assuredly, never was maritime power

exercised to such a height, since the creation of the world, as at that time by Great Britain,—she, in the strictest sense of the words of the national anthem, being “the Ruler of the waves!”

The “right” of search, unscrupulously exercised, and the impressment of seamen, British subjects serving in American vessels, created such an universal ill-will against us, that angry feelings manifested how much pain the carrying out of our professional orders gave—not alone to the Americans, but to all other wanderers of the ocean, not even excepting those of our own country! I hardly think that Attila, with his host of wild Scythians, could have created in the Roman people a much greater source of alarm, than did the sight of an English ship-of-war to these wanderers.

In the unlimited exercise of power assumed by England, whether right or wrong, as far as regards the United States, there can be no doubt that occasionally native Americans were taken from their vessels, upon the supposition, of course, that they were British born subjects. As to the certificate of citizenship which was produced by all as a protection, it was disregarded, as it was well known that they were sold to any applicant.

Having premised the above observations as connected in some measure with the subject in narration, I now proceed to relate the circumstances attending the search and detention of American vessels.

Wherever the “Stars and Stripes” floated on the breeze, the activity which appeared on board of the approaching British ship-of-war,* would have given to an uninterested spectator an idea of the two countries being at war.

American vessels wherever met with, were subject to a very scrutinizing search. Not only were the captain’s papers examined with the documents pertaining to the cargo, &c., but the letters which he was conveying were often opened and read! I do not pretend to know if the opposition to the regulations dictated to the neutral by Great Britain, was a sufficient justification for her infringement of an acknowledged understanding universal among civilized people and which the laws of states have made penal. I cannot, I say, pretend as a private individual to have attained to the knowledge of what the policy of a powerful nation may deem just and proper, under any particular circumstance: I only presume to think that the captains of British ships of war acted in these onerous matters according to their instructions, and not upon their own responsibility;—the latter I cannot conceive of honourable men.

It will appear obvious, if we study the records of history, that we cannot, in a variety of cases, reconcile the public acts of a nation, or rather government, to our natural feelings and sentiments as private individuals: indeed, who can have lived half a century without having observed that the decrees of a government sometimes display a variance from what sober reason would dictate as justice? At all events, the captains of our ships of war, presuming they acted up to their orders—must have had their personal feelings outraged in the fulfilment of such

* Significantly designated by Jonathan—“a brass-bottom Serpent.”

a superlatively repugnant duty as that of *opening and reading private letters*; which, not the desire of making prize-money could possibly soften: if not so, all I can say is that, I am deceived in the estimate formed of what a captain of a man-of-war should be.

In the examination of the neutral no accessible hole or corner was left unsearched; even the beds have been ripped open, and the contents turned out on the cabin floor. With the expectation of lighting upon the true papers, the tops, masts, and bowsprit, in fact all the spars were carefully sounded to detect some recess cleverly concealed as the receptacle for those papers; wherever the body could intrude, or the hand and arm enter, the scrutiny was followed. On the other hand, every mode was adopted that cunning could devise in secreting the papers which it was necessary should be concealed from the Argus-eyed boarding officer. In a great many cases, however, notwithstanding the ingenuity of the contrivance, the papers have been discovered; sometimes snugly stowed within the false back of a looking-glass; in a recess let into the leg of a table, or sofa, or chair; in a neatly contrived case fixed to the lower-mast head; within a luted tin case in a beef barrel; and, no doubt where not detected, in a variety of other parts in the vessel.

Two very remarkable instances of the fortuitous disclosure of papers, which occasioned the condemnation of the cargoes of two American vessels occurred during the war. One is well known, as related by Lieutenant Fitton;—the papers were found in the *stomach of a shark* which had been caught by that officer;* the American was detained by the *Sparrow* cutter, off St. Domingo and sent into port; the papers found related to her, and she was condemned. The other is not so generally known; a vessel was detained on suspicion of bearing French property; in going into Halifax harbour she got on shore upon the Thrum-cap shoal; boats were sent to lighten her, and the only accident which occurred whilst this was performing was that of a cask of beef or pork, slipping out of the slings, falling upon the deck, and scattering its contents at the feet of the prize-master, in the midst of which was found a tin case, luted; on opening this, the vessel's true papers came to sight; she was condemned.

As carriers to the French, during the war, the Americans were apparently playing a game of hazard; but, although, no doubt, some of the adventurers lost, many were gainers; at least it may be so inferred as their voyages were continued. The success of the issue did not alone rest on the favour of Fortune, or good luck, but often on the skill and ingenuity exercised in deceiving the British officers. Many of the vessels employed in this speculation were "Clippers", and evaded detection by their superior sailing; in the open ocean they had little to fear; it was on sailing from their ports of departure, or in endeavouring to enter those to which they were destined, that they had the greatest difficulty to apprehend; but even in these situations, foggy weather, so often prevalent on the coasts of France and America, frequently concealed them from the quick eyes of their old kindred.

* A full account of this appeared in our volume for 1833.

The merchants of Norfolk, in Virginia, and other ports, laid their schemes so well that they had no apprehension of being ultimately ruined by the speculation. Having completed their calculations, and provided for certain contingencies, they thought little of, and cared less, for the condemnation of two or three out of every six vessels. The hulls were often safe when the cargoes, or parts of a cargo were condemned; and in many cases the interest involved only the amount of freight.

The latter may be understood if we suppose that the French merchant, or shipper, at Bordeaux, &c., made an agreement to the effect that the freight-money would be forfeited if his goods should be captured.

The difficulty which was often great, of proving the property to belong to the enemy, deterred some of the English captains from detaining American vessels, as the demurrage which they would be liable to, if failing to substantiate the fact, fell individually upon themselves, the responsibility resting solely with them; so that it may be said to have been a more hazardous game for the British captain to play than the American merchant or ship-owner.

The vessels detained, remained twenty-one days after the *libel* was issued before their cases were argued before the Judge; the object of this delay being, I presume, to afford the parties concerned time to gather evidence. In some cases, however, after the opinion of counsel, when the chances of condemnation were unlikely, before the expiration of the time allotted, the *libel* was cancelled, and the vessel allowed to depart upon the agreement that no charges should be made against the detainers. There were no doubt, some vexatious cases in which the American merchant suffered pecuniary loss by the delay; but as so much pains were taken—justifiable, or not, by those who carried the goods of the enemies of Great Britain, it was hardly to be expected that the dealers who followed a contrary course, would escape suspicion. But this may not be a sufficient excuse for the rigorous means adopted by the British.

Under these circumstances, it may readily be supposed that some of our naval captains were more fortunate than others in having the balance of account much in their favour. It was a current report, for instance, that the active commander of the *Leander* 50, (of John Pierce celebrity)* received £60,000 as his share of the American ship *Herkemere*, which vessel was detained at the threshold of her port of destination, New York, on her return voyage from the Pacific. Of another commander, who was rather eccentric in his manners, it was stated that whenever the answer to his question of—"Whence came you?" was, "From Bordeaux", his invariable response without hesitation was—"Then in you go!" and, as if Fate had decreed against the Americans—he was always successful. But there were others less fortunate, who, according to the common phrase, "burnt their fingers".

The master, or mate, generally the latter, and one or two of the crew,

* This man was killed by a blow from his brother, and not by a shot from the *Leander* or *Cambrian*.

the cook and steward usually, were allowed to remain in the detained vessel. It was necessary, I believe, that one officer and a foremast man should be left on board, being required on the trial of the case as respondents, &c.; but sometimes the detainers were so unwise as to permit more than that number to remain in the vessel. That circumstance, not unfrequently, led to attempts at rescue, and I regret to add that in some instances the rescuers were not scrupulous as to the means by which to effect their purpose. An extreme case occurred in the Atlantic, where the inhuman skipper committed murder, by overpowering the young English midshipman, and heaving him overboard. This savage was probably received in America by the rabble, as having performed a very meritorious action; and there is little doubt that he reconciled the act to his own conscience as one of justifiable retaliation!

Another attempt which all but proved successful, is remarkable for the long struggle which the midshipman of a frigate, on the Halifax Station, had with the gigantic skipper of a detained American ship. The undaunted courage displayed by the young officer, and the almost super-human strength which a clear sense of his perilous situation gave him, lengthened out the time sufficiently for his men—who had been battered down in the fore-cuddy whilst eating their dinner,—to break up the hatch, and just in the nick of time, to rescue their officer. A few moments more and he would have been relentlessly consigned to a watery grave, as he was becoming powerless and exhausted from overstrained energy. It was a most gallant affair. In another instance, which was prolonged for two or three weeks by adverse winds, the determined and resolute spirit of the midshipman triumphed over the revolvers, (not Americans in this case,) among whom were some of his own men. To crown all he accomplished a feat which few had attempted,—that of bringing the vessel, a large ship, safe into Halifax harbour during a dark night! I have a perfect recollection of the circumstance, as I was the first person to notice her arrival, happening to have the watch at the time on board of a ship-of-war, close to which she dropped her anchor.*

I conducted several detained vessels into port myself, and had a narrow escape when in charge of a large American ship on crossing the Bay of Fundy. But being "wide awake" brother Jonathan was frustrated in his design; and he afterwards told me that had I not taken the precautions I did, he would have been snug in Boston in a few hours.

This circumstance, the details of which I shall not stop to relate, would not have occasioned any anxiety could I have placed perfect confidence in the faithfulness of the entire prize-crew, part of which did not belong to the ship-of-war in which I served as a lieutenant, but to another which was in company when we detained the vessel. One of these men, a daring and mutinous fellow, the Americans had gained over: indeed he was so disaffected, and of such an ungovernable spirit that, I have reason to believe, had there been no Americans on board, he would have

* In the event of another war, especially with America, it would be well to have a guard-ship stationed below St. George's Island.

attempted to seduce the men of my own ship from their duty, though, as they were all steady well behaved men, perhaps unsuccessfully.

I would here beg leave to say a few words on manning prizes, and I think in so doing I shall carry my readers' approval with me. In general first-lieutenants,---and captains, when they interfere, have the good sense to select steady trust-worthy men for this service. But this has not always been the case; and moreover, on detaining neutrals, the duty has often been hurried, and otherwise so negligently performed as that the greater part of the detained vessel's crew have been left on board of her: indeed, in one or two instances I have met with, the entire crew within one or two; whilst the prize crew has been sent away entirely unarmed!

In the instance alluded to above, the worthless fellow spoken of, was purposely sent into the detained ship with the hope of getting rid of him. This I was informed of on board his own ship, and my captain remonstrated against his being sent, but unavailingly. I recollect the first-lieutenant of his ship telling me that "He was only one in ten, and with such odds could be kept in order," forgetting the old adage, "one scabby sheep may infect a whole flock." Had this first-lieutenant been appointed prize-master, I am of opinion he would not have taken this man; and what is more, would have selected the best men.

To send men of bad character, especially those inclined to mutinous conduct, in a prize, or detained neutral, which is usually consigned to the charge of a lad, or very young man, where it is scarcely in his power to keep the refractory under due control, is, to say the least of it, extremely unwise; and, moreover, unjust to the young officer sent as prize-master, as it adds a considerable degree of unnecessary anxiety to the responsibility with which he is already sufficiently burthened, in the charge of navigating the vessel, with an authority respected only by subordinates of good moral worth, the thread by which it hangs being of the very alightest texture, when isolated from the majesty of the man-of-war's quarter-deck.

I need scarcely enter farther into discussion to prove the hazard that is run on such occasions, of loss of life and prize-money, as the naval man does not require to be told that opportunity is often only required to set evil spirits into action,---and where so favourable as in a neutral detained, in which there are interested individuals ready to stir up and promote an *emeute* which shall lead to the re-possession of their vessel?

Instances repeatedly occurred of the Americans regaining their ships and taking them into their own ports; yet, these mishaps had not the effect generally of making the captors or detainers more particular for the future, as they still continued; and I have no hesitation in stating my belief that they generally originated in a want of due care in the selection of prize-crews, as well as from an over confidence, in the young officers, of security.

A lieutenant and a midshipman, belonging to the ship in which I was serving, each having the charge of a detained vessel, were outwitted rather than overpowered by the Americans left on board; who, after

gaining possession, shaped their course for their respective ports of original destination, and got safely in.

In one instance, an American brig full of passengers made an unsuccessful attempt to board a detained vessel in which I happened to be; we fortunately cleared her. We had been sent on board in a very hurried manner, without a single musket, pistol, or sword, to defend ourselves with; and had the brig fully accomplished her evolution, it is not improbable that we should have been overpowered by numbers. There were no marines with us, which was a great oversight.

Where attempts at rescue proved unsuccessful, the vessel was, to the best of my recollection, always condemned; but I am not certain that the cargoes were so as a consequence. I rather think that the attempt to rescue a vessel affected her hull alone. Whether this decree was recognised by any international law, or whether it was one of our own making to meet the spirit of the times and circumstances I am ignorant.* It is presumable, however, that, such an action on the part of the ship-master, or mate, and portion of the crew left on board, justified the suspicion of contraband traffic, and became of itself sufficient evidence of the fact, and that, upon that plea the judge declared the forfeiture of the vessel's hull. Another view I shall, however, presently offer.

With respect to the cargo, as the goods composing it often belonged to various individuals, who were not present to justify or condemn the acts of the master, or mate, it is probable that on the score of common equity those individuals would not be affected. For we may readily believe that other proof of their liability to forfeiture must be produced, unconnected with, or independent of, any personal action of the ship-master or mate, before the judge could pronounce his verdict. Whereas, the master (or other officer left on board) being, *pro-tem*, the owner's representative, all his actions pertaining to the vessel, in such cases, would be chargeable on the proprietor proper, at least by action at law; and hence, perhaps, the vessel's condemnation as a recompence to the party in charge at the time, for violence done or attempted to be done. This, I imagine, to be the drift of the argument in justification of the rigour exercised in such cases, whether a previous consent had or had not been given by the nation of the neutral; otherwise an action at law against the offending individual alone would probably be the result, without the liability of the vessel's hull to condemnation being involved.

As far as the Vice Admiralty Courts were concerned, I believe the Americans had nothing to complain of, the strictest impartiality being observed in the proceedings. It was against the rigid fulfilment of a European recognized law that they protested, and the height of their displeasure fell upon the officers of the British navy for carrying it into execution, to the *ne plus ultra* of which it was possible to be applied.

* A digest of all laws of maritime warfare, and which apply to neutrals as far as relates to trading, would be a very useful publication, few naval officers are fully acquainted with such laws, and many not at all.

I have mentioned that a lieutenant and midshipman of the ship I belonged to were unfortunate enough to be outwitted by the Yankees. The midshipman was quite a lad, but possessed a bold and resolute spirit, and his persevering attempt to regain the vessel, was very creditable to him; but that did not avail him; by the sentence of a Court Martial he was punished for not having exercised due caution.

It appeared that whilst he was in the cabin "working his day's work", and all his men except the helmsman, were below at their meal, the Americans who had been left in the vessel, put on the latches, and effectually prevented them from regaining the deck. All the efforts of the youngster, which he perseveringly continued until the vessel reached her port, were ineffectual. In vain did he attempt by firing up the sky-light, and through the companion door, to force these open; and as little success attended his endeavours to join his men by breaking in the bulk-head which separated the cabin from the hold; the cargo was up to the beams, and he could neither force his way to reach his men forward, or remove the weights placed over the sky-light, the frame of which he had battered with shot:—in fact, he was like a young lion suddenly entrapped. I believe there was not any officer in the court who did not sympathise with him, and admire the spirit displayed in one so young; yet it was thought necessary to make him pay the penalty for his want of caution. The lieutenant of the same ship who had met with a similar misfortune, was not tried; why, I know not; he had been put into a passing vessel, and was landed on one of the Caribbean Islands, and did not rejoin his ship for a considerable length of time afterwards.

It may be imagined that the onerous duty of overhauling and prying into the secret recesses of the American vessels, was not an agreeable one to the boarding officer, especially, if the extra task of opening and reading the private letters was imposed upon him. Different no doubt, were the feelings of different individuals, upon such occasions; we may imagine that the thoughtless, with the hope of prize-money floating uppermost ever in his mind, would see nothing very improper in the latter operation; besides, he was only fulfilling the orders of his superior; whilst he who thought deeply would find his conscience ill at ease in the performance of an act which went to set at nought one of the most honourable, if not sacred rules of conventual society! However strong the English Government may have thought the necessity was for checking the Americans, from infringing the general laws acknowledged by European nations, the right of going the length it did to accomplish that point, appeared to our trans-atlantic brethren to have rested solely upon its might; and they considered it, therefore, not questionable that every officer who broke open private letters was liable to prosecution by the offended party.

This opinion was often openly and publicly expressed, but there was little chance of redress for those who felt aggrieved, and no apprehension on the part of the offenders of such a contingency arising. And so the officers and the protests continued until the Americans could bear the

"tyranny" (as they expressed it) no longer. In a moment of desperation, they "cut their stick", leaving the British cabinet at a very unpropitious time, to reconcile the *casus belli* with its "boasted honour", though the effect, *quod erat demonstrandum*, unhappily for the enraged party, it did not dream of! But still,

"Dream after dream ensues;
And still they dream, that they shall still succeed,
And still are disappointed."

The indiscriminate application of the system of opening private letters did not involve the correspondence of American and Foreign individuals alone; a fact, which came to my knowledge through one of the complainants, and which I may here state as an illustration. Captain — in command of H.M.S. — on the Windward Island station, was engaged to be married to a young lady, an heiress, of Jamaica: he availed himself of the opportunity of an American vessel, which he had boarded, bound to the above named island, to transmit a letter to his betrothed. This vessel was boarded off the east end by a sloop-of-war. The letters which the American was carrying were opened, and their contents either in part or wholly read; among the rest, the letter of the captain alluded to! Here was an outrage! What necessity could give the colour of excuse to such a transaction? That Captain — and Miss — were unknown even by names to the commander of the sloop of-war? However, I do not think it right to enter farther into the circumstances of this displeasing case than to add that, an angry correspondence passed between the two officers; and it was fortunate they did not come in contact at the time, or a more serious result would have probably followed.

There were some officers in our service, whose high sense of honour gave them such an antipathy to this "secret service", that I think they would rather have run the risk of blasting their professional prospects than have complied directly with the order; here is another illustration:—

A young officer was sent at night from a ship-of-war by the first-lieutenant, who, by-the-bye never condescended to undertake such an office himself, to board an American ship, with orders to demand the skipper's keys, examine his writing desk, secure the papers and the letters, and to read them all carefully! Here was a frightful order coming from one "in the situation of a gentleman", to another. But, what have subordinates to do with the propriety or impropriety of an order? I will put another question, ought naval officers to be men of strict honour and integrity of principle? If so, ask yourself, good reader, "How such an order was to be executed by a person in possession of such feelings?" Is it not notorious to what lengths state sophistry will go in a bad cause to make it appear a good one, and to justify a public act upon enactments framed by governing power, though the authority emanates only from its might*, and is not acknowledged by the state or party afflicted, the excuse being "political expediency", which it is presumable, like neces-

* Copenhagen to wit; and acts out of number of Napoleon.

sity, recognizes not the law of offence! with that, however, I have nothing to do; it is sufficient that I merely point to the fact that, an action which is punishable in England as felony, naval officers, by authority(?) were made to perform on the ocean, the high-way of nations! Is that not a kink in Mr. Bull's code-coil, to which he, "jolly old soul," would require a very heavy purchase to give the semblance of straitness?

By the way, would it not be advantageous to the *esprit de corps* of the navy, in the event of another war, to distribute among the fleet, a sufficient number of tide-waiters, or custom-house searchers to fulfil the duties of which I have been speaking? But, to return to the "frightful order." Let the officer speak for himself, "I never felt more completely miserable; it was absolutely terrible to be subjected to such a trial. I began to say to myself 'of what avail are all those moral precepts which have been diligently instilled into the youthful mind by fond parents, if the public laws of political expediency are to set them at nought and force the servants of the state to become delinquents, against their consciences and better judgment?' However, there was little time for further reflection, the thing must be done, in some way or other. I shall be better enabled to judge how or in what manner, when I get on board the stranger. Obedience, I well knew was the first duty of military law, but I must own that I could not feel in the same way as the officer who told his captain that if he had ordered him to go to h—, he would have done his best to reach that place! nor should I have thought it any direliction of duty to have preferred the natural law in opposition to the command of a captain to "jump over-board."*

I had not the most distant idea of showing a mutinous spirit on the occasion, but I thought the spirit of the order might be executed, though not the letter. I was soon on the deck of the American; the skipper proved to be a mild and respectable man. He was very willing to produce the ship's papers, but declined to open his writing desk, or submit the private letters to my inspection. Secretly determined not to open or read a single one myself, I had asked him to do so; he of course refused. To insist further was out of the question—and, as to proceeding to the extremity of breaking open the lock, I felt that I was not qualified for such an occupation. What was to be done? I reflected a moment, and then asked him if he had any objection to go on board the frigate with his desk, and letter-bag; to my great delight, he replied "As you have conducted yourself like a gentleman, in that I am willing to oblige you." Thus, then, I had gained the wish of my heart,—and I acknowledge to a secret gratification in affording the gallant "first" the glorious opportunity of fulfilling himself, the delicate order he had given to a very unwilling instrument!

* Naval men will understand what is here meant; it is a fact, that such an order was not only given but enforced!!

In such a world, so thorny, and where none
 Finds happiness unblighted, or, if found,
 Without some thistly sorrow at its side,
 It seems the part of wisdom, and no sin,
 Against the law of love, to measure lots
 With 'more' distinguished than ourselves.

The contrast, by reflection, made me laugh, maliciously? I am, thought I, though lowly, at least, happier far, in this, than my more exalted superior!

When a person is placed in an embarrassing situation—one where the action he has to perform is forced upon him, and is, moreover, repugnant to his feelings, let him not despair if he has any wit about him,—but go calmly and cautiously to work—reflect, catch the terms of expression which light up the features of his *vis-a-vis*, with whom he has to deal; be courteous, yet firm; and in nine cases out of ten, he will find a “hole to creep out of” without compromising himself. Your “blusterers,” puffed out with the self opinion of the vast importance of their station or position, are sure to mar their work. From a very early age I was a “thinker,” and began to study human-nature, and “look into self,”—often discouraged by inconsistencies, but never gave up the pursuit. I have laughed immoderately at times; at others, felt my spirits sadly depressed, not only at my own follies alone, but also at the vagaries and “fantastic tricks” of men and women, (what, the ladies? alas, yes! heaven right them,) who prided themselves upon birth, wealth, title, or station, but, never from the consciousness of virtue! Often, often, have I been utterly bewildered and astonished at the displays;—but I never presumed to say “what fools those persons are,”—in so far I resemble Alexander Dumas, Monte Christo—and why? Because I am myself but a simpleton a mere weak “worm”. If I laughed, therefore, at the bare idea of the gallant “first” having been outwitted, (the “malignity”, mind was only in the curl of the lip,) it was not on his account, but on my own,—you understand? I was saved from the degradation of breaking open *private letters*, and *reading* their contents; was not that joyful?—a happiness replete with pleasurable sensations! Had I then not a right to be merry?

But it was necessary to make some excuse for this deviation in the original plan embraced in the order; it required no ingenuity to effect that; all I had to do was, to tell the truth. It so happened that I was the only “old stager” in the ship at the time; it was, therefore, thought that I must needs understand the best mode of dealing with the “cunning Yankees,” at least, better than the “greenhorns;” thus giving me credit for a qualification I was conscious I did not possess, and this I told my superior, who shook his head. I had, therefore, no occasion for a *ruse*. It was the abovenamed reason, without sufficient confirmation, which got into the cranium of my senior officer, that induced him to honour me with the special commission of this business, as well as that of escaping the dirty-work himself. But the “Fates” were against him: they, not I, tricked him genteelly.

“Whate'er is best administer'd is best.”

So I thought, and so did he. I was highly commended for my sagacity and tact! Of course, I made a very humble bow, with all the gravity imaginable, and went away thinking of the old adage—"There are more ways of killing a dog than hanging him."

I found nothing, neither did they who overhauled the papers and letters, to authorise the detention of the vessel; and the patient skipper came back in about two hours, protesting in a quiet way against such a flagitious and indelicate exercise of power. I shoved off, with the usual "Good voyage to you." This skipper was extremely well behaved; he protested calmly, contenting himself with that privilege of the freeman; differing in this respect from many of his brother sailors, who went so far with their resentment as to try to run on board the English ships, with the intention of carrying away some of the spars. A hot-headed master of a very fine ship, I recollect, was very near succeeding in his attempts, on an occasion when several seamen had been impressed from his vessel. In another instance, the supercargo, who was the owner's son, would not suffer the colours to be hoisted; he was brought on board the frigate, flatly refused to lift his hat; it was taken off for him; and when desired to show his flag, he declared his determination not to do so. In the mean time, however, the master of his vessel had the good sense to run up "the Stars and Stripes:" on being told he might depart he refused to stir, so that it became necessary to force him into the boat. I state this circumstance to show the feeling that existed at the time among the Americans; there was no cause for offence given, and this man's conduct throughout was very absurd. But the most extraordinary case which occurred was that of an American ship-master being tied up to the gang-way, and flogged on board of a British sloop-of-war, for giving the lie direct to an assertion of the boarding officer, in the presence of the captain and officers. The reader, doubtless, will be surprised; but it is a fact! and, in truth, so *ultra* does it appear, that to use a Yankeeism, were it not well known, and angrily discussed in the States, it would be "most amazingly "disbelieved."

The object sought in opening and reading the private letters conveyed by American vessels, appears to have been the detection of information relating to those boarded, or to others following. Yet, upon reflection, it would seem a very unlikely thing that letters of advice respecting contraband goods would be sent in letter-bags, unless written in cypher, because all the parties were aware that these would be examined by the English, if the vessels conveying them were met with; yet, I have a vague recollection that information of this sort had been obtained. However, the simple question to be answered, with reference to our proceedings in the matter is,—“Did the end justify the means?” In a moral point of view all will say “No!”—in a political one, I leave it open. But, honest reader—what would you say of a man who opened private letters with the expectation of finding some clew by which he could gain possession of money—the accursed love of which has caused so many mean actions, and such frightful crimes? “Oh, you would assuredly

exclaim—"what a villain"! That which you denounce is, the action that "political expediency,"—that is precisely the term—forced upon naval officers! How do you feel now? humiliated? stop; here is a nut for you to crack:—If any person in the fleet, or on shore were detected in such an abominable transaction, your judges who make the laws, would mark their horror, by transporting him to Botany Bay. Don't you wish for a Lethean stream into which the whole could be plunged, and washed away in oblivion for ever?* Alas! it is stereotyped in the memory at least, of foreign nations as—"un fait accompli!"

I have said that the Americans did not acknowledge the "right of search"; they, moreover, denied the right of any nation to detain or seize any vessel sailing under the American flag on any pretence. Here is the proof:—President Tyler said, "This government will not cease to urge upon Great Britain full and ample remuneration for *all* losses, whether arising from detention or otherwise, to which American citizens have heretofore been, or may hereafter be, subject by the exercise of rights which this government cannot recognise as legitimate and proper."

And here I end my reminiscences of the "Letter-bag."

Note.—The subject has been freely discussed in the "Consulate and the Empire", of M. Thiers; in which it is said in effect that England did not follow the Laws of Nations, but made others to govern the world herself; and it is probable that Mr. Macauley in his History of England will overhaul it with an impartial pen.

THE MARQUIS OF WORCESTER'S CENTURY OF INVENTIONS.

If credit can be given to a very curious historical record, published in the *Musée des Familles*, and reprinted by all the periodicals at the time of its publication, the genius of Salomon de Caus must have been cruelly undervalued. This document is a letter from Marion Delorme to the Marquis de Cinq-Mars, as follows:—

"My DEAR D'EFFIAT.—While you are forgetting me at Narbonne, and are giving yourself up to the pleasures of a court life, and to the satisfaction of opposing the views of Monsieur le Cardinal; I, in compliance with the wish you expressed to me, have been doing the honours of Paris to your English Lord, the Marquis of Worcester, and I walk him about, or rather, he walks me about from one sight to another, selecting always the most sorrowful and the most serious; speaking very little, listening with extreme attention, and fixing upon those whom he interrogates, his large blue eyes, whose glance seems to penetrate their inmost thoughts. As to the rest, he is never satisfied with the explana-

* Then why stir it? Because it should be laid bare, that its offensiveness might deter its revival upon some new occasion. Besides, it has been registered.

tions which are given him, and he will by no means accept things in the light in which they are represented to him. For example, take the visit which we have just paid to the Bicetre, where he pretends to have discovered in a madman a man of genius. If the madman had not been furious, I believe in truth, that your Marquis would have petitioned for his liberty to carry him to London, that he might listen to his vagaries from morning to night. As we were crossing the court where the madmen are confined, and while I was squeezing myself close to my companion, more dead than alive, so great was my terror, a frightful face peeped behind a large grating, calling out with a broken voice, 'I am not a madman, I have made a discovery that will enrich the nation which puts it into execution.' 'And what is this discovery,' said I to the man who conducted us. 'Ah!' said he, shrugging his shoulders, 'something that you will never guess, something that is very simple, it is the use of the steam of boiling water.' I began to laugh. 'This man,' said the keeper, 'is called Salomon de Caus, he came from Normandy four years ago to present to the king a memorial of the wonderful effects of his invention, namely, that with steam he could make goods travel, carriages run, and do a thousand more wonders. The cardinal dismissed this mad fellow without listening to him. Salomon de Caus instead of being discouraged began to follow the cardinal about everywhere, who wearied out with finding him always in his way, and troubled by his foolish fancies, ordered him to be shut up in the Bicetre, where he has been for these three years and a half, and crying out as you have heard him yourself to every stranger, that he is not mad, and that he has made a wonderful discovery. He has even written a book on the subject.'

"Milord Worcester, who had become extremely thoughtful, asked for the book, and after having read some pages said, 'This man is not mad, and in my country instead of shutting him up, we should have loaded him with riches: take me to him,—I wish to question him.' He was taken to him; but he came back sad and thoughtful. 'He is very mad now,' said the Marquis, 'misfortune and captivity have deprived him for ever of his reason. You have turned his brain, but when you threw him into this dungeon you imprisoned there the greatest genius of the age.'

"Upon this we quitted the place; and since that time the Marquis does nothing but talk of Salomon de Caus. Adieu, my dearly loved and faithful Henry, come back soon, and do not be so happy where you are, as not to leave some remainder of love for me.

"MARION DELORME."

THE ARCTIC EXPEDITIONS.—*Return of Sir James Ross.*

We had scarcely rejected as unfounded the whole story of the Esquimaux in our last number, concerning our absent Arctic ships, when Sir James Ross himself arrives among us; half expecting among the congratulations awaiting his return, he would have had those of Franklin and his party! For of Franklin he has found no trace; and we have yet to turn our attention to the efforts of Captain Kellett in the *Herald* in Bhering Strait, and the result of Dr. Rae's journey to the north from the American shore, for tidings of the absent party. We have preserved entire for the readers of the *Nautical* the report of Sir James Ross to the Admiralty, and for the positions of the places mentioned in it, we refer our readers to the little map in our last number, which will be found to contain all the region over which he has passed. Having also placed in our hands a brief but highly interesting account of the proceedings of the Expedition from an officer on board, we have annexed this to it as containing some incidental matter more adapted for private correspondence than would be consistent with Sir James Ross's official report.—

Report of the proceedings of Her Majesty's ships Enterprise and Investigator, between the 13th of July 1848, and their arrival in England on the 3rd of November, 1849.

In accordance with the intentions expressed to the Secretary of the Admiralty, in my letter of 13th of July 1848, her Majesty's ships *Enterprise* and *Investigator* sailed on that day from the Danish settlement of Uppernavik (a).

By running through an intricate archipelago of islands, which lies off the main land, and seems to keep off the pressure of the main pack, we succeeded in passing the position in which the whale ships had been so long detained, and made every day some advance to the northward, until the 20th, when we made fast to a berg aground off Cape Shackleton (b).

Here we were joined by the *Lord Gambier*, of Hull, Mr. R. Hill, master, who informed me that, having run to the southward with all the rest of the whaling ships, and having carefully examined the pack edge for any opening that might lead them to the westward, he had come to the conclusion there was not the smallest chance, from the close, compact, and heavy nature of the ice, for any ship crossing to the west coast of Baffin Bay this season. He had, therefore, returned to the north, and expected that all the other ships would soon follow him, and endeavour to round the north end of the pack; he spoke very confidently of being able to accomplish this by the first week of August, and promised,

a Uppernavik in lat. about $72^{\circ} 50'$, 160 miles north of the middle of Disco Island.

b Cape Shackleton in lat. about $73^{\circ} 40'$ or 225 miles north of Disco.

at any rate, to remain in company with us until the 3rd of August. We cast off from the berg early the next morning, towing the ships through loose streams of ice towards some lanes of water, which had opened out during the calm which prevailed all night.

Our progress was, however, very slow during this and the next few days, and our situation often difficult and embarrassing.

On the morning of the 26th, when off the Three Islands of Baffin (c), in lat. 74° N., we were surprised, on the fog clearing off, to see the *Lord Gambier*, about eight miles distant, standing under all sail to the southward; thus disappointing us of the only remaining means of forwarding information of our proceedings to their Lordships; and this was the more annoying as we had only the evening before passed within a quarter of a mile of her, when, upon any signal of her intention of going to the southward, we would have placed on board of her all our letters and dispatches. Her enterprising commander deserves the highest praise for persevering alone so far beyond all his fellows, and, had it depended on him, I believe he would not have left us until we had got through the great difficulty of Melville Bay.

We pursued our course to the northward under varying circumstances of perplexity, anxiety, and success; for although I could not but feel assured that we should eventually get through the Melville Bay barrier, yet calms and light winds so greatly impeded any movement in the pack, that day after day passed away until the season had so far advanced as to preclude every hope of accomplishing much, if anything, before the setting in of winter.

No exertions, however, were spared to take advantage of every opportunity of pushing the ships forward until, on 20th of August, during a heavy breeze from the north-east, the ships, under all the sail they could carry, bored through a pack of ice of but moderate thickness, but having amongst it heavy masses mingled with the lighter ice that covered the larger surface through which it was necessary to drive the ships at all hazards. The shocks they sustained during this severe trial were great, but fortunately without serious damage to them,

We gained the clear water at 4h. P.M. on the 20th of August in lat.

c Three Islands of Baffin, about 25 miles north from Cape Sackleton.

Extract of a letter from an Officer of the Expedition.—My last hurried note was I think written from Uppernaavik, on the east side of Baffin Bay, from whence we sailed in company with the *Enterprise* (from which ship by-the-bye we never parted,) on the 13th July, 1848, threading our way to the northward as we best could through the lanes of water in the ice, which extended to the verge of the horizon, thickly studded with bergs, many of an immense magnitude, and when it is considered that they only present one tenth of their entire size above water, it is impossible to behold, and contemplate their greatness, without feelings of wonder and admiration.

75½° N., (d) and long. 68° W., and steered direct for Ponds Bay, where I felt assured of meeting with the whale ships, if any should have crossed to the west land, and might learn from them if the *Erebus* and *Terror*, or their party in boats, had passed along that shore, and also with a view to communicate with the Esquimaux, who annually visit the coast, and from whom we might have derived information of our absent friends.

On the 23rd we made the land about ten miles to the southward of Ponds Bay, and could trace the line of the main pack close in against the land, at a distance of three or four miles to the southward, so closely pressed home as to leave no room for ships or boats to pass between it and the shore. We next stood into Ponds Bay and hove to, within half a mile of those points upon which the Esquimaux are known to place their summer residences, firing guns every half hour, and with our glasses closely examining every part of the shore, without being able to discern any human being.

From Ponds Bay we commenced a rigid examination of the coast to the northward, keeping the ships close in along the land, so that neither people nor boats could have passed without our seeing them. Opposed by a strong current, although going before the wind between two and three knots through the water, we found by the result of all our observations, as well as by unerring marks on the land, that we were sometimes carried astern against the wind (e).

On the 26th we arrived off Possession Bay, (f) and a party was sent on shore to search for any traces of Sir John Franklin's Expedition having

d The meridian in our map passing close to Cape Walsingham of Davis (x) is that of 60° W. The meridians are 10° asunder.

e Affording a remarkable proof of the strength of the southerly set which

drifted the cask to the southward, that gave us the only intelligence we had received from the ships between their departure and return.

f Possession Bay, a few miles to the northward of Ponds Bay.

It was six weeks before we got as far north as Melville Bay, owing to the obstruction of the ice, and the light uncertain breezes which ever prevailed during the summer months, when amongst drift ice. To a high latitude on this side of Baffin Bay it is necessary to get, before attempting to cross over into Lancaster Sound; for the ice sets off bodily to the southward and westward, and first clears away along the east shore, or Greenland side. We got out of the pack and into what is called by Polar Navigators the "West Water," on the 20th August, in lat. 75° 23' N., long. 58° 30' W., and from this time saw little of the pack or heavy winter ice till next year.

We then stood over to Ponds Bay after looking into which, proceeded north, along the west shore of Baffin Bay into Lancaster Sound and Barrow Strait, throwing over-board daily from each ship a cask containing a cylinder with information for the missing expedition. Signal guns and rockets were also continually fired throughout the night and in foggy weather, but no intelligence whatever respecting them was obtained, and the only record we found, was a notice left under a cairn in Possession Bay, by Capt. Sir Edward Parry when in command of *H.M.S. Hecla*, in 1819.

touched at this general point of rendezvous. Nothing was found but the paper left there recording the visit of Sir Edward Parry, in 1819. The paper was very much damaged, but by careful washing and fitting together, nearly every word was clearly deciphered. (It is preserved.)

From this point we continued the examination of the coast with equal care, for we fully expected every hour to see those of whom we were in search, and the most vigilant look out was kept aloft and from the deck.

On the 1st of September we arrived off Cape York, (g) and a party was sent on shore to seek for our friends, and to fix a conspicuous mark at this remarkable point, in which was placed a paper for the guidance of any party that might fall in with it. This service was performed by Lieut. McClintock, with much skill, under very difficult circumstances.

Every day we were in the practice of throwing overboard a cask (h) from each ship, containing papers with information of all our proceedings, guns were fired during foggy weather, and blue lights and rockets during the hours of darkness, the ships being kept under easy sail that any boat seeing the signals might have reached them.

The general tenor of the information thus distributed along the coast was to acquaint Sir John Franklin, or any of his party, that, as the whale ships had not been able to cross to the west land of Baffin Bay, they could have no hope of assistance from them, and recommending them to make for Port Leopold, where I intended to form a depot of provisions, and perhaps, leave the *Investigator* to winter there; they would, at any rate, with the provisions find a notice of the position in which the nearer ship was passing the winter.

It, therefore, became necessary to push for Port Leopold to fulfil these promises, for had any of his party met with one of these notices they would assuredly have gone to that point.

We accordingly stood over from Cape York towards N.E. Cape, until we came in with the edge of a pack, too dense for us to penetrate, lying

g Cape York is on the eastern side of the entrance of Prince Regent Inlet. In speaking of the eastern and western, northern and southern, we may here observe that we refer to the true meridian, the magnetic north pointing in all directions between N.W. and S.W. in the places under discussion.

h One of these casks was that to which we have referred, and it is remarkable that only one was found. The preference of small casks over bottles (the usual, because the most economical case) is strongly advocated by Sir James Ross from the safety of the document as well as its chance of being seen.

The sun at this time shone forth in unclouded splendour, and was noticed to have first dipped below the northern horizon for a few minutes near midnight on the 8th August, the weather was somewhat cold, but nevertheless cheering and delightful. Distant objects were seen most distinctly, refracted in a multitude of shapes, huge ice bergs being inverted, and not uncommonly appearing as though suspended in the air by some invisible agency, many feet from the surface of the sea.

between us and Leopold Island, about fourteen miles broad; but as we could perceive that it was still in motion, we hoped that a few days might produce a favourable change, and in the mean time we stood over to the north shore of Barrow Strait, to seek a harbour further to the westward and to examine the numerous inlets of that shore. Maxwell Bay (*i*), and several smaller indentations were thoroughly explored, and although we got near the entrance of Wellington Channel (*j*), the firm barrier of ice which stretched across it, and which had not broken away this season, convinced us all was impracticable in that direction.

We now stood to the south-west to seek for a harbour near Cape Rennel (*k*), but found a heavy body of ice extending from the west end of Cornwallis Island, (*l*) in a compact mass, to Leopold Island (*m*). Coasting along this pack during stormy and foggy weather, we had difficulty in keeping the ships free during the nights, for I believe so great a quantity of ice was never before seen in Barrow Strait at this period of the season.

With the thermometer at 15 degrees every night, young ice formed rapidly, and became so thick as to frustrate all our exertions to pass through some of the looser streams. Nevertheless, after some days of anxious and arduous work, we succeeded in getting through the pack which still lingered about Leopold Island and N.E. Cape, and entered the harbour of Port Leopold on the 11th September. Had we not got into port on that day it would have been impossible to have done so any day afterwards, the main pack, during the night, having closed the land, and completely sealed the mouth of the harbour.

We had now, at any rate, accomplished one material point, and were rejoiced to find the anchorage, of which we had before been in much doubt, well adapted to our purpose, and as it was desirable to secure a good position for one ship, I resolved that it should be the winter quarters of the *Investigator*.

I had much satisfaction the next morning to find how perfectly our steam-launch fulfilled our expectations in an experimental cruise about

i Maxwell Bay faces the entrance of Prince Regent's Inlet.

j Wellington Channel—see *t* of map.

k Cape Rennel—see *y* of map.

l Cornwallis Island forms the western shore of Wellington Channel.

m Leopold Island is off Cape Leopold, in which is Port Leopold, the western point of entrance of Prince Regent Inlet.

After roaming about Barrow Strait for some days, on the 11th September, 1848, the two ships anchored in Port Leopold, in lat. 74° N., long. 90° W., a harbour situated on the northern extremity of the west shore of Prince Regent Inlet; and the day after three month's provisions were landed from each vessel. In the mean time a quantity of heavy ice having driven into the Bay, and collected considerably in the neighbourhood, and the young ice moreover now fast making over the sea, it was not deemed advisable at that late season to proceed farther to the westward, and accordingly on the 29th the ships were cut into their winter quarters.

the harbour, before proceeding in her to the westward in search of a harbour for the *Enterprise*, as it was now beyond probability from the early setting in of winter, and from the unbroken state of the ice, to reach Melville Island (*n*) this season. The pack at the harbour's mouth, however, still prevented our immediate departure, and all our energies were devoted to landing a good supply of provisions upon Whaler Point (*o*). In this service the steam-launch proved of infinite value, conveying a large cargo herself, and towing two deeply laden cutters, at the rate of four or five knots, through the sheet of ice which now covered the harbour, and through which no boat, unaided by steam, could have penetrated beyond her own length.

The place selected for the depot was upon the low south-east point which forms the chief protection to the harbour, two miles distant from our anchorage. This work was not only tedious, but sometimes hazardous, from the floes of thin ice folding over each other, and thus forming an obstacle at times difficult to overcome. Indeed our operations were still incomplete, when they were interrupted by the ice in the harbour becoming so thick as to require all our attention to the ships themselves. A prevalence of strong easterly winds had caused the pack to press so heavily against the outer margin of the harbour ice, that the ships were carried away with their anchors, so far up towards the head of the Bay that they grounded at low water. All hands from both ships were set to work to cut a canal and warp them off the shore. This had scarcely been accomplished when another severe pressure drove them again into shallow water, and had we not fortunately hauled off on time, it is probable the ships must have laid aground all the winter. The work of sawing was recommenced, and, after two or three days, we succeeded in getting our ships into a position of comparative

* Melville Island—see *s* of map.

o Whaler Point forms the N.E. point of entrance of Port Leopold.

Before October had ended we were snugly secured for the winter, the awnings made of strong woollen stuff were spread, the deck and sides of the ship buried some feet thick in snow, and the boats, spars, and spare rigging, hawsers &c., placed on the ice, where in a short time they were deeply imbedded with a winter covering.

On the 9th November, we lost the sun entirely, and the thermometer fell rapidly: before it had not gone many degrees below zero, but now it fell to 40°, later to 50°, and even 60° minus; and averaging for many months not more than 35°.

No language of mine can convey an idea of the sadness and dreariness of such a situation, in perpetual night for three months, without a glimpse of the joyous and inspiring sun, the air piercingly cold, and surrounded with ice and snow on every side, with the same cheerless prospect month after month, unable to move outside the ship, or even from below without wrappings about the face sufficient to smother one, and then frequently to get frost bitten,—was in truth miserable enough. But the mind under such depressing

safety, although with only a foot or two of water to spare at low spring tides; but the winter had now set in with so much severity, it was impossible to keep the people any longer employed at such work, without serious injury to their health, and the suffering from severe frost bites.

On the evening of the 12th October the ships were hove into their winter position, within 200 yards of each other.

I was indeed most anxious to have taken the *Enterprise* to some distance to the westward, but any attempt to leave the ships, under the circumstances of their situation, would have been highly injurious, and probably have led to some calamity; but the pack which sealed the harbour's mouth the night after we entered it never admitted a chance of even a boat making her way out; and across the Isthmus, as far as we could discern from the hills, the same extensive mass of heavy, hummocky ice, which we had coasted along in search of an opening in the early part of September, was still pressed closely home against the north shore of North Somerset (*p*), and remained fixed there throughout the winter, so that if the *Enterprise* had been able to get out of the harbour, she could not have proceeded far, and would most likely have been compelled either to pass the winter in the pack, or to have returned to England, and thus have defeated all prospective measures for the assistance of our long-absent friends.

And, although, I could not but feel extreme disappointment at the small advance we had been able to make during our first season, yet we had much to be thankful for in having been permitted to gain secure winter quarters at Port Leopold, a position which of all others was the most desirable, if any one spot had to be selected for that purpose: being at the junction of the four great channels of Barrow Strait, Lancaster Sound, Prince Regent Inlet, and Wellington Channel, it was hardly possible for any party, after abandoning their ships, to pass along the shores of any of those inlets without finding indications of the proximity of our expedition.

The winter was passed as are all winters in this climate, but long experience and liberal means gave us many comforts that no other expedition had enjoyed; yet, it is remarkable that the health of the crew suffered more during this winter than on any former occasion.

p North Somerset (discovered by Parry in 1819,) forms the western land

of Prince Regent Inlet, and contains Port Leopold.

circumstances assumes a fortitude and hopefulness encouraging us to anticipate brighter days; and now that this time is past, the retrospect, I assure you, my dear Sir Edward, is one of pleasure and painful recollections.

The ship within was well heated by a stove placed in the bottom of her, which emitted warm air along both sides, warm clothing too was bountifully supplied to all hands, and such work given to the men on the ice daily, as was considered requisite to afford them sufficient exercise to ensure health.

Our want of success might have tended in some measure to depress their spirits, and, unfortunately, the cold of winter was prolonged unusually far into the spring before we could give them more active employment.

During the winter a great many white foxes were taken alive in traps set for the purpose, and as it is well known how large a tract of country these creatures traverse in search of food, I caused copper collars, upon which a notice of the position of the ships and depots of provisions was engraved, to be clenched round their necks, and then set them at liberty again, with the hope that some of these messengers might be the means of conveying the intelligence to the *Erebus* and *Terror*, as the crews of those vessels would assuredly be eager for their capture.

After several short preliminary journeys, in April, and the early part of the next month, to carry out small depots of provisions to the west of Cape Clarence (*q*), and to the south of Cape Seppings (*q*), I left the ships on the 15th of May with a party, consisting of Lieutenant M'Clintock and twelve men, with forty days' provisions, which, together with tents, clothes, blankets, and other necessaries, were lashed upon two sledges. We were accompanied for the first five days of our journey by Captain Bird, in command of a large fatigue party, which increased our number to forty-two. He would willingly have extended his valuable assistance still further, had I not felt that his presence at the ships would be more beneficial to the service, in sending forth such other parties, and completing such further measures as I proposed should be adopted during my absence.

A detailed account of this journey may be found in my journal; it may be sufficient here to mention, that the examination of all the inlets and smaller indentations of the coast, in which any ships might have found shelter, occupied a large portion of our time; and cost us much labour, but it was necessary that every portion of the coast we passed along should be thoroughly explored.

q Cape Clarence and Cape Seppings and southward of Port Leopold.
are points close to the northward

During the winter the foxes which are perfectly white in most instances, and in size something smaller than the common English fox, were very numerous; but we were prohibited from killing them, in order that they might be taken alive in traps, set in various parts of the harbour, that a copper collar, having punched in it the ship's name, the date, and the position in, might be secured around the neck of each and then let go again, in the hope that some of Sir J. Franklin's people might in this ingenious way be apprized of assistance. Near a hundred were set off in this way, but before giving Master Reynard his freedom, he generally afforded us a hunt round a snow wall which was built six feet in height without the ship, as a protection against the snow drift, which in heavy gales was tremendous, being carried over the mast-heads and so thick that the *Enterprise*, distant only 200 yards, was frequently altogether imperceptible.

The north shore of North Somerset trends slightly to the northward of west, until after passing the extreme North Cape of America, a few miles beyond Cape Rennell. From this point it trends slightly to the southward of west, until after rounding Cape Bunny (*r*), when it suddenly assumes a nearly south direction.

From the high land in the neighbourhood of Cape Bunny we obtained a very extensive view, and observed that the whole space between it and Cape Walker, (*s*) to the west, and Wellington Channel to the north, was occupied by very heavy, hummocky ice, whilst to the southward it appeared more favourable for travelling. I, therefore, determined not to divide the party as I had originally intended until we should find a more practicable point for their exertions.

- r* Cape Bunny is about 35 miles west of Cape Rennell.
s Cape Walker is about 40 miles west of Cape Bunny, a strait dividing them not explored. It was Sir

James Ross's intention to have sent a party across this strait, but the illness of some of his men prevented him.

Some of these pretty little creatures had when ensnared lapped the iron grating of the trap, and so intense was the cold, that a great portion of the tongue was found completely gone, and they were brought on board besmeared with blood, and of course killed.

On the 12th December, some mercury being exposed in a wooden trough with the thermometer standing at $-47\frac{1}{2}$. In appearance it resembled small globules of melted lead, and when freezing seemed to be separated and in numerous small particles. Again, on a later date the contents of a mercury bottle belonging to our artificial horizon being emptied into an iron trough, froze in 42 minutes, the temperature by the deck thermometer indicating $-52\frac{1}{2}$.

The Aurora Borealis was seen frequently during the winter, but never in such splendour as I had expected to see it. It usually appeared extending in an arch across the heavens, and resting in the westward. In colour it was of a light yellow tinge, its brightness becoming fainter towards the edges, which seemed on gazing at it intently to be of a pinkish hue, moving with a rapid flitting motion, and emitting in its passage brilliant flashes of light; at other times it much resembled white fleecy vapour, vibrating from one position to another, and suddenly disappearing.

On the 2nd February 1849, the sun's upper limb was refracted half a degree above the horizon, after an absence of eighty-five days.

In the spring of 1849 travelling parties were dispatched down Prince Regent Inlet, to the north side of Barrow Strait, on the ice, a distance of fifty miles: and in like manner to the east shore of Prince Regent Inlet, a similar distance. Each party leaving at its farthest a cylinder, containing an account of the position of the ships, and the object of the voyage, under a pile of stones in the most conspicuous place. Sir James Ross himself proceeded to the westward, and was absent from the *Enterprise* six weeks, having in that time travelled quite 400 miles on foot, along the west coast as far as Cape Bunny, where finding the trend due south, he travelled down it as far as 72° . The distance from Cape Bunny to the southward being all new discovery. No traces however of the people we are seeking were found, and our only hope now for their safety and existence is, that they have arrived in England.

We, therefore, proceeded to the southward, tracing all the indentations of the coast, when our progress became much delayed by several of the party becoming useless from lameness and debility, so that it proved most fortunate that I had not divided the force, which could only, under such circumstances, have terminated in the complete failure of both; for, although the load of provisions was every day becoming less, the necessity of carrying two of the sufferers on the sledges, and the loss of the services of three others, who had scarcely strength to walk behind, greatly increased the labour of the few who were now able to work.

The examination of the coast was pursued until the 5th of June, when, having consumed more than half our provisions, and the strength of the party being much reduced, I was reluctantly compelled to abandon further operations, as it was, moreover, necessary to give the men a day of rest. But that the time might not be wholly lost, I proceeded with Sergeant Hurditch and William Thompson, a seaman of greater endurance, to the extreme south point in sight from our encampment, distant about eight or nine miles. From this point we had so fine a view as fully to reward us for our additional labour, more especially when we reflected that from the nature of the ice over which we, unencumbered, had travelled with comparative ease, could hardly have been accomplished by the party in one day, whilst it would have required another to have got back to their present encampment.

The extreme point of our operations is in lat. $72^{\circ} 38' N.$, and long. $95^{\circ} 40' W.$ It is the west point of a small high peninsula, and the state of the atmosphere being at the time peculiarly favourable for distinctness of vision, land of any great elevation might have been seen at the distance of 100 miles.

The extreme high cape of the coast, however, was not more than fifty miles distant, still bearing nearly south,* the land thus trending for Cape Nicolai (*l*), the northernmost point which I had reached during my journey from the *Victory* in 1832, and which I hoped to have attained on this occasion, as well as to have re-visited the Magnetic Pole, in its immediate vicinity, and had not so many of our party broken down, it might have been accomplished.

We observed several small bays and inlets between us and the southernmost cape, of whose continuity we could not be assured at so great a distance, yet they are marked on the chart which accompanies this account of our proceedings, by which it will be perceived that a very narrow isthmus separates Prince Regent Inlet from the western sea at Creswell and Brentford Bays. (*u*)

l The place of the Magnetic Pole (*q* of map) is within about 20 miles of Cape Nicolai.

u Creswell and Brentford Bays in Prince Regent Inlet.

At Port Leopold there was left a store of provisions sufficient for sixty-four persons for twelve months, a house was erected fit to accommodate them, and the *Investigator* pinnacle having been lengthened six feet, was also left with her steam machinery, sails, &c., together with a sufficient quantity of fuel, and such

• The bearings herein given are true.

On our return to the encampment I found they had all been well occupied during our absence. Lieutenant M'Clintock had taken some magnetic observations which will be of great value from our being so near to the Magnetic Pole. Two of the party had cut through the ice, which they found to be eight feet thick, and fixed a pole by which the state of the tides was ascertained; and all the rest that could work had erected a large cairn of stones on a high knoll just above the tents, in which a copper cylinder was placed, containing an account of our proceedings, and all necessary information for the guidance of any of Sir John Franklin's party that might be journeying along this coast.

Although our resources did not admit of any further perseverance on our part, we could not but feel some satisfaction in the assurance, that if those of whom we were in search had at any time been upon the north or west coast of North Somerset, we must have met with some trace of them. The season for travelling in these regions had also passed away, the thaw having commenced, and had they abandoned their ships at Melville Island, they must have arrived on either of these shores long before this time, where they would have found us in the best possible position to render them assistance and conduct them to our vessels.

We set forward on our homeward journey on the evening of the 6th of June, and, after encountering a variety of difficulties to which I need not now further allude, we reached the ship on the 23rd, the party so completely worn out by fatigue that every man was from some cause or other in the doctor's hands for two or three weeks, and I am sorry to say that two of them are not yet recovered.

I had walked in advance of the party to select the best road by which to cross the isthmus, and as soon as I got sight of the ships I was met by Captain Bird and Lieutenant M'Clure, from whom I was greatly grieved to hear of the decease of Mr. Henry Matthias, the assistant-surgeon of the *Enterprise*, of consumption, which had been deeply rooted in his constitution before leaving England. He was a promising young man, of great amiability of disposition, universally beloved and regretted. Several others of the crews of both ships were in a declining state, and the general report of health was by no means cheering.

During my absence Captain Bird had dispatched parties in several directions. One, under the command of Lieutenant Barnard, to the north shore of Barrow Strait, a second commanded by Lieutenant Brown, to the east shore of Prince Regent Inlet, and a third conducted by Lieutenant Robinson, along the western shore of that inlet. The labours of these parties were of comparatively short duration, still they, like our-

other things, as would be necessary for the preservation of their lives should they arrive at that place.

The last summer having been unusually backward, and there being an immense deal of heavy ice in the country, it was the 29th of August when young ice was again making every night in Port Leopold, before the ships could leave

selves, all suffered from snow blindness, sprained ancles, and debility, especially that under Lieutenant Robinson, who extended his examination of the coast for several miles to the southward of Fury Beach.

Although it was now, but too evident, from no traces of the absent expedition having been met with by any of these parties, that the ships could not have been detained anywhere in this part of the Arctic regions, yet I considered it proper to push forward to the westward, as soon as our ships should be liberated from their winter harbour. My chief hopes now centered in the efforts of Sir John Richardson's party, for I felt fully persuaded that Sir John Franklin's ships must have penetrated so far beyond Melville Island as to induce him to prefer making for the continent of America, rather than seek assistance from the whale ships in Baffin Bay.

Our crews weakened by incessant exertion were in a very unfit state to undertake the heavy labour which they had yet to accomplish. The season at this place was so extremely backward that hardly a pool of water was to be seen on the surface of ice which covered the harbour, except only along the line of gravel which had been spread out towards the harbour's mouth during the winter, and there appeared but small prospect of any release this season.

All hands that were able commenced with saws, extending the breadth of the canal so much, as to admit the ships to pass down it, towards the point of the harbour, a distance of rather more than two miles.

These labours were continued until the 15th of August, when the canal being nearly finished, the harbour ice divided along its line into two nearly equal parts, and thus saved us a few days' work. The ice to seaward remained to all appearance as firmly fixed as during the winter, but we could perceive it was wasting away close along the shores, and it was not until the 28th of August that we succeeded in getting clear of the harbour.

Before leaving Port Leopold I had caused a house to be built of our spare spars, and covered with such of our housing cloths as we could dispense with, and for which we could find a substitute if needful, leaving also twelve month's provisions, fuel, and other necessaries, together with the *Investigator's* steam-engine and launch, which had been lengthened seven feet for the purpose, and now formed a fine vessel capable of conveying the whole of Sir John Franklin's party to the whale-ships, or ourselves, should any calamity befall our ships in their progress to the westward.

We now proceeded towards the north shore of Barrow Strait for the

their winter quarters, and then, when endeavouring to push to the westward through the lanes of water in Barrow Strait, both vessels got immovably beset on the 1st of September to the northward of Leopold's Island, the ice extending apparently in a very close and heavy pack as far as could be seen from the crew's nest; in which critical situation we were driven in the pack out of Bar-

purpose of following up the examination of Wellington channel, and, if possible, of extending our researches as far as Melville Island; but when about twelve miles from the shore, we came to the fixed land ice, which had not broken away this season, and nothing but an uniform sheet of heavy ice was to be seen to the westward.

We kept the ships near that which appeared to be the most probable spot, watching for any opening that might present itself, when a strong wind suddenly arising on the 1st of September, brought the loose pack, through which we had been struggling, down upon us, and closely beset the ships. At times, during two or three days, they sustained severe pressure, and ridges of hummocks were thrown up all around us, but after that time, the temperature falling to near zero, formed the whole body of ice into one solid mass. We were so circumstanced that for some days we could not unship our rudder, and when, by the laborious operation of sawing and removing the hummocks from under the stern, we were able to do so, we found it twisted and damaged, and the ship was so much strained as to increase the leakage from three inches in a fortnight to fourteen inches daily, which, though of but trifling importance at present, served to convince us that she was not, as we had hitherto believed, invulnerable.

The ice was stationary for a few days; the pressure had so folded the lighter pieces over each other, and they were so interlaced, as to form one entire sheet, extending from shore to shore of Barrow Strait, and as far to the east and west as the eye could discern from the masthead, whilst the extreme severity of the temperature, had cemented the whole so firmly together that it appeared highly improbable that it would break up again this season. In the space which had been cleared away for unshipping the rudder, the newly-formed ice was fifteen inches thick, and in some places along the ship's side the thirteen feet saws were too short to work.

We had now fully made up our minds that the ships were fixed for the winter, and, dismal as the prospect appeared, it was far preferable to being carried along the west coast of Baffin Bay, where the grounded bergs are in such numbers upon the shallow banks off that shore, as to render it next to impossible for ships involved in a pack to escape destruction.

It was, therefore, with a mixture of hope and anxiety that, on the wind shifting to the westward, we perceived the whole body of ice begin

row Strait into Baffin Bay, a distance fully of 250 miles; most fortunately getting released from our dangerous position on the 24th of September, when abreast of Cape Graham Moore, without injury to either ship. Had we not got clear of ice, but driven with it down the west coast of Baffin Bay during the winter, the chances are the ships would have been crushed, on the ice bringing up against the land projecting at the entrance of Davis Strait: the fate of many an unfortunate whaler, and a situation in which our ice-master was once caught, in company with two other ships, and most miraculously escaped after enduring

to drive to the eastward, at the rate of eight to ten miles daily. Every effort on our part was totally unavailing, for no human power could have moved either of the ships a single inch; they were thus completely taken out of our hands, and, in the centre of a field of ice more than fifty miles in circumference, were carried along the southern shore of Lancaster Sound.

After passing its entrance the ice drifted in a more southerly direction along the west shore of Baffin Bay, until we were abreast of Ponds Bay, to the southward of which we observed a great number of icebergs, stretching across our path and presenting the fearful prospect of our worst anticipations. But when least expected by us, our release was almost miraculously brought about. The great field of ice was rent into innumerable fragments as if by some unseen power.

Hope revived, and our people worked with energy; all sail was made, and warps run out from each quarter to spring the ships past the heavy floe pieces. The *Investigator* reached an open space of water on the evening of the 24th, but it was not until noon of the 25th of September that the *Enterprise* could clear the pack. It is impossible to convey any idea of the sensation we experienced when we found ourselves once more at liberty, whilst many a grateful heart poured forth its praises and thanksgiving to Almighty God for this unlooked-for deliverance.

The advance of winter had now closed all the harbours against us, and as it was impossible to penetrate to the westward, through the pack from which we had just been liberated, I made the signal to the *Investigator* of my intention to return to England.

Standing to the S.E., we came in with the middle ice of Baffin Bay, within a few miles of the land, and were obliged, in order to make our retreat sure, to run along its western edge to the N.E., until we reached the latitude $74\frac{1}{2}$ N., where we rounded its north end, on the 4th of October, in sight of the coast of Greenland.

Favoured by unusually fine weather as we proceeded to the southward, we passed without any accident through the great cluster of bergs which is always found in lat. 69° N., and on the 12th we re-crossed the Arctic Circle, after which time we saw no more ice.

Strong westerly winds carried us past the meridian of Cape Farewell

severe privations and dreadful scurvy, whilst the other ships were lost, and with one all her crew.

It was now useless attempting anything further, for we had been driven out of that part of the country where the only hope of tracing Sir John Franklin could be found, and the young ice in the 73° degree of latitude was fastening every night, and to the joy of every one, I believe, the colours of Old England were hoisted on board the *Enterprise* as a signal for "home".

Owing to foul and heavy gales we were three weeks nearly in getting out of Davis Strait, but in that time little or no ice was seen, and but for bergs

on the 18th, and at 1h. A.M., of the 28th we struck soundings off Mould Head. At daylight we found ourselves in the Fairway, between North Ronaldsha and Fair Island, but southerly winds so impeded our further progress that it was late on Saturday night before we could anchor off Scarborough.

I arrived at the Admiralty early on Monday, the 5th of November.

I cannot conclude this report without expressing my deep obligations to Captain Bird for his cordial co-operation and zealous support throughout this most arduous service, and my admiration of the conduct of the officers and crews of both ships; whose meritorious exertions fully entitle them to the most favourable consideration of the Lords Commissioners of the Admiralty.

JAMES C. ROSS, *Captain, R.N.*

which would cause it to be supposed that Baffin Bay had cleared itself of ice early in the spring (I mean an arctic spring, June and July), but the straits and inlets to the northward remained completely glutted.

Sorry am I to say; that seven of our poor fellows left their bones within the Arctic regions: one an officer named Mathias, Assistant-Surgeon of *Enterprise*, who died of consumption. A young man of great talent and promise, and who was much esteemed. The others were seamen, three belonging to each ship.

Saturday night 3rd Novmber, we have just sighted Flamboro' Lighthouse. Our passage down the North Sea has been most tedious.

EDWARDS' PATENT PRESERVED POTATO.—Adopted on the various scales of Victualling for Troops, by Her Majesty's Commissioners for Emigration, &c. The high opinion we have always entertained of this invaluable preparation, which for several years has been tested in all climates (proving its inestimable qualities as a sea store,) is confirmed by its being established in Her Majesty's Navy, &c.; and we are happy to find from the following letter that this vegetable diet continues to be fully appreciated by the other Services.

London, 21st Oct., 1849.

“Having used Edwards' Patent Preserved Potato several voyages to India, and Australia for the services of Troops and Emigrants, and a large supply having been put on board my ship the *Lady Kennaway*, last year for the Government Emigrants. I have the pleasure to report that it gave universal satisfaction, and was equally good on arriving at Port Phillip as when shipped in England. I consider Edwards' Patent Preserved Potato as a most valuable store for Ships generally.

(Signed) J. SANTRY,
Owner and Commander, of ship "Lady Kennaway".

AMERICAN VIEWS ON AMERICAN COMMERCE IN THE EAST.

The following interesting document, extracted from the *Washington Daily Intelligencer*, will give English readers an idea of transatlantic notions on the subject of American commerce in the east. The author of the paper is A. H. Palmer, Counsellor of the Supreme Court of the United States, and the communication is addressed to the Hon. J. M. Clayton, Secretary of State to the Union.

Washington, April 14th, 1849.

Dear Sir.—Presuming that authentic and reliable informations respecting the principal independent maritime and commercial nations of the east would prove acceptable to the President and his cabinet, I take leave to hand you the enclosed paper on the present state, productive resources, and capabilities for commerce of the Comoro Islands, Abyssinia, Arabia, Persia, Beloochistan, Burmah Proper, Annam, or Cochin China, Japan and its colonial dependencies, Corea, and the Indian Archipelago, where a new world may be opened to American commercial enterprise under the fostering auspices of our government.

It also embraces a brief account of Siam; suggests the importance of an early revision of our treaty with his Siamese Majesty; the extension of American trade with several large commercial emporia in China; the appointment of a new commissioner for that empire, vested with an authority to act as general superintendent of American trade in Eastern Asia and the Indian Archipelago; and recommends that United States Consuls and Consular Agents should be appointed for certain ports in Eastern Africa, Asia, and Austral Asia, &c.

It may not be deemed inappropriate to state that, as Director of the American and Foreign Agency of New York between 1830 and 1847, I conducted an extensive correspondence with several Oriental governments and princes: regularly received the leading journals of India, the Indian Archipelago, China, and Australia; and during my last visit to Europe, had the advantage of personal access to official sources of information in England, France, and Holland respecting the productions, trade, commerce, &c., of the Oriental nations; from all which I have been able to collect the valuable geographical, statistical, and commercial information embodied in my unpublished work, entitled "The Unknown Countries of the East."

Mr. Walker, the late Secretary of the Treasury, has attentively examined the manuscript of that work, which he considers "as eminently calculated to enlarge our commerce; the result of extensive travel and laborious research, presenting many new and most interesting facts and statistics in regard to countries comparatively unknown; and especially in relation to Northern Asia, where we have no consuls, nor diplomatic or consular agents." It is much to be regretted that the appropriation recommended by him, to enable me to complete it from the latest official sources abroad, with maps and charts drawn from the latest surveys, and to publish it under the auspices of our government, which met with your concurrence in the finance committee of the senate, should have failed by the casting vote of the presiding officer of that body.

In his annual report of the 11th of December, 1848, Mr. Walker shows conclusively, the great advantages that would accrue to the commerce and revenue of the United States by the opening of commercial intercourse with

the independent Oriental nations with whom we have no treaties, and little or no trade; embracing an aggregate population of nearly 140,000,000; in connexion with the introduction of our steam ships in the Pacific, which he truly observes "would revolutionise in our favour the commerce of the world, and more rapidly advance our greatness, wealth, and power, than any event which has occurred since the adoption of the constitution."

I beg to commend the accompanying paper, principally extracted from the above-named work, together with the New York and Baltimore memorials which I had the honour of presenting to you on the 8th ult., to your early attention, and the favourable consideration of the President and cabinet.

The New York memorial is addressed to General Taylor, President elect, under date of the 24th of February last, and among other suggestions recommends "that a commissioner with plenipotentiary powers, be sent by the government of the United States to China, and likewise accredited to the neighbouring nations of Northern and Eastern Asia and the Indian Archipelago, to enable him to open up commercial intercourse with those countries; and that he be instructed to touch in his voyage out to China at some of the principal ports of Eastern Africa, Abyssinia, Arabia, &c., to collect information respecting their productions and openings for American commerce." It is signed by the principal houses in China, East India and Pacific trade, bankers, underwriters, ship-owners, ship-builders, &c., of that city. It also bears the special concurrence of judges of the United States and State courts, and other influential citizens, both whigs and democrats, of New York, whig members of the State delegation in the last Congress, Associate Justices of the Supreme Court of the United States; and Vice-President Fillmore and Senator Seaward having taken a personal interest in furthering its objects and recommendations.

A similar memorial addressed to the Senate and House of Representatives of the United States, signed by a number of the same classes of persons, was presented in the Senate by Mr. Dix, on the 1st of June, 1846, and referred to the Committee of Foreign Relations.

The Baltimore memorial recommends that a special mission be sent by our government to open commercial intercourse with the independent Oriental nations, and is signed by a number of the principal merchants in that city.

In its rapid career of national aggrandisement, this magnificent and mighty American empire republic, is justly entitled to rank with the most enterprising and powerful maritime and commercial nations of the world. The time has arrived when it is imperatively incumbent on American statesmen to be conversant with the productive resources, as well as the geographical, political, and commercial statistics of foreign countries, so as to be enabled intelligently to foster, protect, and extend our own external commerce, and conduct advantageously our foreign relations.

It is eminently the policy of our government, not only to adopt early measures for opening friendly intercourse and trade with all the Oriental nations, in accordance with the views and suggestions of the memorialists; but also to make our star-spangled banner known and respected from the Arctic to the Antarctic oceans, as the national ægis of "free trade and sailors' rights," and extend its protection over American citizens and their lawful commerce in every sea, "from the orient to the setting sun."

With respect to the Oriental countries before mentioned, they all present favourable fields for American commercial enterprise.

The Comoro Islands, inhabited by a friendly, hospitable, and enterprising race of Mahomedan Arabs, are eligibly situated in the Mozambique channel, between the islands of Madagascar and Zanzibar, for trade with these islands and the east coast of Africa, Arabia, &c. They are much frequented by foreign vessels for trade, and by our whalers for refreshments.

In Abyssinia, both the English and French find profitable markets for many of their manufactures and commodities, for which they receive in exchange the rich and varied productions of the country, including indigenous coffee, equal to the best Arabian. They consider the trade of so much importance that each government maintains a diplomatic agent at Shoa, the capital of southern, and Adouah, the capital of northern Abyssinia; and consuls at the outposts. There is a large and increasing demand for our coarse cotton goods in the interior provinces; they are likewise taken in great quantities into the unknown regions of the eastern and central Africa, as far as Timbuctoo, by the annual trading caravans which visit the great fairs, held between October and April, at the Somaui ports of Zeila, Tadjourah, and Berberah, on the Gulf of Aden.

With the ports and trading marts of Arabia, in the Hedjaz, and Yemen, embracing Tehama, in the Imam of Sana, on the Red Sea; Hadramaut, on the Indian Ocean; Lachsa, on the Persian Gulf; Omen, on the Gulf of Oman, and the extended dominions of the Imam of Muscat, both in Arabia and on the east coast of Africa, many openings will be found for the profitable extension of American commerce. In the Nedjed, or "upland" country of the interior, are bred the finest races of the celebrated Arabian horse and camel, and with which Syria and Egypt are supplied. The Imam of Muscat faithfully fulfils his treaty with the United States, and on the opening of American commercial intercourse with Arabia and Persia a new impulse would be given to our trade within his dominions.

The Peninsula of Aden, which has been styled the Gibraltar of the East, on the south coast of Yemen, is a British dependency and coaling depot for the bi-monthly line of steamers established between Suez, Bombay, Calcutta, the Indian Archipelago, and China. From the advantageous position of Aden, and its excellent port, it will become the rival of Moka, and the mart of an extensive traffic with the Arabian and Persian Gulfs, with Abyssinia and the east coast of Africa.

By entering into a commercial convention with the Shah of Persia, upon a modified basis of his last treaties with England and France, we may open up a valuable trade with Persia proper, and the surrounding nations of the Western and Central Asia. Shiras and Ispahan are situated on the great routes of communication between Bushire, on the Persian Gulf, and the other chief trading marts of Persia and Central Asia. Bussorah, on the Euphrates, seventy miles from the gulf, is the great emporium of Asiatic Turkey for India and other eastern produce. The principal Persian emporium for European goods is Tabriz, in the province of Azerbaijan; they are sent through the Turkish port of Trebizond, on the Black Sea, which is the mart of an extensive transit trade with Persia, Armenia, and Georgia, and the most eligible channel for intercourse with all the neighbouring countries of Western Asia.

Khelat, the capital of the Khanat of Beloochistan, is the centre of a considerable caravan trade between the ports of Sonmeanee, Gwadel, and Gutter Bay, Belooch entrepots on the Indian Ocean, with Cabool, and many of the chief markets of Central Asia, which are thus rendered accessible to American commercial enterprise.

The late annexation and pacification of Scinde and the Punjab, and the facilities of safe and expeditious access to both, and Central Asia, offered by the steam-boats of the Indus, has led to the opening of a direct trade with the upper emporia of that river, and with Cashmere, Bokara, Afghanistan, Tibet, and Turkestan. Goods intended for the markets of those countries are now carried in considerable quantities direct from Liverpool to Kurruchee, the port and entrepot of the Indus, and thence by steam-boats up that river to the different trading marts on its banks, as far as Attock, a distance of 942 miles.

Burmah produces many articles of great commercial value, and carries on a large interior caravan trade with Yunnan and the adjacent provinces of China, and has an active and increasing commerce with the neighbouring Asiatic countries. Rangoon, its principal port, situated on the great river Irawaddy, 25 miles from the sea, is beginning to be frequented by American vessels for trade.

Cochin China, is most advantageously situated for foreign trade. No country in the east produces richer, or a greater variety of articles proper for carrying on an advantageous commerce. It possesses some of the finest ports and harbours in the China Sea.

In the innumerable islands of the vast Indian Archipelago, yielding an immense variety of valuable merchantable products, a new, and in part unvisited field may be opened to American commercial enterprise. From its geographical position and natural advantages, it is destined to become a great empire. The slightest acquaintance with its boundless resources must suffice to show that no limit can be assigned to the trade that may be there called into existence. It not only furnishes an innumerable variety of valuable articles suited for European and American markets, but has also an abundance of products not less eagerly sought; and commanding no small prices in the markets of China and Continental Asia. Holland, Spain, and Great Britain possess valuable colonies among those eastern islands. The prosperity of the Dutch is based exclusively upon the revenue and commerce of Netherlands India, embracing several of the largest islands in the Archipelago, and of which Batavia is the chief port and entrepot. With the view of developing the productive resources of Celebes, they have declared Macassar a free port. Our commerce with the Philippines, restricted to Manila, might be greatly increased, were we allowed to trade at the principal ports and islands of that rich, productive, and populous group. The British free port of Singapore is one of the principal commercial emporia of the Archipelago. The island of Labuan, and the territory of Sarawak, on the north west coast of Borneo, have been ceded to the British by the Sultan of Borneo Proper; and they contemplate forming other trading settlements on that magnificent and fertile island. The trade with the Sooloo group is capable of great extension; the most fertile parts of north-eastern Borneo are entirely subject to its authority, and their trade with the Philippines is very considerable. The immense and unexplored island of Papua, or New Guinea, with many noble rivers traversing its interior for hundreds of miles, presents an interesting field for geographical discovery and commercial enterprise.

Steam communication is about being opened by the British between Singapore and Sydney, by the route of the Indian Archipelago, Torres Strait, and within the great Barrier Reefs: with depots at Batavia, Macassar, and Albany Island, in Torres Strait, adjacent to Cape York, on the north-eastern peninsula of Australia.

Since the late interesting exploring expedition of Doctor Leichard, into the unknown regions of Tropical Australia, lying between Moreton Bay, on the east coast, and Port Essington, on the Cobourg peninsula, a distance of 1,800 miles, where he discovered extensive tracts of country well adapted for agricultural settlements, and intersected by several large rivers that fall into the Gulf of Carpentaria, active measures have been taken by the local authorities at Sydney, aided by the home government, to introduce the culture of sugar, rice, and cotton in those regions, and to supply the planters with predial labourers from China. Several ship loads of natives of the New Hebrides and Solomon's Group have already been imported into those new settlements, where they are said to make excellent agricultural labourers and shepherds.

It is only by the opening Japan to our commerce that we may hope to establish trading intercourse with Corea. Tchosan, and other fine bays and harbours, indent the southern and eastern coasts of that extensive peninsula. The natives carry on an active trade with Japan, through the port of Fun-Fung, in the Japanese island of Tsus Sima, and the maritime town of Fung-Chang, on the opposite coast of Corea. The trade is under the exclusive control of the Prince Governor of Tsus Sima, who has warehouses for its accommodation at both ports. This island, lying in the Strait of Corea, is admirably situated for trade with both countries, and as a coaling depot for the new line of American steamers contemplated to be established between San Francisco, Shanghai, and Canton, by the route of the Great Circle. Coal is said to be very abundant in the neighbouring provinces of Japan.

Siam is a very fertile country, abounding in multifarious products suited for foreign trade. Bankok, its chief port, has become within a few years one of the most important emporia of India beyond the Ganges, and has the largest commerce, next to Canton, of any city of the east not peopled by Europeans or their descendants. Our treaty with his Siamese Majesty requires immediate revision to place our commerce with his dominions upon a proper footing, and stipulate for the residence of an American consul at Bankok.

As regards the further extension of our trade with China, and the expediency of appointing a general superintendent of American trade in Eastern Asia and the Indian Archipelago, and consuls for certain ports in the east, and Australia, &c., I would most respectfully refer you to the statements and suggestions contained in the enclosed paper, under those respective heads.

The Chinese appear to be on the eve of another war with England, which it may be confidently predicted will result like the last, in extending the sphere of British and American commercial enterprise with that empire; and it is to be hoped in like manner, with its colonial dependencies of Manchuria, Mongolia, Turkestan, Tibet, &c. The isolated and mysterious empire of Japan which has been since 1637 hermetically sealed to all foreign intercourse and trade, except with the Chinese and Dutch, will likewise be compelled, by force of circumstances, to succumb to the progressive commercial spirit of the age; and the Japanese Islands will eventually become in the east what the British Islands are in the west.

The Japanese are a vigorous energetic people, and assimilate in their bodily and mental powers much nearer to Europeans than Asiatics. They are eager of novelty, open to strangers, extremely curious and inquisitive concerning the manners and habits of other countries, take great interest in

learning the course of events and progress of the useful arts and sciences among the western nations; are frugal, ingenious, sober, just, and of a friendly disposition; warm in their attachments, but proud, distrustful, and implacable in their resentments. In courtesy and submission to their superiors few nations can compare with them; and they are distinguished from all other Orientals by a lofty, chivalrous sense of honour. Robbery and crimes against property are of rare occurrence among them. They have existed 2,500 years as a homogeneous race and independent nation, under the same form of government and system of laws, speaking the same language, professing the same national religion; owe no allegiance to China, and have never been conquered or colonised by any foreign power.

Their language is polysyllabic, with an alphabet of forty-eight letters, soft, euphonious, and one of the most polished and perfect of Eastern Asia, bearing no affinity to the Chinese, or any other primitive Asiatic idiom. They have a rich, indigenous literature; primary schools, where children of both sexes and all classes are taught the elementary branches of education; colleges, with professors in the higher departments of learning and science, including mathematics, astronomy, geography, and the leading Asiatic and European languages; possess an imperial library at Yeddo, said to contain 150,000 volumes; are more advanced in arts and civilization than the Chinese, and are in many respects a much superior race.

The commercial and seafaring classes are very desirous of a more unrestricted intercourse and trade with foreigners, which is now confined to the Chinese and Dutch at Nangasaki, but are prevented by fear of their rulers and the law.

The native merchants at the port of Kagosima, principally of Satzuma, island of Kiu-siu, carry on an indirect trade with Fuchau through Napakiang, in the Loo Choo tribute junks, by which they receive regular supplies of foreign merchandise, including American cotton goods. The trade is understood to be conducted with the sanction of the Prince of Satzuma, a member of the imperial family, and suzerian of the Loo Choo and Meiacosima groups. Notwithstanding the severe prohibitions of the imperial government, it is said that a very considerable clandestine traffic is carried on with China and Russia, through the colonial dependencies of the empire.

The shops and markets of the principal towns of Japan are well provided with every description of agricultural produce and manufacturing industry, and are crowded with people from the most distant parts of the empire. Accounts are published from time to time of the general state of trade and agriculture, and prices current for the chief articles of traffic at the trading marts of Yeddo, Miako, Ohosaka, and Semoneski, in the islands of Nippon; Kagosima, Sangar, Kokura, and Nangasaki, in Kiu-siu; Tosa, Sikokf; and Matsmai, in Yeso, and a variety of regulations are in force to protect home industry.

Ohosaka is the great mart of the empire for foreign goods. It is a large and populous city, situated at the mouth of the river Yodogawa, distinguished for the great wealth, mercantile enterprise, and manufacturing industry of its inhabitants.

The Dutch trade with Japan is limited to two ships, dispatched from Batavia yearly, in the month of June, and they are compelled to send an expensive mission to Yeddo every four years, with costly presents for the court. With China the trade is carried on regularly between Chapu and Nangasaki, in twenty-two Chinese junks annually. Among their imports

are considerable quantities of American cotton goods, which are in increasing demand in the Japan market, and are sent into Corea through the factory of the Japanese Prince, governor on the island of Tsus-Sima.

As the Dutch find an excellent market for the very limited quantity of merchandise they are allowed to offer for sale, there can be no doubt that were the country open to foreign commerce, the demand for the chief articles of import would be very extensive. With regard to exports, it is a matter of question whether the Japanese copper mines would be able to compete with those in other parts of the world, especially of Lake Superior and the enormous Burra mines recently discovered in Australia; but that a very extensive and lucrative trade might be carried on with Japan there cannot be the least doubt.

The empire contains inexhaustible mines of the precious metals; the quantity of gold, silver, and copper exported from Japan between 1611 and 1703, according to an official report of a Japanese minister of state, a translation of which is contained in the enclosed paper, amounted to 413,036,800 dollars. Gold is so plentiful in the great island of Nippon that it is thought advisable to regulate the working of the mines by law, less too great a quantity should be brought into circulation. The currency of the country is composed of gold, silver, and copper.

American whaling ships commenced cruising last year in the inner seas, harbours, and bays of Japan, and its northern dependencies, the Kurile Islands, in the pursuit of their gigantic game. The great success which most of them have met with will probably attract thither a large whaling fleet in the course of the present year. From want of reliable charts and accurate hydrographical information respecting those remote and comparatively unknown seas, several shipwrecks have already occurred. We have accounts of the loss of the ships Lawrence, Lagoda, and David Paddock, and it is to be feared that many others will have shared a similar fate.

In the case of the Lawrence, the survivors of the crew, who landed in a destitute and famishing condition on one of the Japanese Kuriles, were kept seventeen months in close and strict confinement, and treated with great inhumanity. One of the number, on attempting to effect his escape from prison, was barbarously put to death by the Japanese guard, as stated in my memoir printed by order of the senate, 8th March, 1848. The crew of the Lagoda were arrested on their landing, and are still detained in prison by the local authorities. The crew of the David Paddock landed at Aniva Bay, a Japanese settlement on the south-west end of the island of Tarakay, were kindly treated, furnished with a house and food gratuitously, but were strictly guarded by a body of soldiers. At the expiration of three days, after being supplied with a quantity of rice and water, they were compelled by the local officials to leave the island in their boats, and were shortly afterwards rescued at sea, in the vicinity of Matsmai, by the ship Globe, an American whaler.

Lack of provisions and water, or stress of weather, will occasionally compel our whalers and merchantmen to put into Japanese ports, or seek refuge there from shipwreck. With the exception of the Chinese and Dutch, at their privileged factories in the harbour of Nangasaki, all foreigners landing in Japan, no matter under what circumstances of distress or peril, are immediately arrested, and sent under military escort to that port, where they are detained in close confinement, kept on a short allowance of rice, fish, and water; are frequently severely beaten, exposed to many indignities, and compelled to trample and spit upon a picture of the crucifixion. Such barbarous

treatment of our distressed countrymen who may have the misfortune to be driven on those inhospitable shores ought no longer to be tolerated by a nation of freemen.

In this untoward state of things our government should address, without delay, a national missive to the Siogoon of Japan, specially commending to the protection of his Imperial Majesty's government and provincial authorities such of our mariners employed in whaling, or the naval, or merchant service, as may be compelled by stress of weather, in want of repair and assistance, to put into any of the ports of the empire, that they may be aided and provided with necessaries to refit at the current prices of the country; and, in case of shipwreck, that they receive kind and hospitable treatment, and be forwarded as soon as practicable to the care of the United States consul at Batavia, who should be instructed promptly to reimburse all incidental expenses.

In the event of the Siogoon's declining to comply with so reasonable and just a request, our government would be justified in taking such ulterior measures as humanity, and the national honour may require to enforce its immediate and effectual observance by the imperial and provincial authorities of Japan. A strict blockade of the Bay of Yedo and port of Matomia, for which two frigates are amply adequate, would soon compel that imperious government to accede to our demand.

When the Japan seas are thus becoming the highways and thoroughfares, not only for American whale ships and merchantmen, but likewise those of other western nations, in the peaceful pursuit of their lawful enterprise and commerce, or for geographical and scientific discovery, it would appear to be extremely difficult, if not physically impracticable, for the supreme government of Yedo to maintain hereafter, peacefully and inviolately, its exclusive system of isolation and seclusion from the rest of the world.

The insular geographical position of Japan, her excellent ports and harbours, dense and industrious population (said to exceed fifty millions), her boundless productive resources and vast capabilities for commerce—the superior intelligence and refinement of her princes and nobles, together with the skill, energy, and enterprise of the Japanese people, justly entitle her to rank above every other Asiatic nation. By a judicious relaxation of her restrictive policy all these unrivalled natural and political advantages could be made available for conducting a very extensive and profitable commerce with the United States, both on the Atlantic and Pacific, without compromising either her sovereignty, national religion, or peculiar institutions.

The visit of the American whale ship *Manhattan*, Capt. Mercator Cooper, to the Bay of Yedo, in 1845, to return twenty-two Japanese mariners, whom he had rescued from a sinking junk and desert island, coupled with the moderation, forbearance, and courtesy which characterised the conduct of Commodore Biddle and the officers of the United States squadron which visited that bay in July, 1846, have inspired both the Imperial Government and people of Japan with the highest opinion of our country, and have favourably disposed them toward it.

The occupation in 1847 of Quelpaert's Island, the largest of the Korean group, lying off the southern coast of Corea, opposite to the island of Kiasia, by the British, as a military and naval station, another Malta, commanding the northern coasts of China and the southern islands and seas of Japan with the avowed object of prosecuting their hydrographical surveys in those seas; the projected British naval expedition to Nangasaki; the free navigation of the great Manchurian river Amur accorded the same year by China

to Russia, and the contemplated opening by the Tzar of his ports in North-eastern Asia and the adjacent islands to foreign commerce, are all calculated to have an important bearing upon the future policy of the Imperial Government of Japan with regard to foreign intercourse; and I have particular reasons for believing that the plan hereinafter indicated would successfully prepare the way for the ulterior opening of that Empire to American commerce.

Among the many obvious political and commercial advantages to be derived by the Japanese from the desired intercourse between the two countries upon the opening of our projected American steam communication with China, with coaling depots at Matsmai, on the Strait of Sauger, the chief town of Yeso, and residence of the prince governor of the Japanese Kuriles, and at the port of Fun-Fung, island of Tsus-Sima, they would possess the facility of acquiring a practical knowledge of the construction and management of steamers, and likewise of the latest inventions and improvements in the systems of modern warfare by land and sea, which, with their indomitable bravery, would the better enable their supreme government to place the country in a posture successfully to repel foreign aggression or invasion, maintain the integrity of the empire, and make Japan the first maritime and commercial power in the East. The periodical arrival of our steamers in the Japan seas would, moreover, put that government in possession of the latest political, commercial, and scientific intelligence from all parts of the world much sooner than by the present tardy means of conveyance by the privileged Dutch ships from Batavia and the Chinese junks from Chapá.

The Dutch are no longer opposed, as formerly, to the intercourse of foreigners with Japan, and have been taught the necessity of adopting a more liberal system of commercial policy in Netherlands India. The late King of Holland, who died on the 17th ult. it is well known was decidedly in favour of the opening of Japan to foreign commerce. There are strong grounds for believing that his eldest son and successor, William III., if officially requested by our government, would readily, as an act of national comity and courtesy, interpose his friendly meditation with the Japanese government for the opening of a privileged port or ports to American commerce.

There seems nothing to prevent the success of a mission properly managed, if the Siogoon, Council of State, and the Mikado or Cubo, their spiritual emperor, can be made thoroughly to understand that we have no design upon their religion or government; that we seek a peaceful and mutually beneficial commercial intercourse with their empire, and ask for neither lands, forts, factories, nor exclusive privileges therein; that we have no desire for conquest or colonization, and will engage that our citizens, who may be permitted to visit Japan on commercial business, shall strictly conform to its laws, pay the customary imposts and dues, scrupulously abstain from any interference in matters of religion and government, and yield due deference and respect to the established authorities, usages, and customs of the country; that so soon as the Imperial Government shall accord permission, a special envoy or commissioner of the United States be sent to Yedo to obtain an authentic record of such concession, privilege, or treaty as that government might be induced to make to the freedom and security of American commerce in its ports, and which shall at the same time guarantee on our part full reciprocity of trade and protection of Japanese subjects in our ports, and lay the foundation of a lasting peace between Japan and the United States.

It should be one of the objects of the proposed mission to visit the Loo-choo and Meiaosima groups, the Japanese Kuriles, and the island of Ta-

rakay or Saghalien, and enter into arrangements with the independent chiefs of the latter island for the privilege of trading in their ports, and that our whalers may frequent them for wood, water, refreshments, or repairs. We should, moreover, keep one of our vessels of war cruising in those seas during the summer months for the protection of our whalers, and to obtain hydrographical and commercial information respecting Japan and its colonial dependencies.

It is generally admitted to be a state axiom with the Oriental nations that treaties are only to be observed so long as they shall be found advantageous, or they are enforced by superior power. With a knowledge of this fact, it ought to be the settled policy of our government to direct our ships of war in the Eastern Seas to make occasional visits to the chief ports of all the Oriental sovereigns, with whom we now, or hereafter, may have diplomatic and commercial relations, to look after American interests there, showing them our ability and readiness to compel immediate redress for any violation of their treaties with the United States, as well as to protect American citizens engaged in their lawful commercial pursuits. The English always keep a number of ships of war and armed steamers employed in those seas for the protection and encouragement of their commerce.

Several experienced officers of our navy, among whom may be named Commodore Perry, concur in the opinion that an armed steamer would be greatly preferable in many respects to a ship for the service either of the China or any other United States Eastern mission. Her extra expense above that of a frigate would be more than compensated by her greater celerity of movements, particularly during the frequent calms and adverse monsoons in the eastern seas. There are coaling stations already established at the Cape of Good Hope, Aden, Bombay, Ceylon, Madras, Calcutta, Maulmain, Penang, Malacca, Singapore, Labuan, in Borneo, Hong-Kong, Amoy, Ningpo, Fuchau, Shanghai, Formosa, Batavia, &c. Coal has recently been discovered in the island of Java, Celebes, Ceram, and in several of the Philippines, in the Indian Archipelago.

In many of the provinces of Japan there are inexhaustible mines of the best bituminous coal, which have been worked from time immemorial. The coasts of her northern dependencies, as well as those of the Gulf of Tartary and island of Tarakay, are covered with vast forests of pine, larch, birch, and other woods suitable for burning in steamers, and which, it is presumed, could readily be supplied by the natives at very low rates.

It is the opinion of the illustrious Humboldt that an opportunity for opening a liberal and honourable communication between Europe and Japan will not happen until the two great oceans shall be united by a canal across the Isthmus of Panama, when the productions of the west and north-west coast of America, of China, and Japan, will be brought more than 6,000 miles nearer Europe and the United States, and when alone any great change can be effected in the political and commercial policy of Eastern Asia; "for this neck of land," he observes, "has been for many ages the bulwark of the independence of China and Japan."

American skill, capital, energy, and enterprise are now successfully employed in the construction of a railroad across the Isthmus, under a grant from the government of New Grenada to William H. Aspinwall, John L. Stephens, and Henry Chauncey, in behalf of an American company of New York; the route has already been surveyed, the road will shortly be commenced, and it is thought can be in operation by January, 1851.

The opening of the Nicaragua, Tehuantepec, and other practicable routes of intercommunication between different points on the Atlantic and Pacific

has been undertaken by various American companies associated for such purpose. From the various surveys that have been made, it is satisfactorily ascertained that the only feasible route for a ship canal to unite the two oceans is through the river San Juan and the Lakes of Nicaragua and Leon to the port of Realejo, or some point in its vicinity, on the Pacific. It is also contemplated to extend a line of magnetic telegraph and construct a railroad from St. Louis, or a point on Lake Michigan, to San Francisco or San Diego, on the Pacific.

San Francisco, from its favourable position, with its fine bay and harbour and superior local advantages as the chief outpost of the gold placers and mining districts of California, is destined to become the great mart and entrepot for our commerce on the Pacific with China, Japan, and all the maritime countries of Asia, Polynesia, Oceania, and Australasia, which embrace an aggregate population of upwards of six hundred millions.

We have now regular steam communication with San Francisco, as well as the principal ports on the west coast of America, which are soon to be extended to those of the north-west coast as far as Russian America and Kamtschatka. When connected with the new lines, to consist of five government war steamers, to ply between San Francisco, Shanghai, and Canton, *via* Sandwich Islands, and by the great circle route of the Aleutian and Kurile Islands, Strait of Sangar, Sea of Japan, and Strait of Corea, as recommended by Mr. T. B. King, chairman of the Committee on Naval Affairs, House of Representatives of the 4th of May, 1848, it is calculated the transit of mails, passengers, and merchandise can be made between New York and Shanghai in about thirty five days; and with Matsmai, Island of Tsus-Sima, Nangasaki, and the intermediate Japanese ports, in a still shorter time.

On the completion of the Pacific railroad, it is believed the passage from Shanghai to New York, will be effected in about twenty days; to London in thirty-two days; and, by the magnetic telegraph, communications could be made between New York and San Francisco in the course of a few hours. This would operate a far greater change in the commerce of the world, and be attended with results infinitely more important to the social progress and material welfare of the human race than that which followed upon the discovery of the route to India *via* the Cape of Good Hope, in 1497. By those rapid means of intercommunication and transit, the diversified and valuable productions and commodities of Continental Asia and the Asiatic islands of Australasia, Polynesia, Oceania, and the Pacific States of the western and north-western coasts of America, would flow in vast and continued streams into this country, turn the balance of trade with all nations in our favour, and make New York the universal emporium, the centre of business, trade, and commerce, exchange and banking transactions for the whole world.

It is customary with Asiatic as well as European sovereigns, on extraordinary occasions, such as accession to the throne, or on important matters of state, to address each other letters missive, especially to those potentates at whose courts they may have no diplomatic representatives, and where no embassy is sent. In accordance with this usage, General Washington addressed the Emperor of Germany, May 15th, 1796, interposing his friendly mediation for deliverance of Lafayette from the dungeon of Olmutz; Mr. Jefferson, April 19th, 1806, wrote to the Emperor Alexander of Russia, in behalf of neutral rights; and these examples have served as precedents to several of their successors.

The recent auspicious accession of General Taylor to the presidency and organization of his able and efficient cabinet, would appear to present a

most appropriate occasion for him to appoint a new commissioner to China, and also to address letters missive to the Sovereigns of Persia, Burmah, Cochin China, and Japan, enclosing therewith respectively copies of his inaugural message, and intimating his desire to open friendly and commercial relations with each upon a mutually beneficial basis. Such national missives to be forwarded through the new commissioner on his voyage to China in a United States ship, in the following order:—

For the Shah of Persia, care of the Prince Governor of Bushire; for the king of Burmah, by the hands of the raywoon or governor, Rangoon; for the king of Cochin China, in charge of the chief mandarin, Turon. The delivery of all which would not probably retard his voyage out more than two months.

In regard to Japan, it is respectfully recommended that there be sent with the president's letter to the Siogoon the following presents:—

Charts of the United States Coast Survey and maps of the topographical bureau; public documents, such as late presidential messages; Patent-office reports, and those relating to steam navigation on the Atlantic and Pacific, and proposed opening of communication by railroads, canals, and magnetic telegraphs with both oceans; and on Oregon and California; lithographs of American sea and river steamers; prints of American campaigns and sea battles; a chest containing a complete set of carpenter's tools: a complete medicine chest, with a copy of the best American work on medicine, surgery, the physical sciences, mathematics, astronomy, navigation, engineering, mechanical arts and industrial pursuits of our country; a few agricultural implements; a small collection of cereals and garden seeds; tobacco and cotton seeds; files of American agricultural, mining, and railroad journals; newspapers and prices-current of New York, Boston, &c; ; Daguerreotype likenesses of the president and members of his cabinet; American Almanac for 1849; samples and musters of our cotton and woollen manufacture; description of the magnetic telegraph, &c.

The whole can be furnished at a trifling cost, and forwarded by the commissioner from China to Nangasaki by one of the vessels of our East India squadron; and I feel confident would be thankfully received as the most acceptable present that could be sent by our government to that of Japan conveying official and reliable information: geographical, political, agricultural, industrial, commercial, and financial—respecting these United States; their boundless resources, rapid social progress, and elevated rank in the family of civilised nations; and well adapted to show the Japanese how vastly their country might be benefited by the opening of their ports to American commerce.

On the voyage of the new commissioner out to China, during his sojourn in that empire, as well as on his periodical visitations, many favourable opportunities would be presented for his obtaining much new and valuable geographical, statistical, and commercial information.

A mission of this character, so urgently recommended in the memorials of the merchants, bankers, ship-owners, &c., of New York and Baltimore, we may confidently anticipate, will not only vastly benefit the commercial, navigating, productive, and industrial interests of these United States and our rising territorial possessions of Oregon and California, but will also greatly contribute to the popularity and lasting renown of the present patriotic and enlightened administration.

Awaiting your commands, I have the honour to be, with great respect, dear sir, your most faithful and obedient servant,

AARON H. PALMER.

THE SORELLI ROCKS.

The two last numbers of our work contained the narrative of the loss of the *Avenger*, as delivered at the Court-Martial by the surviving officers. Besides placing on record this authentic account, our object was to show the effects of the current in the part of the Mediterranean where she was wrecked. The following letters from H.M. Consuls shew that fragments of the ship were drifted to places above three hundred miles from the Sorelli Rocks, in the month of February, or 59 days from the date of the disaster.

Bastia, Feb. 7th, 1849.

My Lord.—On the 20th of February 1848, I had the honor of reporting to the Secretary of H.M. Navy, that the fore part of a large steamer had been cast on shore at Pietra-nera, a village near to Bastia, and from its size, and the copper fastenings, I had every reason to conclude that it was a part of the wreck of the "*Avenger*" steam-frigate, and in consequence requested that instructions might be furnished, to enable me to claim the produce of the sale. But after waiting until the November following without receiving any reply, and feeling perfectly satisfied that the part of the wreck cast on shore had belonged to that unfortunate vessel, I renewed the claim on the part of H.M. Government, and obtained a promise from the Chef du Service de la Marine, that the amount remaining in the case should be placed at my disposal, as well as the different objects of small value left in the Marine stores. I have, therefore, the honor to request that your Lordship will be pleased to direct the manner in which I am to carry the same to the account of H.M. Government.

I have, &c.,
(Signed)

T. PENNINGTON.

To Viscount Palmerston, G.C.B.

British Consulate Bastia, Feb. 20th, 1848.

Sir.—Having received information that a part of the fore deck of a large steamer had been washed on shore on the 18th instant at Pietra-nera, near Bastia, and that orders had been forwarded to have it broken up and disposed of, I immediately wrote to the Chef du Service de la Marine, requesting that all further progress in removing the wreck might be suspended until I could proceed and visit it, which I did this morning in company with the Chef du Service, and found on examination, that all the iron, and copper work attached to the timbers was marked with the broad arrow, and not having heard of the loss of any other of Her Majesty's ships, except the *Avenger* steam-frigate, I have come to the conclusion, that this must have been a part of that unfortunate vessel.

As the post is leaving for Paris, I have requested to be furnished with a copy of the description and measurement of the different objects found by the Bureau de la Marine, which I have the honor to enclose for the information of Her Majesty's Government.

The copper bolts, and iron work, will remain in charge of the Chef du Service, until I can receive further instructions.

I have, &c.,
(Signed)

T. PENNINGTON, Consul.

To the Right Honourable the Secretary to the Admiralty.

Leghorn, March 31st, 1848.

MY DEAR SIR.—The Leghorn Sanita received yesterday, a report from the Sanita officer at Viareggio, to the effect that a piece of a wreck supposed to be part of a stern cabin of a ship had been thrown on the beach of Viareggio. A small tin box containing papers was found in the cabin, and these

having been sent to me for perusal, I think there can be little doubt that the cabin in question formed part of H.M.S. *Avenger*.

The contents of the box are as follows.—Thirteen shop bills and memorandums of accounts dated from Portsmouth, and made out in the name of William Hill, who appears to have been Ward-room steward on board H.M.S. *St. Vincent*. One stamped receipt for £20 6s. 0d., paid by William Hill to Margaret L. Kelsey, of the George Hotel, Portsmouth. One letter addressed to Mr. Hopkins, Ward-room messman, H.M.S. *Trafalgar*, Malta, from J. J. Gonea, dated Lisbon, 10th December, 1847. One letter addressed to Mr. Poppe, Gun-room messman, H.M.S. *Rodney*, from J. J. Gonea, dated Lisbon, 10th December, 1847. Five printed papers of no value, being prices current of wines, &c. One letter dated from H.M.S. *Avenger*, of which I enclose a copy.

Besides these I am told that some English and Portuguese coins were found in the cabin.

I shall endeavour to procure further information on the subject, and I shall probably go myself to Viareggio to see the piece of wreck, or to take any steps in regard to it which may appear advisable, and I shall then address a report to you on the subject. I write in great haste in order to send this by a steam-packet on the eve of departure for Naples.

I have the honour, &c.,

Signed ALEX. MACBEAN.

His Excellency Vice Admiral Sir William Parker, Bart., G.C.B.

Extract of Vice Consul Lowe's Despatch, dated Civita Vecchia, April 6th, 1848, addressed to Consular Agent Freeborn, Rome.

SIR.—I have the honour to hand you herewith, a rough sketch I have made of a piece of a mast, or of the bowsprit of H.M. late steam frigate *Avenger*, which was wrecked off the coast of Africa in December last. The length of the spar was 20 feet, its circumference 6 feet 10 inches: at one end there are two iron rings, on one of which there is F 11, on the other F 1 & between the rings, and cut in the mast "*Avenger*, F.D.P. 1845," with a broad arrow.

From the enquiries I have made of the harbour-master, I have ascertained that this fragment was thrown on shore on the 19th of March last, near the tower of S. Agostino to the northward of this port, and distant from it about six miles, and that it was brought into this port yesterday 5th April, by the launch belonging to this port.

I have taken the necessary steps with the authorities here to retain the mast at my disposal, while for better security I have had it placed in the arsenal of the port.

I remain, &c.,

(Signed) JOHN TH. LOWE.

John Freeborn Esq., Rome.

Florence, April 17th, 1848.

MY LORD.—I lately received information from the Tuscan government that part of a wreck of an English ship had been washed ashore near Viareggio, and a quantity of wearing apparel, and articles of the toilette (a list of which was sent to me) had been found in the wreck. A tin box containing papers was also found, and the papers have been forwarded to me, although they are much defaced, yet it appears without doubt that they belonged to the "*Avenger*."

I informed Her Majesty's Consul at Leghorn of these circumstances, and

he immediately went to Viareggio where he found the piece of wreck and the wearing apparel had been burned, as a sanitary precaution; but from papers shewn him by the inspector, he had no doubt that the wreck had formed part of a cabin of the *Avenger*.

The Consul also informs me that a piece of a mast 26 feet long, marked "Avenger;" has been washed ashore at Civita Vecchia.

I have requested the Tuscan government to cause the gold, silver, and copper coin, found in the wreck to be delivered to Her Majesty's Consul at Leghorn, on behalf of H.M. Government.

I have, &c.,

(Signed)

G. B. HAMILTON.

To Viscount Palmerston.

British Consulate, Leghorn, May 2nd, 1848.

Sir.—The Inspector of the Tuscan Sanita department having informed me that a piece of wreck had been found on the coast in the neighbourhood of Viareggio, and exhibited to me the papers found in the same, one of which is dated from on board H.M.S. *Avenger*. I have the honor to report that I proceeded to Viareggio on the 4th of April, accompanied by Mr. Robert Eleves, of Sheerness Dockyard, the Purveyor of timber at this port, but on arriving there we found the piece of wreck in question, and the wearing apparel found in it, had been burnt as a Sanita precaution.

From the description given by the Delegato di Sanita at Viareggio, the wreck in question was about two feet long and three feet high, and must have been part of the fittings of a cabin or store room. Some gold, silver, and copper coin, and some other articles, found in one of the drawers were shown to us. We saw also four locks and five screw nails, which have been preserved, and which, being marked with the broad arrow of the Admiralty, clearly established that they must have appertained to one of her Majesty's ships. I understand that this piece of wreck was found on the coast about two miles to the westward of Viareggio, on the 22nd of March last.

I am informed that a piece of the wreck of a steamer was thrown on shore near Porto Ferrajo on the 9th of March last, as also part of a top-mast or top-gallant-mast, both of which have been sold by order of the Governor of Elba. I have succeeded in purchasing two of the copper bolts taken from this piece of wreck, which are likewise marked with the broad arrow.

I am also informed that on the 16th March, a piece of the deck of a ship was found near Porto di Capo di Pini, in the island of Elba, and that on the 25th or the 26th of March, a piece of the side of a ship about 32 feet long, with 22 nail holes, was found in the neighbourhood of Piombino, and I have requested the Inspector of the Sanita department to prevent the sale or destruction of these, as there can be little doubt that they belonged to the *Avenger*.

Sir George Hamilton, who has been in communication with the Tuscan Government on the subject of these pieces of wreck, has applied for the delivery to me, on behalf of H.M. Government, of such articles, as may be found on the coast of Tuscany, or of the island of Elba, which appear to have belonged to the *Avenger*.

I have, &c.,

(Signed)

ALEX. MACBEAN, Consul.

Vice Admiral Sir William Parker, Bart., G.C.B.

List of ships towed by the

Date.	Ships towed.	No. of Guns.	Tonnage.	Duration of Trial.	How many Boilers used.	Pressure of Steam.	HP. per Diagram.	Revolutions per Minute.	Hourly Speed.	
									By the Terrible Fat. Log.	By the ship towed.
Oct. 19, 1846...	Hibernia.....	104	2530	h. m.					knots.	knots.
May 27, 1847..	Howe	120	2619	1 30	3	8	1104	9½	7.40	8 2
June 14 " ...	Amazon	24	1078	2 25	2	7	768	9½	7.75	.....
July 18 " ...	Reeruit	12	425	1 52	2	7	.....	9½	8.66	8 4
				3 0	2	6½	.....	8½	7.11	.....

General Abstract of the performances, expenditure, &c., of Her Majesty's Steam Master, taken from the preceding papers. Builder, O. Lang, Esq., of length of stroke 8 feet, diameter of paddle wheel 34 feet; tubular boilers

No.	Date.	From.	To.	Steaming.		Assisted by Sail		Portion of the Passage under Sail only.	
				Time.	Distance.	Fore and Aft.	Sq. re.	Time.	Distance.
	1846.			dy. hr.	knots.	dy. hr.	dy. hr.	dys. hrs.	knots.
1	July 31 to Aug. 6	Cork	Gibraltar	5 0½	1128 0	4 1	1	.....	.....
2	9th to 16th Aug.	Gibraltar	Corfu.....	5 9	1112 0	2½	0 15	1 14	223
3	21st to 27th "	Corfu	Gibraltar	5 14½	1185 0	2½	0 2½	1 0½	123
4	24th to 28th Sep.	Tetuan	Malta	3 22½	977 0	13	0 13	.....	.....
5	4th to 9th Oct.	Malta	Gibraltar	4 11	990 0	15	0 3½	.....	.....
6	8th to 13th Nov.	Lisbon	Plymouth	2 15	578 0	12½	.....	.....	.....
	1847.			1 15½	206 0	4	.....	.....	.....
7	6th to 10th June	Spithead	Oporto & Lisbon	3 12½	778 1	3 2	9 0	12½	86
8	17th to 21st July	Lisbon	Madeira	1 3½	196 0	8 0	8	2 10	220
				0 11½	111	.....	.....	.....	.....
9	3rd to 23rd Aug.	Madeira	S Paul de Loanda	6 16½	1305 0	12	.....	20 22	2497
10	Sept. 9 to Oct. 9	S. Paul de Loanda	Lisbon	9 8	1922 0	20 0	9	21 10	2468
11	Oct. 28 to Nov. 1	Lisbon	Spithead	4 4½	909½	1 10	0 2	.....	.....
			Totals.....	54 0	11397 6	10½	5 15	47 21½	5617
			Averages.....	...	...	...	...	...	...

On the passage from Lisbon to Plymouth, the top frame work of the larboard engine became fractured. and in order to ensure as far as possible against going right through, that engine was disengaged, and the remainder of the passage, 206 miles, was made with the starboard engine only. In order to shew the performance of the single engine, two lines are given for this passage: the upper one for that part made with both engines, the under line for the single engine.

The passage from Lisbon to Madeira also has been shewn in two lines: the upper one shews the performance of the Terrible, with the Recruit, iron brig of 435 tons in tow; the lower line when without that incumbrance.

Terrible, with the result.

Course.	Wind.		State of the Sea.	What Sall set.	Coal.		Remarks.
	Direc-tion.	Force.			Hourly Con-sump-tion.	Distance run with one ton.	
NW. & W.	N.W.	3	Mod. heavy head swell	None	July 18th.—Ex-pansive gear on 6th step of Cam for both engines.
S.W.	S.E.	3	Smooth.	None	2 10	3 10	
South.	E.S.E.	1	Smooth.	None	2 0	4 33	
W.b.S. ½ S.	Calm	0	Long swell from North	None	1 1½	4 44	

Ship *Terrible*, W. Ramsay, Esq., Captain, drawn up by Mr. R. C. Allen, Woolwich Yard, 1847 tons: Engines, Maudsley's double cylinder of 73 in.; 800 nominal horse-power.

Draught of Water.				Immersion of Paddle Wheels.		Average.					Coal.			Expenditure.			
At starting.		On arryl		At Starting	On Arrival	Pressure.	Vacuum.	Step of Cam	H.P. used.	Rev. pr min.	Hourly speed by Pat. Log.	Total quan-tity used.	Average Daily Consump-tion.	Distance run with one ton	Oil.	Oakum.	Tallow.
Mean.	By stern	Mean.	By stern														
feet in.	in.	ft. in.	in.	ft. in.	ft. in.						knots	tons. cwt.	tns. cwt	knots	Gal	lbs.	lbs.
19 1	...	18 2	...	7 5	6 7	26½	5½	6	851	9½	9.14	220 15	42 4	5.22	17	27	150
18 11	6	18 0	...	7 3	6 4	26½	do	...	8½	8.04	225 16	37 7	5.12	40	28	350	
18 10	4	17 7	15	7 2	5 11	26½	do	766	10½	8.82	274 9	48 9	4.52	42	65	400	
18 1	17	17 5	24	6 5	5 9	26½	do	773	11	10.33	193 17	47 0½	5.29	30	20	200	
18 11	24	18 2	29	7 3	6 7	26½	do	850	10½	9.25	210 10	46 14	4.76	36	14	300	
18 7	4	.....	6	11	.....	26½	do	...	10½	9.17	218 6	51 2½	4.31	35	30	200
.....	6.39	6.5	44 3	2.83
18 9½	17	18 1	...	7 1½	6 5	6	6th	570	9½	9.19	161 18	43 10½	5.08	27	20	200	
18 11½	1	18 7	9	7 3½	6 11	7	do	...	8½	7.20	76 5	39 3	4.40	22	12	100	
.....	.....	.....	.....	.....	.....	.....	do	...	10½	9.80	.....	45 12	5.16	.....	.....	.....
18 10	7	17 5	26	7 2	5 10	6	.....	580	9½	8.13	252 6	35 5	5.56	43	34	290
18 11	4	17 2	24	7 3	5 6	6	do	580	9½	8.58	357 7	36 16½	5.60	60	61	140	
.....	.....	.....	.....	.....	.....	6	do	...	9½	9.04	166 18	38 16	5.59	29	30	160
...	...	...	...	...	...	...	...	...	...	...	2358 7	...	...	381	341	2490
...	...	...	...	...	...	...	...	...	9½	8.86	.....	41 10½	5.18	.....	.....	.....

The average quality of the Coal used was middling.
 Nos. 1, 2, 3, the Retribution in company; engines frequently eased to allow her to keep pace with the *Terrible*.
 No. 5, One hundred and twenty-five tons of Provisions on board for Sir William Parker's Squadron.

In the statistical papers which have appeared in several of the numbers of the *Nautical Magazine* for 1849, and from which the accompanying General Abstract has been formed, it will be seen that only two boilers were used at a time in the *Terrible* over a distance of about 11,000 miles; the average daily consumption of coal while actually steaming was $41\frac{1}{2}$ tons, and the average distance run for each ton was 5.18 knots. Taking the last three lines, however, from the General Abstract, it will be seen that in going a distance of upwards of 4,000 miles, the average daily consumption of fuel was $36\frac{3}{4}$ tons, and the average distance run with each ton was 5.58 miles, and these last averages are perhaps the fairest criterions of what may be performed in such a vessel as the *Terrible*, with similar boilers and engines. The reduction in the daily quantity of coal burnt is attributable to several causes. The steam was cut off at the 6th, or lowest step of expansion, and in other respects was economized most carefully. The stokers too, from practice, and a longer acquaintance with each other, had become better skilled in their art, which is so important, that it might alone serve to account for it.

From those papers it may be seen also, that when using the expansion gear on the 5th and 6th steps, the daily expenditure of coal was about 45 tons, and the distance run for each ton may be roughly stated at 5 knots; while when using the 6th step on both engines the daily expenditure was as already stated $36\frac{3}{4}$ tons, and the distance run for each ton was 5.58 knots. It is not supposed that this difference was wholly the effect of a different arrangement of the expansion gear, but that it arose as well from the causes before mentioned.

The *Terrible* stows 487 tons of coal, and her average daily consumption being $36\frac{3}{4}$ tons, when working the expansion gear on the 6th step for both engines and using two boilers, only, as shewn in the General Abstract, it follows that she could perform a voyage of $13\frac{1}{4}$ days duration; and allowing 5.58 knots for each ton of coal, she could steam 2,717 nautical miles in that time at the hourly rate of $8\frac{1}{2}$ knots. Assuming this to be a very near approximation to the truth, the following table will show what she could do at high and low speeds, the consumption of fuel varying as the square of the speed of the vessel.

Quantity of Coals can stow.	Daily Consumption.	No. of days steaming.	Hourly Speed.	No. of miles could steam.
487 Tons	18 $\frac{1}{2}$ Tons.	26 $\frac{1}{2}$	6 Knots.	3792
	37 "	13 $\frac{1}{4}$	8 $\frac{1}{2}$ "	2686
	74 "	6 7-12th.	12 "	1696

In an account of the steam voyages made by H.M.S. *Inflexible*, published in the *Times* a short time since, the writer laid particular stress on the circumstance of the distances having been all run by the Patent Log. It is very important that this should be stated, for then it is known what degree of reliance may be placed in it, for it is quite certain that the surface water sent astern by the wash of the paddle-wheels takes the common log with it, which consequently gives a large excess over the speed of the vessel. In the abstract before mentioned, it may be seen that a great portion of the distance was measured by the Patent Log, indeed, latterly it was kept over constantly from noon to noon; the speed by common log has not been used in any one instance.

The coals were always carefully measured under the superintendance of a very careful engineer. The columns shewing the daily and hourly consumption of fuel contain that used while actually steaming only.

The following particulars relative to the *Terrible*, may be interesting as an accompaniment to the foregoing.

The greatest speed ever attained by her with the whole power exerted, and using four boilers was 12·8 knots per hour by the *Patent Log*

She towed the *Hove* of 120 guns from the Nore to Spithead at the hourly average rate of 7·5 knots by the patent log using two of her four boilers, the sea being quite smooth. On another occasion she towed the *Hibernia* of 104 guns at the rate of 7·4 knots per hour against a light breeze and a moderate head sea, using three boilers; and again using two boilers she towed the *Amazon* razeed corvette in smooth water 8·66 knots per hour by Patent Log.

With a squadron composed of six line of battle ships, consisting of *Hibernia*, *Trafalgar*, *Albion*, *Rodney*, *Vanguard*, and *Superb*, the *Terrible* under sail only was easily kept in her station, sparing the two first-named ships, her main-sail and royals. With the *Albion* and *Rodney* she held her own, but she stood no chance with the *Vanguard* or *Superb*. The *Terrible*, therefore, would not be a drag on a squadron of ships except in very light winds with her paddle boards on, unless indeed it were composed of such ships as the *Vanguard* and *Superb*.

In a sea-way she is very easy, she rolls deeply, but without any jerking motion, she stands well up under her canvas, and is very weatherly.

NAUTICAL NOTICES.

PACIFIC NAVIGATION.—EXTRACT FROM THE REMARKS OF H.M.S. CALYPSO, Capt. J. Worth, R.N.

BEING ordered to visit Pitcairn Island, Tahiti, and the north-west group of the Society Islands, as also the Navigator, Friendly and Feejee Islands, touching at Callao on my way, we weighed at 6h. P.M., on the 3rd of February from Valparaiso, for Callao, with a very light and variable breeze from E.S.E., but which died away to a calm, and the boats of the squadron being unable to tow the ship out of the bay, and the current and swell setting her fast towards the rocks off the lighthouse, I towed back again into 35 fathoms water, and anchored for the night; and at 1h. 30m. P.M., the next day I again weighed with a very light air from the southward, and stood out, assisted by the boats as before. Soon after clearing the bay it became quite calm with a dense fog, sounded during the night every hour, in from 68, to 74 fathoms, soft mud, being about six miles off shore. The calm continued till 7h. A.M., on the 6th, when a fine breeze sprung up from S.W.; the usual course was then shaped for Callao, which we reached at 2h. P.M., on the 14th, after having met with the usual southerly winds and fine weather.

From Callao I weighed at 2 P.M., on the 16th February, with a very light breeze from the southward, which increased towards midnight, steering a S.W.b.W. course. For the first five days the wind varied from south-east to E.N.E., and we experienced a westerly set of eight miles daily. From the 29th February to the 5th March the wind was strong from east and

E.N.E., with a heavy swell from south-west. On the latter day, the island of Ducie was observed W. $\frac{1}{2}$ N., and its south-east end passed at 11 A.M., bearing N. $\frac{1}{2}$ W. four miles. This island is extremely low, composed principally of sand and patches of coral, with its centre covered with shrubs and stunted trees, and is apparently of about four or five miles in circumference: a heavy surf was breaking all around it, nor did there appear any inlet where landing could be effected; and from its lowness and the light color of its soil and sand it becomes dangerous at night, or in hazy weather, as although the day was fine and tolerably clear when we made it, it was not more than eight or nine miles off when first seen from the mast-head. On the 6th the wind became lighter though the same high southerly swell continued, and the westerly current we had experienced had ceased. At 5h. 20m. P.M., we sighted Henderson Island W.b.N., distant about fourteen or sixteen miles; it being, however, hazy, and darkness coming on before our distance from it could be correctly ascertained, its exact position could not be so well defined as was desirable. The island appears low though considerably higher than Ducie Island, and is much larger, its size in circumference being eight or ten miles and it is covered with underwood, shrub, and trees.

On reaching Pitcairn Island and correcting the chronometers, which we found gave us four miles to the eastward of it, as compared with the longitude shewn by Captain Beechey, I consider Ducie Island to be in lat. $24^{\circ} 39'$ south, and long. $124^{\circ} 36'$ west, and Henderson Island to be in lat. $24^{\circ} 28'$ south, and long. $128^{\circ} 36'$ west. The natives of Pitcairn believe the former to be inhabited, but I doubt it. I also learnt that a party from Pitcairn had visited the latter island in a whaler: they state it to be about eight miles in circumference, and surrounded by a shore reef, containing no water and little or no land capable of cultivation. On the morning of the 9th Pitcairn Island was seen W.S.W. about thirty or forty miles distant, the wind blowing strong from the north to W.N.W. attended with squalls, lightning, and heavy rain, with a high swell. On approaching the north-east side of the island we stood in for Bounty Bay, but the weather being threatening, we considered it imprudent to send a boat on shore. The afternoon proving finer, a whale boat containing eight of the Islanders came off, and having hoisted in their boat, we stood off and on during the night, and at nine o'clock the next morning having stood within $1\frac{1}{2}$ miles of Bounty Bay, we landed in their whale boat, keeping the ship's cutter, in which we had pulled into the bay, at an anchor without the influence of the rollers, which at times are high and dangerous, although on this occasion they were not so, and the sea in the bay comparatively smooth. The surf however, was much too high for a ship's boat to land; indeed from the confined spot at which landing can be effected, with the numerous rocks that surround it, would I conceive make it always a matter of danger attempting it in ship's boats; and particularly, if without the assistance of the natives as pilots. The position, size, and other details respecting this island must be so well known from its having been frequently visited by our ships of war, that it is unnecessary for me to enter into them, and I shall merely observe that the inhabitants appear both healthy and contented, numbering in all 140. They describe the climate as being excellent, and the soil producing every tropical fruit and vegetable, and many of colder climates; and quite equal to the maintenance of 2000 persons, the only draw back being the entire absence of springs of water. This evil has however been greatly, if not entirely, overcome by the construction of falls for receiving the rain water, which

besides giving them an ample supply for present use, contains a sufficient quantity to ensure them against the risk of an unusually dry season, indeed they are in the habit of supplying whale ships with water when occasionally calling for refreshments, as also with fruit and vegetables, pigs, goats, and poultry, which they rear in great quantities; for the last eight years the average number of ships calling at this island has been eighteen, and principally consist of American whalers. Anchorage off some parts of Pitcairn may be had in 30 to 35 fathoms at a quarter of a mile distance or even more, but the ground being foul, it would be injudicious to anchor, unless to avoid being drifted on shore, in calms, &c., the weather whilst off this island was fine, though occasionally squally, with rain and a very great rolling swell: the thermometer ranging from 76° to 80° ; barometer 30.20 to 30.24; and the wind, a moderate breeze from S.S.W. to E.S.E.

I made sail from Pitcairn Island at 6h. P.M., on the 11th for Tahiti, steering W. $\frac{1}{2}$ S., intending to sight Incarnation Island, the existence of which island is denied by the people of Pitcairn. The wind up to the 14th was from the eastward, though occasionally shifting for a few hours to the N.W., and the weather finer, but on the afternoon of that day, it became unsettled, with squalls and rain from N.W.; thermometer 78° to 79° , barometer 30.07, and on the next day the wind increased to a fresh gale, with severe squalls and heavy rain, which obliged us to reduce the sail and strike top-gallant-masts. This weather continued till the 19th, the wind shifting occasionally to S.W., and at length continued from E.N.E.; a westerly current averaging from eight to ten miles daily had been experienced for several days past. From the 21st the weather continued fine, and on the 23rd, the Island of Maitia was seen E.b.S., about twenty miles distant, which is very high, and of a round form; within half an hour the island was observed west, the wind being still steady from E.N.E., and the weather fine, and at 3h. 40m. P.M., we entered the harbour of Papiete, and anchored in $11\frac{1}{2}$ fathoms.

On the morning of the 26th I sailed from Papiete and anchored in the harbour of Taloo, Eimeo. The weather during our stay was very unsettled, sometimes blowing strong, with heavy showers of rain, and extremely close and sultry; the thermometer ranging from 84° to 85° barometer, 30.07. On the 31st I left Eimeo with the land breeze, and steered for the Island of Huaheine, having a light breeze from the eastward, and anchored at 10h. 40m. A.M., the next day at the entrance of the harbour, the wind as usual blowing directly out, and we kedged the ship to the anchorage off the settlement. With reference to these islands I may merely state that having on this occasion visited besides those of the last three named islands, Raiatea, and Boro-Boro, which occupied from the 23rd of February, till the 20th of March, in consequence of being detained several days in each of the harbours of the north-west group (*i.e.* Huaheine, Raiatea and Boro-Boro,) from a continuance of extremely tempestuous and unsettled weather, with the wind at N.W. which blows directly into their harbours, and which are much too intricate and narrow to be attempted under such circumstances.

Having sailed on the morning of that day for the island of Upola, Navigators group, I steered on a west course, with the wind a moderate breeze from the southward, and having passed about seven miles to the northward, of the Island of Monpiti, to pass which the ship was kept W.b.S., she was again steered W., with a view of making Rose Island, (a small island to the eastward of the Navigator Islands) the wind varying from E. to S.E., accompanied with a heavy easterly swell. On the 24th at 5h. 30m. P.M., the island

was seen ahead, but from its extreme lowness, the trees growing upon it, could only be made out before dark. At daylight the next morning the Island of Manua was observed W.b.S., and shortly after the Islands of Oloosonga and Ofoo W. $\frac{1}{2}$ N.

I should here observe that from information I gained on my arrival at Upolo (Navigator Islands) a coral reef exists, at, about eleven miles N.W. of Manua, of which no mention is made in Wilk's American Exploring Expedition charts, though I believe it is noticed in his enlarged plan of the group, nor in any chart on board this ship. This reef from being almost in the track of vessels visiting the Navigator Islands from the eastward, is certainly dangerous. We passed close to the north shore of these islands, which appears clear and bold, heaving to for a short time to communicate with a canoe which came alongside with two natives.

The islands of Manua, Oloosonga and Ofoo rise abruptly from the sea, and have apparently no anchorage, with a shore reef surrounding each. They are richly wooded from the beach to their summits, with great abundance of cocoa-nut, bread fruit, plantain, and other trees, common among these islands, indeed their appearance was most luxuriant. At 4h. p.m. the Island of Tutuilla was seen W.S.W., and having run to within thirty miles of the Island of Upolo, at 2h. 30m. a.m., on the 26th, sail was shortened till daylight, when the island was seen S.S.W., and sail again made. We ran along the land to the bay of Apia, with a view of observing the appearance, and peculiarities of the island, which is rich and beautiful in the extreme, being thickly wooded from the shore to the highest point. Upola is of moderate height, and contains rich valleys, in which grow cocoa-nut, bread fruit, plantains, &c., in great profusion. We passed along the outer reef at the distance of about $1\frac{1}{2}$ miles, but observing the water discoloured in several places, I hauled further off. I afterwards learnt that shoals extend on this side of the island in some parts, to full that distance, I should, therefore, recommend strangers to keep at least from $2\frac{1}{2}$ to 3 miles off the reef, when running along it. Wilks I believe in his survey does not notice these shoals, nor can I take upon myself to assert they exist, though the sources from which I gained my information were both respectable and intelligent. It was also reported to me that a shoal existed about three or four miles off the reef, to the northward of Apia Bay, with apparently sixteen or eighteen feet water upon it. This shoal was sought for by the *Juno* and *Dido*, as I was informed. I also sent boats out with the master and the pilot of Apia, but it was not found on either occasion.

At 10h. a.m. having received a pilot I entered the bay, and moored east and west with an open hawse to the northward or entrance of the bay, in 7 fathoms, having 40 fathoms on each anchor, and laid out a kedge astern, to keep it from fouling during the night land breezes; the trade wind from the eastward, however, blowing almost constantly, but little chance occurs of doing so.

Apia bay being correctly surveyed by Captain Bethune, there remains nothing for me to add to it. From his plan it will be seen that the bay is entirely open to the northward, and it cannot be considered a safe anchorage in the bad or rainy season, when the islands are subject to severe gales from the N.W., which send in a tremendous sea, so much so that were its full force to come home, in a direct line from its entrance, it would be impossible for a ship to hold on: fortunately, however, it seldom so happens; the north-west reef partly sheltering the anchorage from that quarter from whence the violence of the gales are usually most severe and destructive, the ground

being likewise for the most part sand, added to its confined space, which prevents a ship veering to any extent, makes it still more unsafe.

Whilst the *Calypso* was at Apia, from the 26th of March to the 6th of May, the weather was generally speaking fine, some squalls of rain and wind occasionally occurred, but the wind generally being from the eastward, no inconvenience was felt; the thermometer ranging from 80° to 84° ; the facility of watering is a great advantage, as is also the abundant supply of fresh pork poultry, vegetables and fruit, which are procured at reasonable prices. Fresh beef is likewise occasionally to be had, but during the time of my visit to the Navigator group, the native wars had caused so much destruction to the lands, and stock of this description, that it was procured but seldom, and with much difficulty. The capabilities of these islands seem great, the land being extremely rich, and the climate good, but the wars amongst the natives being incessantly going on, added to their habitual idleness, prevents the production of more stock, or other articles; (with the exception of cocoa-nut oil, which they barter to the Foreigners for exportation,) than supply their wants, together with that of the Foreigners residing amongst them, whose principal employment is the furnishing of whale ships that call at Apia for refreshments.

On the 2nd of June at 11h. 30m A.M., I sailed from Apia for the Feejee Island, with the usual trade winds, shaping a course to round the next island of Savau to the westward, and then to the south-westward, the weather from the 2nd to the 5th, was squally and the wind strong, accompanied with heavy rain, and a high sea, causing the ship to pitch and roll heavily, the wind being from E.S.E.; the thermometer ranging from 77° to 82° , and barometer from 30.10 to 30.30. In sailing into the Feejee group, I had determined in consequence of the imperfect knowledge that existed respecting them, and the innumerable dangers with which they are surrounded, to enter the group from the southward, by rounding Turtle Island, and to do so, I steered a course to take the ship about forty miles west of it. Having reached this point at 9 P.M., on the 5th, sail was shortened till daylight, when it was again made, and the island steered for; and at 8h. 30m. A.M., the island was sighted ahead, and about thirty miles distant, when the course was altered to S.W.b.W., in order to pass it.

At the distance of fifteen miles to my surprise, however, at 10h. 30m. A.M., breakers were reported ahead, when the ship was immediately brought to the wind, and it blowing fresh, sail was shortened, and the top-sails double reefed, &c., the reef was eventually weathered by about four miles. I had procured from the master of the whale ship at Apia, the work of Capt. Wilks, of the American exploring expedition, with his charts and plans of the Feejee Islands, in which it is stated that Turtle Island had been surveyed, and the reef, on which an American whale ship had been lost, examined. I cannot, however, conceive this to be the case, or if so, some great error must exist in the publication, for not only is there no mention made of this detached and dangerous reef, but the position of the island itself, is placed very erroneously, and which is the more necessary to correct, from its being the south-east point of this intricate group, and which vessels from the eastward would usually round, in entering it. We made the centre of the island to be in lat. $19^{\circ} 47' S.$, and long. $178^{\circ} 8' W.$, twenty-nine miles to the eastward of Wilks, who places it in lat. $19^{\circ} 50' S.$, and long. $178^{\circ} 37' W.$, with a reef extending five or six miles in a south-west direction, and a large oval coral patch detached from it lying north and south, eight or nine miles in length, both of which were breaking heavily. The island is apparently about six miles in length.

Having stood sufficiently to the southward, to clear the last mentioned reef we bore up W.b.N., in order to pass between the islands of Matuka and Totola distant about 130 miles, as being the clearest route towards the Island of Ovalan, whither I intended in the first instance to go. The weather however, appeared threatening with a strong wind and a high sea, when having reduced the sail, and made the ship snug, with the precaution of having extra lookout men on the yards, and bowsprit, and running on towards those islands till 10 P.M., at which hour the moon had set, I hove the ship to, not considering it prudent to run farther in amongst the group till daylight, when at 5h. 30m. A.M. I again made sail; and at 6h. 30m. sighted both those islands, N.N.W.; at 10h. 30m. we passed midway between them; they are moderately high, or about 800 feet.

Proceeding almost in a direct line for the Island of Ovalan, with the wind at east and north-east, we passed several islands and sighted many more, all of which appeared to be surrounded by extensive reefs, the sea gradually smoothing as we got within the islands, though the wind was still strong, and the appearance lowering.

On advancing to the northward, we continued to sight several islands in various directions, and at 5h. 15m. P.M., the detached and dangerous reef of Mumbolittee was seen W.b.S., when sail was shortened and the ship brought to the wind S.S.E., the reef bearing west three or four miles, the wind a strong breeze from east, the island of Angan at the same time bearing north-west. Mumbolittee reef is about a mile in circumference, and is about fourteen miles south of Angan, the sea invariably breaks heavily upon it.

ARCTIC OCEAN.

YANKEE WHALING ENTERPRISE.—The American Whaling barque Superior, commanded by Captain Roys, sailed from Sag Harbour to cruise in the South Pacific, but not being successful, Capt. Roys decided to carry out the plan of a voyage which he had been contemplating for several years. His plan embraced a cruise in the Arctic Ocean, through Bhering Straits. He had collected what information he could in regard to those regions, which had hitherto only been visited by such adventurous navigators as Cook, Clerke, Kotzebue, and Beechey. Capt. Roys informs us that the principal reason which induced him to put away for that ocean, was a remark which he recollected to have read in Beechey's Voyages, viz:—"Off here we saw a great many black whales, more than I ever remember to have seen even in Baffin Bay." This remark is found in Vol. I of Beechey's Voyages, p. 379, and refers to Icy Cape, situated in lat. 70° twenty miles, and W. long. 162°. Capt. Roys has furnished us with the following outline of his cruise in the Arctic Ocean.

"I entered the Arctic Ocean, about the middle of July, and cruized from continent to continent going as high as lat. 70°, and saw whales wherever I went: cutting in my last whale on the 22nd of August, and returning through Bhering Straits on the 28th of the same month. On account of powerful currents, thick fogs, near the vicinity of land and ice, combined with the imperfection of charts and want of information respecting this region, I found it both difficult and dangerous to get oil, although there are plenty of whales. Hereafter, doubtless, many ships will go there, and I think some provision ought to be made to save the lives of those who go there, should they be cast away, they should not be left to perish among the Indians who inhabit those regions."

In conversation with Capt. Roys we have obtained additional information, which may not be uninteresting to our readers. During the entire period of his cruise there, no ice was seen, the weather was ordinarily pleasant, so that men could work in light clothing. In most parts of the ocean there was good

anchorage from 14 to 35 fathoms. During a part of the time that the vessel was there she lay at anchor.

The first whale was taken at twelve o'clock at night! It was not difficult to whale the whole twenty-four hours; so light was it that at midnight it was easy to read in the cabin. The whales were quite tame, but entirely different from any which Capt. Roys had ever before taken. He took three different species, one of the largest yielding 200 barrels of oil. The first species much resembled the Greenland whale, yielding about 160 or 170 barrels; the second was a species called Polar whale, a few of which have been taken on the north-west coast; and the third a small whale peculiar to that ocean. The last three whales which were taken yielded over 600 barrels.

The American coast has been explored, surveyed, and found to be inhabited. Captain Roys discovered that the Asiatic coast was also peopled by numerous Indian tribes, and he expressed the opinion that they are well supplied with valuable furs, which could be easily purchased. There are no good charts of the Asiatic coast, unless they are in possession of the Russians.

On entering the straits, seven canoes containing forty men each were seen crossing from the American to the Asiatic coast. There are three small islands situated in the passage, hence rendering it extremely easy for the dwellers on the American and Asiatic continents to pass and re-pass. Capt. Roys did not hold any communication with the Indians, as his vessel was but partially armed, and in one instance the Indians showed disposed to make him a hostile visit when becalmed; but a favourable breeze springing up soon carried the vessel beyond the region of danger.

The success which has attended the Superior's cruise to the Arctic ocean will undoubtedly, stimulate others to follow her adventurous track. By referring to the charts it will appear that at favorable seasons, ships may cruise over 10 degrees of longitude, and as far north as the 70th degree. As the attention of the whaling community will now be directed to this part of the ocean, as yet but very partially explored, especially on the Asiatic coast, it will be necessary for cruisers to exercise great watchfulness and precaution. The charts of that ocean are extremely imperfect. Attached to Beechey's voyages, published in London 1831, there is a well executed chart of the American coast from Bhering Strait to Point Barrow, the most extreme point of land as yet explored, lying in 71° 20'. In the opinion of Capt. Roys, this chart of Beechey's is the most accurate which can be obtained. This ocean, doubtless, varies very much during different seasons: some seasons it is much more clear of ice than others. Ships would not probably be much endangered by floating icebergs, from the fact that almost any part of the ocean can be easily sounded. Knowing that our seafaring readers will be anxious to learn everything that can be known respecting that region, we publish such accounts of exploring voyages as are accessible.

PRESENT CONDITION OF PITCAIRN ISLAND.

No. of Inhabitants Male and Female.—Number of Inhabitants 149, Males 75, Females 74; of this number three are English, one a Tahitian woman, widow of Young of the "Bounty," aged about 80, two men of the first generation, one of those a son of Adams, named George, the other a son of Quintal, named Arthur, and seven females of the first generation, three daughters of Adams, one a daughter of Christian, one of Young, one of Mills, and one of McCoy, the remainder are children of the second and third generations.

No. of Births and Deaths in a Year.—During the last five years one-fifth of the population have been born, and only one has died a natural death, one of lock jaw, and a child burned to death.

Diseases, and which most fatal.—The diseases most prevalent are asthma and catarrh, which prevail most among the females. Billious attacks are frequent, but slight and easily giving way to the treatment; within the last seven years we have been visited by influenza, of which two have died. Since our return from Tahiti in 1831, there have been sixteen deaths, four of those were accidental,

four of fever, one a disease of the ear, one of the heart, one of cancer, one of consumption, two of influenza, one in child birth, and one in infancy.

Trades and Occupation.—Occupied chiefly cultivating the ground, and carpentering. Several of the young men good at cabinet making, and some as blacksmiths.

No. of Marriageable Males and Females at present Unmarried.—Males eight, females seven.

Soil, Climate, and Seasons.—Very rich but porous, a great proportion decomposed lava, the other a rich black earth with clayey ground, climate temperate, thermometer 59° to 89° in the shade. Spring commences in August, which is our harvest, when we dig our yams and potatoes, which are our principal food. We have two crops of potatoes per year, which are planted in February and July, and dug in June and November.

Winds, distinguishing those that prevail and what kind of weather they bring.—No regular trades; in the summer months the wind prevails mostly from E.S.E., to north. Northerly winds are generally light, often accompanied with rain or fog, when the wind is north it invariably goes round to the westward, from which quarter and south-east we have the strongest gales, when it is south-west it is generally clear weather and moderate breezes. During the winter season, the prevailing winds are from S.W. to E.S.E.

Productions, Animal and Vegetable.—Animals—hogs, goats, and poultry. Vegetables—yams, sweet, and Irish potatoes, the api root and tarro in small quantities. Fruits—plantains, pines, melons, oranges, bread fruit, sugar cane, limes and the Vi or Brazilian plum. Grain—maize.

Food, and Clothing how obtained, and if plentiful.—Food chiefly yams, and potatoes. Animal food two or three times a week. Fish are getting scarce. Bed clothes are generally manufactured by the Females from the Ante or Paper Mulberry. Wearing apparel obtained from whale ships in exchange for vegetables, &c. Often in want of cotton cloth, blankets, and woollen articles: soap, scarce.

No. of ships visiting the Island, and if troublesome.—The average number of ships touching at the Island annually about eight, mostly Americans, and always behave well. Last year there were seven, ten less than the year before: the last vessel that touched here was an English brig from New Zealand bound to California with Emigrants; eight English females amongst them.

Any general information respecting habits, modes of life, Laws Regulations, &c.—On the 1st of January a Chief Magistrate and Councillor are elected; all over sixteen years of age are voters, (both male and female,) the chief Magistrate then chooses his Councillor or Secretary, the duty of the Magistrate is to convene meetings and hear cases; it is then left to the decision of a Jury of five persons, and if the decision is not satisfactory to both parties, they are allowed to appeal to the Commander of H.M.S. ships of war: punishments are generally fines or labour. The inhabitants generally retire to rest early and arise with the sun. From August to November they have plenty of employment, digging yams, also planting bananas, yams, and potatoes, weeding ground, &c. When not busily employed they generally meet in the morning, and if the weather is favourable go fishing, and if not, on Saturday go goat hunting for a Sunday dinner. On the arrival of a ship off the island, no one is allowed to go on board before the pilot, he always takes charge of the boats when landing, and provides for the Captain when on shore: each family in rotation stands pilot, or provides a deputy, who always expects a small remuneration for his services.

The females generally assist in the cultivation of the ground, preparing thatch for the houses, &c, and in fact are more employed than the males, they are generally very strong, many of them being able to carry a barrel of potatoes down to the landing place.

Queries proposed by me and Answers supplied by Messrs. Buffett and Nobbs.

J. WOOD, (s)

Lieut.-Com. H.M.S. Pandora.

THE NAVIGATION LAWS.—*Declaration of Reciprocity by Sweden.*

The following important proclamation of the King of Sweden and Norway, conceding to British vessels the same privileges in Swedish and Norwegian ports as native vessels, has been officially published by the Consul General of those countries in London :

We, Oscar, by the grace of God King of Sweden and Norway, the Goths and the Vandals, make known that, it having been officially reported to us that in consequence of the new navigation laws which have passed the parliament of Great Britain, and been ratified by the government of the said kingdom, Swedish vessels, subject to stipulated conditions of reciprocity, will, from and after the 1st of January, 1850, (with the sole exception of the coasting trade), be treated in like manner as British vessels in all ports under the British rule ; we have, in return for the privileges thus granted to Swedish vessels, been graciously pleased to decree that from and after the 1st of January, 1850.

1.—British vessels visiting the ports of Sweden shall, both on arrival and departure, be treated in the same manner as native vessels in respect to tonnage and port dues, and all other charges to the crown, town, or private institutions of every denomination.

2.—All goods being the natural production or manufacture of any country soever, the importation of which into the ports of the kingdom of Sweden is legally permitted by Swedish vessels, may be imported into Sweden by British vessels from any place soever; and, likewise, all goods, the exportation of which from Sweden by vessels of the country is legally permitted, may be exported thence by British vessels: in both cases without the goods in question so imported or exported being subject to higher charges, of any denomination, than would be levied if the goods from or to the same places were imported or exported by Swedish vessels. Which all whom it may concern have to regulate accordingly. For greater certainty we have signed this with our own hand, and caused it to be sealed with our royal seal.—

Palace at Stockholm, the 26th day of October, 1849,

(Signed)

OSCAR.

A List of New Charts published and corrected by the Admiralty, and Sold by R. B. Bate, 21, Poultry.

	<i>s.</i>	<i>d.</i>
SCOTLAND, Sheet 1, <i>Firth of Solway to the Firth of Clyde</i> , Capt. C. G. Robinson, R.N., 1838.	price	2 0
Do. do. 2, <i>Firth of Clyde, Campbelltown, &c.</i> , Capt. C. G. Robinson, R.N., 1848.	price	2 0
Do. do. 6, <i>North Coast from Thurso Bay to Cape Wrath</i> , Com. Otter, R.N., 1844.	price	2 0
Do., <i>Sanda Island</i> , Capt. C. G. Robinson, R.N., 1848.	“	0 6
Do., <i>Port Ane</i> , Do. do. 1849.	“	0 6
Do., <i>Lamlash Harbour</i> , Do. do. 1848.	“	0 6
Do., <i>Lochs Inver and Roe</i> , Com. Otter, R.N., 1848.	“	1 6
ENGLAND, <i>West Coast</i> , Sheet 10, <i>Formby Bay to Fleetwood</i> , Capts. Sir Edward Belcher, H. M. Denham, and G. Williams, 1837, to 1847.	price	2 0
ACAPULCO PORT, Capt. Sir Edward Belcher, C.B., R.N., 1837,	“	1 6
PUGET SOUND, Mr. Inskip, 1846.	“	0 6
FONSECA GULF, Capt. Sir Edward Belcher, C.B., R.N., 1838,	“	2 0
PORTS FITZROY AND PLEASANT, Capt. B. Sullivan, R.N., 1838,	“	1 6
COCAGNE HARBOUR, Capt. H. W. Bayfield, R.N., 1843,	“	1 6

PORTS FITZROY AND PLEASANT, <i>Capt. B. Sullivan, R.N., 1838,</i>	"	1	6
COCAGNE HARBOUR, <i>Capt. H. W. Bayfield, R.N., 1843,</i>	"	1	6
MURRAY, DO., <i>Prince Edward's Island, Ditto, 1843,</i>	"	1	6
PORT ALEXANDER, <i>West Coast of Africa, Mr. J. Richards Master, R.N., 1849.</i>			price 0 6
CHINA, <i>East Coast, Sheets Nos. 2, to 8, Capt. Collinson, C.B., R.N., 1845.</i>		each 3	0 and 2 0
MIRS BAY, <i>Capt. Collinson, C.B., R.N., 1846.</i>			price 2 0
MIN RIVER, <i>Capt. Kellett, C.B., R.N., 1843.</i>			" 2 0
TINGHAE HARBOUR, <i>corrected to 1848.</i>			" 2 0
EAST INDIA LIGHTS, <i>corrected to 1849.</i>			" 0 3
CHUSAN ISLANDS, <i>Capt. Collinson, C.B., R.N., 1846, 2 Sheets,</i>		each 2	0
ENDRAVOUR STRAIT, <i>Australia, Capt. O. Stanley, 1848.</i>			price 1 6
AUCKLAND HARBOUR, <i>New Zealand, Capt. J. L. Stokes, R.N.,</i>			" 1 0
NORTH POLAR SEAS, <i>corrected to 1849.</i>			" 2 0
ARCTIC, AMERICA, <i>Sheet 2, ditto.</i>			" 2 0
BAFFINS BAY, <i>ditto.</i>			" 2 0

METEOROLOGICAL REGISTER.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, Royal Observatory.
From the 21st October to the 20th of November, 1849.

Month Day.	Week Day.	Barometer. In Inches and Decimals.		Thermometer In the shade.				Wind. Quarter. Strength.				Weather.	
		9 A.M.	3 P.M.	9 A.M.	3 P.M.	Min	Max	A.M.	P.M.	A.M.	P.M.	A. M.	P.M.
21	Sa.	29.85	29.81	53	57	50	58	SW	W	3	4	or [2	bcp [3
22	M.	30.10	30.10	48	55	42	58	SW	S	2	3	bc	od [2]
23	Tu.	30.12	30.15	56	61	58	62	SW	SW	2	4	bc ;	o
24	W.	30.16	30.17	57	60	53	62	SW	SW	3	3	o	bc
25	Th.	30.06	30.00	56	59	51	61	SW	SW	4	4	op [2]	bc
26	F.	29.82	29.83	54	56	53	57	SW	W	2	2	bcp [1]	bc
27	S.	29.96	29.98	52	60	49	61	SW	W	1	2	ogd [2]	bc
28	Su.	30.34	30.42	57	62	53	63	W	W	1	1	o	bc
29	M.	30.68	30.66	50	56	48	57	N	SE	1	1	bcm	o
30	Tu.	30.33	30.18	47	53	42	56	SE	S	2	3	b	bc
31	W.	29.82	29.66	49	51	48	52	NW	W	1	1	od [3	bcm
1	Th.	29.52	29.53	48	52	42	53	SE	SE	3	3	o	o
2	F.	29.63	29.64	43	53	39	54	E	NE	1	2	bcm	b
3	S.	29.53	29.46	50	55	42	56	NE	NE	2	2	og	bc
4	Su.	29.27	29.15	48	52	47	53	NE	SW	1	1	od [1] [2]	od [3] [4]
5	M.	29.13	29.20	43	49	41	51	SW	W	5	5	qb	qbc
6	Tu.	29.56	29.66	39	45	38	48	SW	SW	2	4	b	b
7	W.	30.04	30.01	39	53	35	55	SW	SW	3	5	or [2	op
8	Th.	30.31	30.34	56	57	55	57	SW	SW	4	3	o	o
9	F.	30.38	30.34	55	57	53	58	SW	SW	3	3	o	bc
10	S.	30.30	30.27	52	56	49	57	SW	SW	1	1	o	bc
11	Su.	30.31	30.31	50	55	44	56	SW	SW	2	2	bc	b
12	M.	30.19	30.10	44	48	42	49	SW	SW	1	2	of	bc
13	Tu.	29.92	29.82	50	53	46	54	SW	SW	3	5	bc	qodr [3] [4]
14	W.	29.72	29.63	48	44	43	51	SW	SW	2	4	bcp [2	bephr [3
15	Th.	29.63	29.66	39	43	35	47	W	NW	2	4	b	qbc [3]
16	F.	29.97	30.03	38	45	37	46	NW	NW	2	4	bc	bc
17	S.	30.20	30.24	35	43	34	43	N	N	2	2	b	b
18	Su.	30.20	30.10	43	49	33	50	SW	SW	2	3	op [1]	od [3]
19	M.	30.02	30.05	51	49	49	51	N	N	2	2	o	o
20	Tu.	30.13	30.14	42	44	42	46	E	E	1	1	o	o

October 1849.—Mean height of the barometer = 29.8811 inches; mean temperature = 50.4 degrees; depth of rain fallen 2.93 inches.

NOTICE TO CORRESPONDENCE.

The letter from Cushaven just received. That from Jersey in our next.

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