

A REVIEW OF SOME OF THE SPECIES OF
LEPANTHES FROM VENEZUELA (ORCHIDACEAE).

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The orchid flora of the coastal mountains of Venezuela is more or less isolated and distinct from the orchid flora of the Cordillera del Merida, the mountains of western Venezuela that are contiguous with the Eastern Cordillera of Colombia. In the high mountains of the adjacent departments of Santander and Norte de Santander we have found numerous species of pleurothallids that have been found in neighboring areas of Venezuela and illustrated by G. C. K. Dunsterville in *Venezuelan Orchids Illustrated*. Very few species from the coastal range have been seen or recorded from the Eastern Cordillera of Colombia.

As of this date 49 specific epithets (encompassing about 44 species) have been attributed to the genus Lepanthes in Venezuela. Of these, 41 have been superbly illustrated by Mr. Dunsterville in *Venezuelan Orchids Illustrated*, 13 with erroneous determinations, nine of which are undescribed species. One has recently been described from neighboring Colombia; the remaining seven are described below.

* The species from the coastal mountains identified in *Venezuelan Orchids Illustrated* and the *Flora of Venezuela* as L. wagneri Rchb. f., is one of the variable and widely distributed variations (or populations) in the L. turrialvae-complex. Exactly how to treat this complex is not yet resolved, but, of course, the simplest solution would be to include all the variations in one variable species. I have drawn numerous plants from Costa Rica, Panama, Colombia and Ecuador, each of which varies from the other in seemingly inconsequential details. To give each a specific epithet seems impractical at this time. Those populations that vary to a significant degree, however, should be recognized.

Lepanthes wagneri does occur in western Venezuela. It was described from Aspasica in the Eastern Cordillera of Colombia, and it is relatively frequent through Colombia and Ecuador. In *Venezuelan Orchids Illustrated* it is identified as the Costa Rican L. decipiens Ames & Schweinf., and in the *Orchidaceae* by Foldats in the *Flora of Venezuela* it is identified as the Costa Rican L. barbae Schltr.

* Dunsterville's drawing of the species from the high mountains of western Venezuela identified as L. aquila-borussiae Rchb. f., is a form of L. rabei Foldats. This species is frequent and variable in the high mountainous paramos of adjacent Colombia. Lepanthes aquila-borussiae was described from a collection near Caracas in the coastal mountains. Among Dunsterville's drawings the species found near Caracas identified as the Guatemalan L. stenophylla Schltr. seems to fit Reichenbach's meager description and sketches.

* The illustration of the species from the western Venezuelan mountains identified as the Ecuadorian L. pteropogon Rchb. f., confused us for years. We had found it in neighboring Colombia, but never in Ecuador. The true L. pteropogon was described from a collection by Jameson from around Quito. Believing that I knew what L. pteropogon should look like, the true L. pteropogon was described by me as L. pollex. It is still a common species around Quito. The misidentified Colombian and Venezuelan species is probably L. ruscifolia Rchb. f. which was described from a collection by Schlim from the Cordillera del Merida. Lepanthes ruscifolia may also include L. dunstervilleorum Foldats, depending upon how much variation will be acceptable,

* The species in Venezuelan Orchids Illustrated and the Flora of Venezuela identified as the Guatemalan L. samacensis Ames was recently described from the Eastern Cordillera of Colombia as L. cercion Luer & Escobar. The sepals of L. samacensis are ciliate, those of L. cercion are not.

* The species identified in the Flora of Venezuela as the Central American L. ciliisepala Schltr. was recently discovered in the Eastern Cordillera of Colombia and described by Luer & Escobar as L. antennifera.

Lepanthes biappandiculata Luer, sp. nov.

Planta mediocris caespitosa, racemo congesto disticho foliis grandibus latis brevioribus, sepalis late ovatis breviter acuminatis, petalis transverse bilobis, lobo superiore oblongo rotundato, lobo inferiore late subfalcato, labello bilaminato, laminis ovatis, connectivis corporeque latis, sinu transverse bilobo cum appendicibus duobus pubescentibus.

Plant medium in size, epiphytic, caespitose; roots slender. Ramicauls erect, slender, 4-10 cm long, enclosed by 8-12 pale, long-ciliate, lepanthiform sheaths. Leaf erect, thinly coriaceous, elliptical, 5-7 cm long, 2.4-2.7 cm wide, the obtuse apex lightly acuminate, the base cuneate into the petiole. Inflorescence a congested, distichous, successively flowered raceme up to at least 8 mm long, borne behind the leaf by a filiform peduncle ca. 15 mm long; floral bracts echinate, 2 mm long; pedicels 1.5 mm long; ovary 1.5 mm long; sepals yellow-green, glabrous, carinate, broadly ovate, the obtuse apices shortly acuminate, the dorsal sepal 4 mm long, 4 mm wide, connate to the lateral sepals for 1.5 mm, the lateral sepals oblique, 4 mm long, 2.25 mm wide, connate 1 mm; petals dull orange with the border purple, minutely pubescent, transversely bilobed, 1.3 mm long, 3.3 mm wide, the upper lobe oblong with the end rounded, the lower lobe smaller, obliquely triangular-falcate with the apex narrowly rounded; lip orange-brown, suffused with purple, bilaminated, the blades ovate, microscopically pubescent, 1.6 mm long, the connectives and body broadly

cuneate, connate to the base of the column, the sinus broadly bilobed, pubescent, with 2 small, oblong, ciliate, appendices externally in the sulcus, one behind the other; column stout, 1.5 mm long, the anther dorsal, the stigma ventral.

Etymology: From the Latin *biappendiculatus*, "with two appendices," referring to the two external appendices.

Type: Venezuela: State of Miranda: epiphytic in forest near Guatopo, Apr. 1961, G. C. K. Dunsterville 619 (MO); C. Luer illustr. 11519.

This species was identified in the Flora of Venezuela as *L. ruscifolia* Rchb. f. and in Venezuelan Orchids Illustrated, as the Ecuadorian *L. papyrophylla* Rchb. f. The latter was described from a collection by Jameson near Quito. To date, *L. papyrophylla* is one of the two "old species" from Ecuador that have not yet been rediscovered, but from Reichenbach's description and Lindley's sketches confirming the acute sepals and petals, and deeply sulcate lip, it is obvious that this species from Eastern Venezuela is not the same.

Although unusual, a pair of appendices, one behind the other, seen externally on the body of the lip of this species has been seen in extremely few other species (e.g. *L. eumeces* Luer).

Lepanthes calocodon Luer, sp. nov.

Species haec *L. chelonioni* Luer & Escobar affinis, sed sepalis intus glabris, caudis sepalorum lateralium angustioribus, laminae labelli oblongis glabris tantum apice incurvatis longiciliatis, et columna graciliore differt.

Plant small, epiphytic, caespitose; roots slender. Ramicauls slender, erect, 2-4 cm long, enclosed by 3-5 minutely ciliate, lepanthiform sheaths. Leaf erect, coriaceous, elliptical, obtuse, 1.5-2 cm long, 1-1.2 cm wide, the base cuneate into a petiole ca. 1.5 mm long. Inflorescence a loose, flexuous, flexible, few- but large-flowered, successively flowering raceme up to 5 cm long including the filiform peduncle ca. 2.5 cm long; floral bracts lightly echinate, 1.5-2 mm long; pedicels 3-4 mm long; ovary carinate-papillose, 1.5 mm long; sepals dark red-purple, carinate, glabrous, minutely short-ciliate, the dorsal sepal ovate-triangular, concave, 15 mm long, 10 mm wide expanded, connate to the lateral sepals for 4 mm to form a cupped flower, the apex acute, acuminate, the lateral sepals ovate-triangular, concave, oblique, 15 mm long including the tails, connate 8 mm, 13 mm wide expanded together, the subacute apices contracted into tails 5 mm long; petals dark purple, transversely bilobed, 0.75 mm long, 6.5 mm wide, the upper lobe minutely short-pubescent, narrowly triangular, the lower lobe longer, long-pubescent, triangular-filiform; lip dark purple, bilaminar, the blades glabrous, narrowly oblong, 4 mm long expanded, the apices rounded, long-ciliate, incurved beyond

and below the stigma, the connectives broadly cuneate, connate to the column near the middle, the sinus obtuse with an oblong, shortly pubescent appendix; column slender, 3 mm long, the anther dorsal, the stigma ventral.

Etymology: From the Greek calocodon, "a beautiful bell," referring to the appearance of the flower.

Type: Venezuela: State of Tachira: epiphytic in dwarf forest near the pass between Zumbador and Quenequea, alt. 2500 m, M. J. O'Connor, Oct. 1969, G. C. K. Dunsterville 1120 (NO), C. Luer illustr. 11516.

This species was identified as the Ecuadorian L. capitanea Rehb. f. in Venezuelan Orchids Illustrated. Lepanthes capitanea was described from a collection by Jameson near Lloa, very near to Quito. It is fairly frequent in the mountains of central Ecuador, but it has never been seen elsewhere. The flower is flat, completely different from the concave, bell-shaped flower of the present species.

Lepanthes calocodon is very closely allied to L. chelonion from the nearby mountains of Colombia, but L. calocodon is distinguished by the sepals glabrous within, narrower tails of the lateral sepals, and long, oblong blades of the glabrous lip with long-ciliate apices that curve inward beyond the very slender column.

Lepanthes glochidea Luer, sp. nov.

Planta parva caespitosa, racemo subdenso paucifloro quam folio anguste ovato brevior, sepalis anguste ovatis acutis ciliatis, petalis transverse bilobis, lobis longi-attenuatis ciliatis, labello minuto bilaminato ciliato, appendice linguiformi.

Plant small, epiphytic, caespitose; roots filiform. Ramicauls slender, erect, 4-6 cm long, enclosed by 6-8 microscopically scabrous, lepanthiform sheaths. Leaf erect, thinly coriaceous, more or less suffused with purple, narrowly ovate, acute, 2.5-3.5 cm long, 0.6-0.8 cm wide, the base cuneate into a 1 mm long petiole. Inflorescence a subdense, successively few-flowered raceme up to 8 mm long, borne behind the leaf by a filiform peduncle 5-8 mm long; floral bract glabrous, 1-1.5 mm long; pedicel 1 mm long; ovary 1 mm long; sepals yellow, suffused with purple, ciliate, ovate, acute, lightly acuminate, the dorsal sepal 3.4 mm long, 1.5 mm wide, connate to the lateral sepals for 0.5 mm, the lateral sepals 1-veined, 3.6 mm long, 1.2 mm wide, connate 0.8 mm; petals yellow-orange, ciliate, transversely bilobed, 0.5 mm long, 2.5 mm wide, the lobes similar, narrowly triangular, attenuate; lip orange, bilaminate, the blades narrowly ovate, pubescent, 0.8 mm long, the connectives broadly cuneate, connate to the base of the column, the body concave with an obtuse sinus, the appendix long-ligulate, decurved over long cilia on the convex, external surface of the body; column 0.8 mm long, the anther dorsal, the stigma ventral.

Etymology: From the Latin (Greek) glochideus, "with points," referring to the pointed sepals and petals.

Type: Venezuela: State of Trujillo: epiphytic in cloud forest between Bocono and Guaramacal, alt. ca. 2500 m, Mar. 1961, G. C. K. Dunsterville 605 (MO), C. Luer illustr. 11518.

In Venezuelan Orchids Illustrated and the Flora of Venezuela this species was identified as the Ecuadorian L. millei Schltr., which is frequent in the high forests of the central part of that country. Although the loose, flexuous racemes of L. millei were originally described as being commonly shorter than the obtuse, elliptical leaf, the racemes are often found growing much longer. The racemes of L. glochidea are less than half the length of the acute, narrowly ovate leaf. In addition, the sepals of L. millei are entire, the petals are not ciliate, and the appendix is reduced to a minute, obtuse angle in the sinus.

Lepanthes navicularis Luer, sp. nov.

Planta parva caespitosa, folio anguste ovato, racemo brevi subdenso, sepalis ovatis subacutis, petalis pubescentibus transverse bilobis obtusis, lobo inferiore minore, labello bilaminato, laminis breviter pubescentibus ovatis, connectivis latis, appendice crassa naviculari.

Plant small, epiphytic, caespitose; roots slender. Ramicauls slender, erect, 4-9 cm long, enclosed by 6-7, minutely ciliate-scabrous, lepanthiform sheaths. Leaf erect, coriaceous, narrowly ovate, acute, 3-4.5 cm long, 1-1.2 cm wide, the base cuneate into the petiole 1.5-2 mm long. Inflorescence a sub-dense, successively few-flowered raceme up to 7 mm long, borne behind the leaf by a filiform peduncle 5-8 mm long; floral bracts glabrous, 1.5 mm long; pedicels 1.5 mm long; ovary 1 mm long; sepals pale yellow-brown, suffused medially with purple, ovate, subacute, more or less minutely subdenticulate, the dorsal sepal 2.5 mm long, 1.7 mm wide, connate to the lateral sepals for 0.5 mm, the lateral sepals oblique, 1-veined, 2.5 mm long, 1.1 mm wide, connate 0.75 mm; petals yellow, the upper lobe suffused with red, minutely pubescent, transversely bilobed, 0.8 mm long, 1.9 mm wide, the upper lobe oblong with the apex obtuse to rounded, the lower lobe obliquely triangular with the apex rounded; lip red-purple, minutely pubescent, bilaminate, the laminae ovate, 1.2 mm long, the apices narrowly obtuse, the bases broadly rounded, the connectives broadly cuneate, connate to the base of the column, the body thick with the sinus protruding as an acute, triangular, prowlike appendix; column 1 mm long, the anther dorsal, the stigma ventral.

Etymology: From the Latin navicularis, "boat-shaped," referring to the appearance of the appendix.

Type: Venezuela: State of Merida: epiphytic in cloud forest, La Carbonera, alt. ca. 2000 m, July 1962, G. C. K. Dunsterville 713 (HO), C. Luer illustr. 11517.

This species was identified as the Costa Rican L. lindleyana Oerst. a comb. f. in Venezuelan Orchids Illustrated and the Flora of Venezuela. Although similar, this species may be distinguished by the subdense inflorescence with smooth floral bracts and short pedicels appressed to the rachis, and a thick, triangular appendix. Reichenbach described the rachis of L. lindleyana as "bene bipectinati" indicating that the raceme was congested with two dense rows of pedicels. His drawing also shows the floral bract to be echinate.

Lepanthes ophiostele Luer, sp. nov.

Planta mediocris caespitosa, racemis subdensis foliis anguste ovatis plus minusve aequilongis, sepalis ovatis acutis, petalis bilobis pubescentibus, lobis triangularibus aequilongis, labello bilaminato breviter ciliatis, laminis lunatis, connectivis et corpore latis ad columnam angustissimam elongatam super medium connatis, et appendice oblonga pubescenti.

Plant medium in size, epiphytic, caespitose; roots slender. Rhachis erect, slender, 7-10 cm long, enclosed by 7-8 tightly fitting, minutely scabrous, lepanthiform sheaths. Leaf erect, thinly coriaceous, narrowly ovate, acute, 4-8 cm long, 1.5 cm wide, the base cuneate into a twisted petiole 3 mm long. Inflorescence a subdense, successively many-flowered raceme up to 5 cm long, borne behind the leaf by a filiform peduncle 8-20 mm long; floral bracts and pedicels 1-1.5 mm long; ovary 1 mm long; sepals pale yellow-brown, entire, carinate, ovate, acute, the dorsal sepal lightly concave, 3.5 mm long, 2 mm wide, connate to the lateral sepals for 0.5 mm, the lateral sepals 1-veined, oblique, 3.5 mm long, 1.3 mm wide, connate 1.2 mm; petals orange, red at the base, minutely ciliate-pubescent, transversely bilobed, 0.6 mm long, 2.5 mm wide, the lobes triangular, acute, about equal in size; lip red, orange toward the margins, bilaminate, the blades 1.5 mm long, minutely pubescent, oblong-lunate with rounded ends, the connectives broad forming a broad body with a cleft sinus and an oblong, pubescent appendix, the body connate to the column above the middle; column very slender, 1.75 mm long, the anther dorsal, the stigma subapical.

Etymology: From the Greek ophiostele, "a snake-like column," referring to the long, slender column.

Type: Venezuela: State of Merida, epiphytic in cloud forest between Santa Cruz and Canagua, alt. 2600 m, Nov. 1973, G. C. K. Dunsterville 1100 (HO), C. Luer illustr. 11513.

This species was identified in Venezuelan Orchids Illustrated as the Ecuadorian *L. monoptera* Lindl. *Lepanthes monoptera* was described from a collection by Jameson near Cuenca in southern Ecuador, and it is found commonly in southern and central Ecuador. The habit, raceme, and all floral parts easily separate the two species.

Lepanthes ophiostele is recognized by the slender, subdense, many-flowered raceme that approaches the leaf in length, and the slender, elongated column to which the lip is connate above the middle.

Lepanthes pectinata Luer, sp. nov.

Planta mediocris caespitosa, foliis acuminatis quam racemis distichis congestissimis longipedicellatis longioribus, sepalis ovatis obtusis, petalis magnis transverse bilobis glabris, lobo superiore suborbiculato, lobo inferiore triangulari obtuso, labello bilaminato, laminis ellipticis glabris, connectivis late cuneatis, appendice segmentata pubescenti.

Plant medium in size, epiphytic, caespitose; roots slender. Ramicauls erect to subpendent, slender, 2.5-7.5 cm long, enclosed by 4-8 closely fitting, minutely subscabrous, lepanthiform sheaths. Leaf erect, coriaceous, more or less suffused with purple, elliptical to suborbicular, 2-6 cm long, 1-4 cm wide, the apex subacute to obtuse, more or less abruptly acuminate, the base similarly acuminate to the petiole 1.5 mm long. Inflorescence a very congested, distichous, long-pedicellate, successively many-flowered raceme up to 20 mm long, borne on top of the leaf by a filiform peduncle 10-20 mm long; floral bracts subscabrous, 1 mm long; pedicels 2-2.5 mm long; ovary 3 mm long; sepals red-brown, entire, ovate, subacute to obtuse, the dorsal sepal 2.5 mm long, 2 mm wide, connate to the lateral sepals for 0.5 mm, the lateral sepals oblique, 2 mm long, 1.25 mm wide, connate 1 mm; petals orange, red toward the base, glabrous (microscopically cellular-pubescent), transversely bilobed, 1 mm long, 2.75 mm wide, the upper lobe suborbicular, the lower lobe triangular with the apex rounded; lip red-orange, essentially glabrous, bilaminate, the blades elliptical, 1.4 mm long, with obtuse ends, the connectives broadly cuneate, connate to the base of the column, the sinus obtuse with a comparatively large oblong appendix with a long-pubescent terminal segment; column 1.25 mm long, the anther dorsal, the stigma ventral.

Etymology: From the Latin *pectinatus*, "like a comb," referring to the congested, long-pedicellate raceme.

Type: Venezuela: State of Bolivar: epiphytic in forest along the road to Santa Elena de Uairen, between Km 114 and 136, alt. 900-1300 m, Jan. 1964, G. C. K. Dunsterville 832 (MO), C. Luer illustr. 11514.

This species from eastern Venezuela was identified as the Jamaican *L. ovalis* (Sw.) Fawc. & Rendle in the Flora of Venezuela, and as the Central American *L. turialvae* Kchb. f. in Venezuelan Orchids Illustrated. Besides the distinctive habit with acuminate leaves and smaller flowers, the large, segmented, pubescent, appendix easily distinguishes this species from the other two. The appendix, however, is very similar to that of several apparently unrelated species from Ecuador.

Lepanthes scolex Luer, sp. nov.

Planta parva caespitosa, foliis ellipticis quam racemis subdensis longioribus, sepalis ovatis breviter acuminatis subdenticulatis, petalis transverse bilobis, lobis rotundis subaequantibus, labello bilaminato, laminis anguste ovatis obtusis, connectivis oblongis, appendice oblonga pubescenti.

Plant small, epiphytic, caespitose; roots slender; ramicauls slender, erect, up to 4.5 cm long, enclosed by 5-7 closely fitting, lepanthiform sheaths. Leaf erect, coriaceous, elliptical, acute, up to 3 cm long, 1.2 cm wide, the base cuneate. Inflorescence a subdense, successively few-flowered raceme up to 15 mm long, borne behind the leaf by a filiform peduncle up to 10 mm long; floral bracts and pedicels ca. 1 mm long; ovary ca. 1 mm long; sepals pale translucent brown, ovate, minutely subdenticulate, the dorsal sepal obtuse, shortly acuminate into the acute apex, 3.2 mm long, 1.8 mm wide, connate to the lateral sepals for 0.5 mm, the lateral sepals oblique, acute, acuminate, 1-veined, 3.2 mm long, 1.25 mm wide, connate 0.6 mm; petals bright yellow, the upper lobe suffused with red, glandular-cellular, transversely bilobed, 0.6 mm long, 1.75 mm wide, the lobes subequal, suborbicular; lip bright red, bilaminate, the lobes narrowly ovate, obtuse, glandular-cellular, 1.4 mm long, the connectives oblong, the body rounded, connate to the base of the column, the sinus obtuse with an oblong, pubescent appendix.

Etymology: From the Greek *skolex*, "a tapeworm," referring to the appearance of the appendix.

Type: Venezuela: State of Trujillo: epiphytic in rain forest between Bocono and Guaramacal, alt. ca. 2000 m, Aug. 1962, G. C. K. Dunsterville 724 (SEL), C. Luer illustr. 11515.

This species was identified in Venezuelan Orchids Illustrated as *L. acuminata* Schltr. from the northern part of Central America. Although superficially similar, the Central American species may be distinguished from this Venezuelan species by the narrower, twice longer, entire sepals, proportionately larger petals, and a very small, triangular appendix.

I am grateful to Mr. Dunsterville who generously supplied me with pickled vegetative and floral material of the above species.