

NEW SPECIES OF *LEPANTHES* (ORCHIDACEAE)

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In the following new descriptions of species of *Lepanthes*, the sheaths of the secondary stems are referred to as "lepanthiform," a concept derived from the peculiar morphology of the sheaths typical for the genus. The secondary stems are enclosed by a series of tubular, ribbed, more or less imbricating sheaths with oblique, more or less dilated, margined ostia, and the ribs and margined ostia are grossly or microscopically ciliate or scabrous, occasionally glabrous. Lepanthiform stems are also found exclusively in *Lepanthopsis* (Cogn.) Ames and *Trichosalpinx* Luer.

The flowers are described from the customary resupinate position, although the flowers are often looked upon by authors as non-resupinate. The position is purely arbitrary, depending upon from which perspective the flower is viewed on a pendent, horizontal, or erect rachis. When the flower reclines upon the leaf, either dorsally or ventrally, the lateral sepals are usually pointed toward the surface of the leaf, indicating a resupinate position, even though the leaf may stand erect, in which case the flower becomes non-resupinate if viewed from "behind." Therefore, the unpaired middle sepal is described as dorsal in the following descriptions of new species. The dorsal sepal is three-veined unless stated otherwise; the lateral sepals are two-veined unless stated otherwise.

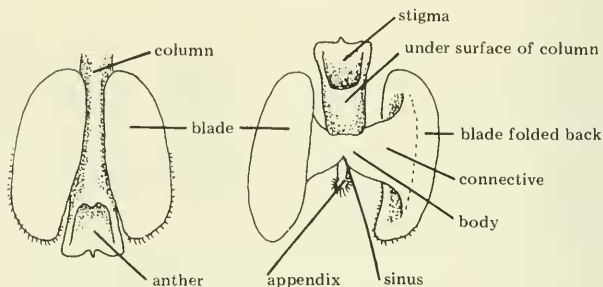
The floral parts are often vividly multicolored, but these colors are not diagnostic. The colors vary greatly from population to population, and even among plants within a limited area. The colors given in the descriptions apply only to that particular plant. The degree of pubescence of the floral parts is also variable, depending upon the magnification. Even "glabrous" parts become cellular pubescent under strong magnification.

The petals are commonly transversely oblong or bilobed. The "upper" lobe is the lobe toward the dorsal sepal, the "lower" lobe is the lobe toward the lateral sepals. The "length" is the short distance from side to side; the "width" is the longer dimension from tip to tip.

The lip of most species is so highly specialized that certain features require descriptive terminology for standardization of descriptions. In section *Lepanthes*, by far the largest, the lip is divided into two halves, or lobes, each of which consists of a blade, or lamina, borne by a more or less wedge-shaped, erect "connective." The united bases of these connectives form the "body" with an anterior "sinus," the angle of junction; posteriorly the body is connate to the under surface of the footless column. The free limbs of the connectives, one to either side of the column, carry the blades to parallel positions beside or above the column. The "apex" of the blade is the end nearer the anther, or toward the lateral sepals; the "base" of the blade is the end toward the dorsal sepal. The "appendix," the extremely modified middle lobe of the lip, is a tiny organ, often intricately sculpted, somewhere on the under surface of the body of the joined connectives, or more often at the sinus. It commonly protrudes beyond the sinus, usually beneath the stigma, and sometimes in direct contact with it. The appendix seems to act as a lure for a pollinator.

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The column may be slender or stout. It is footless except on rare occasions when a rudimentary foot may develop. The anther lies dorsally or apically with an apical rostellum, or occasionally subapically with the rostellum pointed downward. The stigma may protrude apically or it may be completely ventral. It may be round, transverse, or rarely horseshoe-shaped as in *Pleurothallis* or *Stelis*. The two pollinia are separate from the viscidium of the rostellum.



Lepanthes acarina Luer, sp. nov.

Planta minuta caespitosa, inflorescentia folio ovato paulo longiore, flore rubro minimo, sepalis serrulatis acutis, petalis transverse oblongis, labelli laminiis lunatis, appendice pubescenti sigmoidea.

Plant minute, epiphytic, caespitose; roots slender. Secondary stems slender, erect, 10-25 mm long, enclosed by 3-6 close lepanthiform sheaths, microscopically scabrous. Leaf erect, coriaceous, elliptical-ovate, obtuse, 7-10 mm long, 4-6 mm wide, the rounded base contracted into a petiole ca. 1 mm long. Inflorescence a successively few-flowered raceme 3-4 mm long, borne by a capillary pedicel up to 10 mm long; floral bract and pedicel ca. 1 mm long; ovary 1.5 mm long; sepals red, minutely serrulate-ciliate on the margins and ribs externally, the dorsal sepal broadly triangular, subacute, 2.3 mm long, 2.5 mm wide, connate to the lateral sepals for 1 mm, the lateral sepals ovate, oblique, acute, 2.5 mm long, 2.66 mm wide together, connate 1 mm; petals red, transversely oblong, 0.5 mm long, 1.75 mm wide, the upper lobe oblong, oblique, obtusely angled, the lower lobe smaller, narrowly oblong, obtuse; lip red, the blades of the lateral lobes lunate, glabrous, 1 mm long, the connectives cuneate, connate to the under surface of the lip, the appendix pubescent, constricted above the middle with the apical portion deflexed; column stout, 1 mm long, the anther dorsal, the stigma ventral.

ETYMOLOGY: From *Acarina*, the order of the mites, in reference to the little, red, prickly flowers.

TYPE: *ECUADOR*: PICHINCHA: epiphytic in cloud forest near Rio Silante, Finca Canchacato, alt. ca. 2000 m, 28 Oct. 1979, *C. Luer, J. Luer & A. Hirtz 4399* (Holotype: SEL); near Tandapi, alt. 1300 m, Oct. 1982, *A. Hirtz 372* (SEL); *MORONA-SANTIAGO*: cloud forest between Gualaceo and Limon, alt. 2650 m, 29 Oct. 1982, *C. Luer, R. Escobar & A. Pozo 8220* (SEL); *BOLIVIA*: COCHABAMBA: Prov. of Charasco: Monte Puncu along Rio Lope Mendoza, alt. 2400-2600 m, 1 Feb. 1981, *C. Luer, J. Luer, R. Vásquez & E. Besse 5819* (SEL); *LA PAZ*: Prov. of Nor Yungas: west of Coroico, alt. 2550 m, 27 Jan. 1983, *C. Luer, J. Luer, R. Vásquez & E. Besse 8611* (SEL); *COLOMBIA*: ANTIOQUIA: Munic. of Cocorná: forest in quebrada near Rio Cocorná, alt. 1600 m, 24 April 1983, *C. Luer, R. Escobar et al. 8810* (SEL); Munic. of Frontino: Alto de Cuevas, alt. 2050 m, 14 May 1983, *R. Escobar 2602* (SEL); Munic. of Jardín: Alto de Ventanas, alt. 2800 m, 25 May 1983, *R. Escobar 2726* (SEL); Munic. of Sonson: Tres Cruces, alt. 2750 m, 30 April 1983, *C. Luer, R. Escobar et al. 8903* (SEL); Munic. of Yarumal: Alto de Ventanas, alt. 2100 m, 20 May 1983, *R. Escobar 2614* (SEL); *NORTE DE SANTANDER*: Munic. of Toledo: Alto de Santa Ines, alt. 2100 m, 23 May 1982, *C. Luer, R. Escobar & D. Portillo 7962* (SEL).

This species is distinguished by the little, red, prickly flower held above the little ovate leaf. The sepals are minutely serrulate, the dorsal broadly triangular, the blades of the lip are lunate and between them the appendix is proportionately large, pubescent, and deflexed upon itself above the middle.

Lepanthes aculeata Luer, sp. nov.

Planta parva caespitosa, foliis ovatis acutis superficie scrobiculata et aculeata, racemo congesto folio brevior, sepalis subaequalibus ovatis obtusis ciliatis, petalis transverse bilobatis lobis inaequalibus, labelli laminis falcatis, appendice loriformi pubescenti.

Plant small, epiphytic, caespitose; roots slender. Secondary stems erect, slender, 3-9.5 cm long, enclosed by 7-17 close, ciliated lepanthiform sheaths with widely dilated ostia. Leaf erect, coriaceous, ovate, acuminate, acute, 17-27 mm long, 10-14 mm wide, the under surface covered by numerous small depressions and excavations with the elevated ridges echinate-pubescent, the margins erose-scabrous, the rounded base abruptly contracted into a petiole 1-2 mm long. Inflorescence a congested, successively flowered raceme up to 8 mm long, borne by a filiform peduncle ca. 5 mm long along the back surface of the leaf; floral bract 0.75 mm long; pedicel 1.25 mm long; ovary 1.5 mm long; sepals green, suffused with red, subequal, broadly ovate, obtuse, shortly ciliate, connate basally, the dorsal sepal 2 mm long, 1.75 mm wide, the lateral sepals 1.5 mm long, 1.75 mm wide; petals redorange, transversely bilobed, 0.8 mm long, 2.66 mm wide, the upper lobe oblong, obtuse, the lower lobe smaller, narrowly oblong, oblique, obtuse; lip redorange, the blades oblong, 1.3 mm long, the apices uncinatae, acute, the bases rounded, the connectives broadly cuneate, lifting the blades above the column, connate to the under surface of the column above the base, the appendix strap-shaped, pubescent, hinged to the sinus; column 0.75 mm long, the anther dorsal, the stigma ventral.

ETYMOLOGY: From the Latin *aculeatus*, "covered with prickles," in reference to the under surface of the leaf.

TYPE: ECUADOR: NAPO: epiphytic in cloud forest north of Baeza, alt. ca. 1500 m, 10 Aug. 1978, C. Luer, J. Luer, A. Hirtz & A. Andreaetta 3203 (Holotype: SEL); same area, alt. 1650 m, 30 Oct. 1979, C. Luer, J. Luer & A. Hirtz 4482 (SEL); MORONA-SANTIAGO: near Rio Calagrás, alt. 1650 m, 4 Nov. 1982, C. Luer, R. Escobar & D. D'Alessandro 8279 (SEL).

The under surfaces of the leaves of this species are minutely but deeply rugose with the elevated ridges erose and spiculate. The sepals are broadly ovate, about equal in size and shape and shortly ciliate. The connectives of the lip lift the blades well above the column, and the hinged appendix protrudes from the sinus.

Lepanthes agglutinata Luer, sp. nov.

Planta mediocris caespitosa, inflorescentia folio ovato acuminato brevior, racemo congestissimo, sepalis late ovatis breviter acuminatis minute denticulatis, petalis transverse oblongis pubescentibus cum processo mediano, labelli laminis lunatis diaphanis agglutinis, connectivis anticeis, corpore angusto, appendice grandi oblonga ciliata cum glande apicali.

Plant medium in size, epiphytic, caespitose; roots slender. Secondary stems slender, erect, 11-16 cm long, enclosed by 13-16 microscopically ciliate lepanthiform sheaths. Leaf erect, thinly coriaceous, purple beneath, ovate, long-acuminate, 6-8.5 cm long, 1.8-2.7 cm wide, the rounded base contracted into a petiole 3-4 mm long. Inflorescence a very congested raceme up to 25 mm long of successive flowers, borne by a filiform peduncle up to 25 mm long along the back of the leaf; floral bract 1.5 mm long; pedicel 3.5 mm long; ovary 2 mm long, winged; sepals translucent, carinate, with minutely denticulate margins, acute, shortly acuminate, the dorsal sepal broadly ovate-triangular, 5.5 mm long, 5 mm wide, connate 1.5 mm basally to the lateral sepals, the lateral sepals oblique, the apices diverging, 5.5 mm long, 3 mm wide, connate 1.5 mm; petals green with purple margin, shortly pubescent, transversely oblong, 1.5 mm long, 4.75 mm wide, with a 1 mm long process from the outer margin at the midvein, the lobes oblong, obtuse, the lower lobe smaller; lip green, the blades lunate, 1.75 mm long, membranous, glabrous, adherent medially over the column, the connectives narrow, attached to the apical portions of the blades, the body narrow, connate to the base of the column, the appendix 1 mm long, oblong, ciliate, concave, truncate-retuse, with a ciliated, apical gland; column 1.5 mm long, the anther dorsal, the stigma ventral.

Etymology: From the Latin *agglutinatus*, "glued together," referring to the blades of the lip.

TYPE: ECUADOR: ZAMORA-CHINCHIPE: epiphytic in cloud forest near the river above Valladolid, alt. ca. 2000 m, 21 Feb. 1982, D. D'Alessandro 165 (Holotype: SEL) C. Luer illustr. 9075.

This species is another relative of the common and widespread *L. mucronata* Lindl., but *L. agglutinata* is distinguished by the larger habit, diverging lateral sepals, narrow connectives attached near the apex of the membranous blades of the lip, a narrow body, and a large appendix with an apical gland.

The lunate, membranous blades of the lip are agglutinated medially over the column to form a flat, elliptical surface, a set of characters found in *L. mucronata* and its relatives.

Lepanthes allector Luer & Escobar, sp. nov.

Planta parva debilis caespitosa, racemo congesto paucifloro folio ovato acuminato brevior, sepalis glabris, petalis transverse oblongis pubescentibus, labelli laminae oblongis ciliatis, appendice loriformi cum glande bi-alata pubescenti.

Plant small, epiphytic, caespitose. roots slender. Secondary stems slender, suberect, 2.5-5 cm long, enclosed by 6-9 close, minutely scabrous lepanthiform sheaths. Leaf suberect, thinly coriaceous, ovate, acuminate, acute, 20-30 mm long, 8-12 mm wide, the rounded base contracted into a petiole 2 mm long. Inflorescence a densely few-flowered raceme ca. 2 mm long, borne by a filiform peduncle 5-9 mm long up the back side of the leaf; floral bract 1.3 mm long, pedicel 1.5 mm long; ovary 2.5 mm long; sepals yellow, suffused with purple basally, glabrous, the dorsal sepal ovate, obtuse, 3.1 mm long, 2.75 mm wide, the lateral sepals ovate, oblique, acute, 3 mm long, 2 mm wide, connate 1 mm; petals yellow-orange, suffused with red, transversely oblong, long-pubescent, 0.66 mm long, 2.66 mm wide, the apices rounded; lip white with red margin, the blades ovate, 1.3 mm long, the apices acute, incurved, ciliate, the bases rounded, the connectives broadly cuneate with an obtuse angle on the anterior margin, connate to the under surface of the column at the base, the appendix a 2-winged, pubescent gland carried by an S-curved, straplike band from the sinus; column 1 mm long, the anther dorsal, the stigma ventral.

ETYMOLOGY: From the Latin *allector*, "an enticer," in reference to the intricate appendix.

TYPE: ECUADOR: MORONA-SANTIAGO: epiphytic in cloud forest between Gualaceo and Limon, alt. 2050 m, 29 Oct. 1982, C. Luer, R. Escobar & A. Pozo 8229 (Holotype: SEL).

This little species with an inflorescence shorter than the ovate, acuminate leaf is most notable for the angled margins of the connectives of the lip between which the appendix protrudes. The appendix consists of a pubescent, bi-alate gland borne by an S-shaped strap.

Lepanthes amabilis Luer, sp. nov.

Planta mediocris amabilis, vaginis caulium longiciliatis ostiis valde dilatatis, racemis paucis subsensibus folio elliptico brevioribus, sepalis denticulatis ovatis brevicaudatis, petalis oblique bilobis, labelli laminae lunatis convexis, appendice parva pubescenti in sinu fisso.

Plant medium in size, epiphytic, caespitose; roots slender. Secondary stems relatively stout, erect, 7-14 cm long, enclosed by 9-10 long-ciliate lepanthiform sheaths with widely dilated ostia. Leaf erect, coriaceous, elliptical, acute, 4.5-6.5 cm long including the 0.5 cm long petiole, 2-2.5 cm wide, the base cuneate into the petiole. Inflorescence a subsens, successively flowered raceme up to 35 mm long, borne behind the leaf by a filiform peduncle 10-15 mm long; floral bract 2.5 mm long, echinate; pedicel 2.5 mm long; ovary 2.5 mm long; sepals cream-colored, suffused with purple along the midveins, carinate-spiculate, ovate, acute, shortly caudate, the dorsal sepal 8 mm long, 4 mm wide, connate to the lateral sepals for 1.5 mm, the lateral sepals oblique, denticulate, connate 3 mm, 8 mm long, 6 mm wide together; petals cream, edged in red, glabrous or cellular, obliquely bilobed, 1 mm long, 3.75 mm wide, the lobes about equal, oblong with rounded ends; lip cream, edged in red, glabrous or cellular, the blades lunate, convex, 2.5 mm long, the apices narrowly obtuse and incurved beneath the apex of the column, the bases rounded, the connectives broadly cuneate, connate to the column above the middle, the sinus cleft, with a small, round, pubescent appendix; column 2.5 mm long, the anther and stigma apical.

Etymology: From the Latin *amabilis*, "lovely," referring to the pleasing qualities of the species.

Type: PERU: AMAZONAS: epiphytic in cloud forest between Leimebamba and Balsas, alt. 3050 m, 25 Aug. 1980, C. Luer, J. Luer, W. Koeniger & H. Koeniger 5426 (Holotype: SEL).

This pretty species may be distinguished by the unusually hirsute and unusually dilated lepanthiform sheaths; the ovate leaves with shorter racemes; the relatively large, purple-striped flowers; denticulate sepals; and convex, lunate blades of the lip with a small appendix in a cleft sinus.

Lepanthes antiopa Luer, sp. nov.

Planta mediocris caespitosa, inflorescentia folio ovato acuminato brevior, racemo congesto, sepalis purpureis flavolimbatis acuminatis, petalis transverse oblongis, labelli lamina oblongis glabris, appendice vestigiali.

Plant medium in size, epiphytic, caespitose; roots slender. Secondary stems slender, erect, 4-8.5 cm long, enclosed by 10-12 close, ciliate, lepanthiform sheaths with widely dilated ostia. Leaf erect, coriaceous, ovate, acuminate, acute, 3-5.5 cm long, 1-2 cm wide, ciliate along the veins beneath, the base broadly cuneate into a petiole 1 mm long. Inflorescence a congested, successively flowered raceme up to 8 mm long, borne by a filiform peduncle 5-13 mm long behind the leaf, floral bract 1 mm long; pedicel 2.5 mm long, ovary 3 mm long, sparsely papillose; sepals dark purple, edged in yellow, the margins entire, spiculate along the veins externally, the dorsal sepal ovate, concave, obtuse, acuminate, 6 mm long, 3 mm wide, the lateral sepals ovate, oblong, acute, acuminate, 6.25 mm long, 2 mm wide, connate 1.5 mm; petals purple, transversely oblong, 1 mm long, 3.75 mm wide, the upper lobe subtruncate, the lower lobe narrowly triangular, narrowly obtuse; lip purple, the blade oblong, convex, 2.2 mm long, the ends rounded, the connectives cuneate, connate to the under surface of the base of the column, the appendix reduced to a small, shallowly concave, rounded prominence; column 1.5 mm long, the anther dorsal, the stigma ventral.

Etymology: Names for *Nymphalis antiopa* L., The Mourning Cloak, a butterfly familiar to all who have ventured into the temperate forests.

Type: ECUADOR: COTOPAXI: epiphytic in cloud forest west of El Corazon, alt. 1200 m, 18 Feb. 1979, C. Luer, J. Luer & A. Hirtz 4020 (Holotype: SEL).

In spite of the fact that the colors of the flowers of *Lepanthes* are extremely variable, the sepals of this particular plant are purple with broad, yellow margins, reminiscent of the color pattern of the Mourning Cloak. Otherwise, the species may be identified by the short racemes of flowers with acuminate sepals, obtuse petals and lip, and a vestigial appendix.

Lepanthes aries Luer, sp. nov.

Planta mediocris caespitosa, inflorescentia folio oblongo acuminato subaequilonga, racemo congesto disticho, sepalis ovatis acuminatis serrulatis pubescentibus, petalis transverse oblongis acuminatis ciliatis, labelli lamina oblongis basibus elongatis obtusis recurvatis, appendice minuta trilobata pubescenti.

Plant medium in size, epiphytic, caespitose; roots coarse. Secondary stems slender, erect, 8-15 cm tall, enclosed by 8-11 minutely ciliate lepanthiform sheaths. Leaf erect, thinly coriaceous, oblong, acute, acuminate, 5-6.5 cm long, 1.5-1.8 cm wide, the base cuneate into a petiole 5 mm long. Inflorescence a congested, distichous raceme up to 23 mm long, borne by a filiform peduncle up to 45 mm long along the back of the leaf; floral bract 1.5 mm long; pedicel 2.5-3.5 mm long; ovary 2 mm long; sepals orange-brown with thin yellow margins, serrulate, shortly pubescent, ovate, acute, acuminate, the dorsal sepal 7.5 mm long, 3.75 mm wide, connate basally to the lateral sepals for 1 mm, the lateral sepals connate 4 mm, 7.25 mm long, 4.5 mm wide together; petals red-brown, ciliate, transversely oblong, bilobed, 1.5 mm long, 5 mm wide, the lobes elliptical, acuminate, acute, the lower lobe smaller; lip rosy brown, the blades oblong, 3 mm long, the apices short, obtuse, ciliate, the bases long, obtuse, recurved, the connectives broadly cuneate, connate to the column above the middle, the appendix minutely pubescent, 3-lobed, one lobe beneath 2 lobes above at the sinus; column 2.5 mm long, the anther dorsal, the stigma ventral.

Etymology: From the Latin *aries*, "a ram," referring to the recurved bases of the blades of the lip.

Type: ECUADOR: IMBABURA: epiphytic in cloud forest, Selva Alegre west of Otavalo, alt. 2730 m, 1 May 1981, C. Luer, J. Luer, A. Hirtz et al. 6044 (Holotype: SEL).

This species is characterized by the congested inflorescence nearly as long as the ovate, acuminate leaf; the serrulate, pubescent sepals; the petals acuminate at both ends; and the blades of the lip with elongated, recurved bases.

Lepanthes auriculata Luer, sp. nov.

Planta grandis caespitosa, inflorescentia folio elliptico longi-acuminato breviori, racemo densifloro longi-pedunculato, sepalis glabris acuminatis, petalis transverse bicuneatis, labelli laminis ellipticis auriculatis, corpore protrudenti, appendice oblonga pubescenti.

Plant large, epiphytic, caespitose; roots coarse. Secondary stems erect, slender, 20-30 cm tall, enclosed by 12-16 minutely ciliate lepanthiform sheaths. Leaf erect, thinly coriaceous, elliptical, acute, long-acuminate, 11-13 cm long, 4.5-5 cm wide, minutely ciliate along the veins beneath, the rounded base contracted into a petiole 5 mm long. Inflorescence a dense, successively flowered raceme at least to 5 mm long, borne by a filiform peduncle up to 40 mm long behind the leaf; floral bract 1.5 mm long; pedicel 1.25 mm long; ovary 4 mm long, narrowly winged; sepals yellow, glabrous, the dorsal sepal triangular, acute, acuminate, 9 mm long, 4 mm wide, connate to the lateral sepals for 1.5 mm, the lateral sepals ovate, oblique, 9 mm long, 4 mm wide, connate 3 mm, the apices acute, acuminate, diverging; petals yellow, suffused with purple, transversely bilobed, 1.25 mm long, 5 mm wide, the upper lobe cuneate with the apex subtruncate-rounded, the lower lobe similar but smaller and narrower; lip yellow, edged in purple, the blades elliptical, longitudinally concave, 2 mm long, the apex narrowly rounded, the base rounded, the connectives broad, short, oblique, connate to the midpart of the under surface of the column, the body protruding and rounded, the appendix short, oblong, pubescent; column 2 mm long, the anther dorsal, the stigma ventral.

Etymology: From the Latin *auriculatus*, "shaped like an ear," in reference to the appearance of the blades of the lip.

Type: ECUADOR: ZAMORA-CHINCHIPE: epiphytic near the river above Valladolid, alt. ca. 1800 m, 21 Feb. 1983, *D. D'Alessandro 164* (Holotype: SEL), *C. Luer* illustr. 9076.

This large species may be distinguished from its numerous relatives by the large, long-acuminate leaves; the glabrous, acuminate sepals; the cuneate, bilobed petals; the auriculate lobes of the lip, and a protruding appendix. The last feature, however, is visible only when the column is lifted from between the lobes of the lip.

Lepanthes aurita Luer & Escobar, sp. nov.

Planta parva caespitosa, inflorescentia folio ovato obtuso breviori, racimo congestissimo, sepalis glabris ovatis acutis, petalis grandibus transverse oblongis, labello laminis anguste oblongis, appendice late oblonga cum glande terminali parva.

Plant very small, epiphytic, caespitose; roots slender. Secondary stems slender, erect, 15-20 mm long, enclosed by 3-4 close, microscopically scabrous lepanthiform sheaths. Leaf erect, coriaceous, convex, elliptical-ovate, obtuse, 10-12 mm long, 6-9 mm wide, the base broadly cuneate into a petiole 1 mm long. Inflorescence a congested, distichous, successively flowered raceme up to 4 mm long by a filiform peduncle up to 4 mm long behind the leaf; floral bract 0.5 mm long, minutely spiculate; pedicel 0.3 mm long; ovary 1.5 mm long; sepals yellow-orange, glabrous, ovate, acute, 3.2 mm long, 1.8 mm wide, the lateral sepals ovate, acute, 3 mm long, 1.5 mm wide, connate only at the base; petals orange, transversely oblong, 1.2 mm long, 2.5 mm wide, the apices rounded, with a minute apiculum on the outer margin at the midvein; lip rose, the blades narrowly oblong, 2 mm long, the apex acute incurved with a few hairs, the base rounded, the connectives short, connate to the base of the column, the appendix broadly oblong, pubescent, with a small, terminal gland; column 1.5 mm long, the anther dorsal, the stigma ventral.

Etymology: From the Latin *auritus*, "a rabbit, or one with large ears," referring to the petals.

Type: ECUADOR: LOJA: epiphytic in cloud forest south of Yangana, alt. 2400 m, 1 Nov. 1982, *C. Luer & R. Escobar 8254* (Holotype: SEL).

Distribution: Southern Ecuador.

This little species with congested racemes shorter than the ovate leaf is distinguished by the proportionately large petals with broad, rounded apices, narrow blades of the lip, and a broadly oblong appendix with a small apical gland.

Lepanthes ballatrix Luer, sp. nov.

Planta grandis caespitosa, inflorescentia folio anguste ovato acuminato brevior, racemo congestissimo disticho, sepalo dorsali triangulari, sepalis lateralibus ovatis subacutis, petalis transverse bilobatis, labelli laminis lunatis breviter pubescentibus, appendice late triangulari ciliata.

Plant medium to large in size, epiphytic, caespitose; roots coarse. Secondary stems slender to stout, 10-30 cm long, enclosed by 8-15 lepanthiform sheaths, glabrous to microscopically scabrous on the upper sheaths, more or less microscopically ciliate on some of the stomata of the lower sheaths. Leaf erect, thinly coriaceous, glabrous beneath, narrowly ovate-elliptical, acute, acuminate, 6-12 cm long, 2.5-4 cm wide, the base rounded, abruptly contracted into a petiole 3-4 mm long. Inflorescence a very congested, distichous, short-pedicellate, successively flowered raceme up to 4 cm long, borne by a filiform peduncle up to 3 cm long behind the leaf; floral bract 1-1.5 mm long; pedicel 1-1.5 mm long; ovary 2 mm long; sepals yellow, glabrous, carinate, the dorsal sepal triangular, acute, 7-9 mm long, 3.5-4.5 mm wide, connate to the lateral sepals for 1 mm, the lateral sepals ovate, subacute, connate 2.5-3 mm, 7-8.5 mm long, 5-7 mm wide together; petals yellow to orange with red to purple margins, transversely bilobed, 1.5-2 mm long, 4-5 mm wide, the lobes suborbicular to broadly elliptical; lip orange to red, more or less suffused with purple, the blades oblong-lunate, 2 mm long, obtuse, minutely pubescent, connate to the under surface of the column below the middle, the appendix triangular, concave, ciliate; column 2 mm long, the anther dorsal, the stigma ventral.

Etymology: From the Latin *ballatrix*, "a dancer," in reference to the fancied illusion of the flower.

Type: ECUADOR: PICHINCHA: epiphytic in cloud forest between Tandayapa and Mindo, alt. 2320 m, 13 March 1982, C. Luer, A. Hirtz & S. Dalström 7294 (Holotype: SEL); IMBABURA: above Apuella, alt. 2500 m, 24 Aug. 1978, C. Luer, J. Luer & A. Hirtz 3349 (SEL); Selva Alegre, alt. 2430 m, 1 May 1981, C. Luer, A. Hirtz et al. 6048 (SEL); LOJA: west of the pass between Loja and Zamora, alt. 2700 m, 21 Sept. 1980, C. Luer, C. H. Dodson et al. 5525 (SEL); east of Yangana, alt. 2850 m, 4 March 1982, C. Luer, D. D'Alessandro et al. 7156 (SEL); MORONA-SANTIAGO: between Gualaceo and Limon, alt. 2600 m, 26 Dec. 1982, S. Dalström 384 SEL).

This large species is very similar to *L. elata* Rehb. f. and *L. monitor*, but *L. ballatrix* may be distinguished by the narrower dorsal sepal and suborbicular lobes of the petals. The lip is essentially the same as that of *L. monitor*.

Lepanthes benzingii Luer, sp. nov.

Planta mediocris caespitosa, inflorescentia folio suborbiculari breviter acuminato brevior, racemo congestissimo disticho, sepalis acutis glabris, petalis transverse bilobatis sepalis longioribus, labelli laminis oblongis super columnam, appendice quadrilobata pubescenti, stigmathe hippocrepiformi.

Plant medium in size, epiphytic, caespitose; roots slender. Secondary stems slender, erect, 6-9 cm long, enclosed by 7-8 close, microscopically ciliate lepanthiform sheaths. Leaf erect, coriaceous, broadly elliptical, 3.5-4.5 cm long, 2.2-3 cm wide, the apex shortly acuminate, abruptly acute, the base cuneate into a 2 mm long petiole. Inflorescence an extremely congested, distichous, successively flowered raceme up to 8 mm long, borne by a filiform peduncle 7-15 mm long, usually behind the leaf; floral bract 1 mm long, pubescent; pedicel 2 mm long; ovary 3.5 mm long; sepals yellow-orange, glabrous, the dorsal sepal ovate, acute, 3 mm long, 1.9 mm wide, the lateral sepals ovate, oblique, subacute, connate 1 mm, 2 mm long, 2.25 mm wide together; petals yellow, suffused with red, microscopically pubescent, transversely bilobed, 1.3 mm long, 3.2 mm wide, the lobes ovate, obtuse, the lower lobe smaller; lip red, the lobes oblong with rounded ends, 1.66 mm long, microscopically ciliate, in apposition over the column, the connectives cuneate, connate to the base of the column, the appendix pedunculate, 4-lobed, ciliate; column 1 mm long, the anther apical, the stigma subapical, horseshoe-shaped.

Etymology: Named in honor of Dr. David Benzing, professor of botany, Oberlin College, Oberlin, Ohio, co-discoverer of this species.

Type: ECUADOR: NAPO: epiphytic in wet forest north of Tena, "Cotundo," alt. 1130 m, 19 June 1983, C. H. Dodson, D. Benzing & A. Hirtz 14120A (Holotype: SEL), C. Luer illustr. 9091.

This species is closely related to the concept presently called *L. rotundifolia* L. O. Wms. which is common on the western declivity of the Andes of Ecuador. *Lepanthes benzingerii* is apparently rare at relatively low altitudes on the eastern declivity. The apices of the round leaves of *L. benzingerii* are shortly acuminate instead of obtuse, and the bases are broadly cuneate instead of rounded. The oblong blades of the lip lie in apposition over the column. The anther is apical with the horseshoe-shaped stigma subapical, in close association with the appendix. In *L. rotundifolia* the anther and apical stigma protrude between the blades of the lip, a considerable distance from the appendix.

Lepanthes bifalcis Luer, sp. nov.

Planta parva caespitosa, racemo subdensifloro folio anguste ovato acuminato brevior, sepalis dorsali synsepaloque subaequalibus, petalis transverse bifalcatis, labello ciliato suborbiculari-bilobato.

Plant small, epiphytic, caespitose; roots slender. Secondary stems slender, suberect, 3-8 cm long, enclosed by 6-8 minutely scabrous lepanthiform sheaths. Leaf suberect, thinly coriaceous, narrowly ovate, acuminate, acute, 25-40 mm long, 7-11 mm wide, the base cuneate into a petiole 3-4 mm long. Inflorescence a weak, subdensely successively flowered raceme up to 25 mm long including the capillary peduncle, along the back of the leaf; floral bract 1.5 mm long; pedicel 1.5 mm long; ovary 0.75 mm long; sepals light yellow, glabrous, the dorsal sepal ovate, subacute, convex, 2.5 mm long, 1.5 mm wide, the lateral sepals connate into an ovate lamina 2.3 mm long, 2 mm wide, the subacute apex minutely bifid; petals dark yellow, transversely bilobed, forked, 0.5 mm long, 2.3 mm wide, the lobes equal, falcate, narrowly obtuse; lip orange, minutely ciliate, suborbicular, 0.75 mm long, 0.75 mm wide, incised at the apex into two rounded lobes, the base cuneate, connate to the base of the column; column 0.8 mm long, the anther apical, the stigma subapical.

Etymology: From the Latin *bi*, "two-" and *falx, falcis*, "a sickle," in reference to the forked, bifalcate petals.

Type: ECUADOR: NAPO: epiphytic in cloud forest south of Baeza, alt. 1900 m, 20 Feb. 1982. C. Luer & A. Hirtz 6864 (Holotype: SEL).

This small-flowered species is notable for the bifalcate petals and a bilobed, suborbicular lip connate to the base of the column.

Lepanthes brachypogon Luer, sp. nov.

Planta mediocris caespitosa, inflorescentia folio longissime acuminato brevior, racemo congesto secundo, sepalis acutis lateralibus denticulatis, petalis transverse oblongis pubescentibus, labello laminis lunatis ciliatis connectivis latissimis, appendice late obtusa ciliata.

Plant medium in size, epiphytic, caespitose; roots slender. Secondary stems erect, slender, 5-11 cm long, enclosed by 8-16 lepanthiform sheaths with microscopically ciliate stomal margins. Leaf suberect to horizontal, coriaceous, narrowly elliptical, 2.5-6 cm long, 0.7-1.3 cm wide, the apex acute, long-acuminate, mucronate, the base cuneate into a petiole 1-2 mm long. Inflorescence a congested, second, successively flowered raceme up to 15 mm long, borne by a filiform peduncle 12-25 mm long on top of the leaf; floral bract 1 mm long; pedicel and ovary each 1.5 mm long; sepals green, suffused with brown, the veins denticulate externally, the dorsal sepal ovate, acute, concave, 4.75 mm long, 3 mm wide, connate to the lateral sepals for 1 mm, the lateral sepals narrowly ovate, acute, denticulate, 5 mm long, 1.6 mm wide, connate 1 mm; petals brown, transversely oblong, pubescent, 0.6 mm long, 2.8 mm wide, the ends obtuse, the lobes nearly equal; lip brown, the blades lunate, 1.8 mm long, ciliate, the ends acute, the connectives broadly cuneate, the wide body connate to the column above the base, the sinus prolonged downward with a broadly rounded, ciliate appendix; column 1.5 mm long, the anther apical, the stigma ventral.

Etymology: From the Greek *brachys* "short," and *pogon*, "a beard," referring to the shortly ciliate, chinlike labellar body and appendix.

Type: ECUADOR: PICHINCHA: epiphytic in cloud forest between Tandayapa and Mindo, alt. 2320 m, 13 March 1982, C. Luer, A. Hirtz & S. Dalström 7301 (Holotype: SEL).

Vegetatively this species looks like a form of the common and widespread *L. mucronata* Lindl., but the flowers prove no close relationship.

Lepanthes branchifera Luer & Vásquez, sp. nov.

Planta parva, racemo flexuoso folio late elliptico obtuso multilongiore, sepalo dorsali synsepaloque concavis acutis cum carinis et marginibus anguste revolūtis leviter erosis, petalis inaequaliter bilobis, lobo superiore setiformi, lobo inferiore longi-ciliato, labelli lamini anguste oblongis, columna angustissima elongata.

Plant small, epiphytic, caespitose; roots slender. Secondary stems erect, slender, 2.5-4.5 cm long, enclosed by 5-6 long-ciliate lepanthiform sheaths with markedly dilated ostia. Leaf erect, coriaceous, broadly elliptical, obtuse, 12-15 mm long, 8-10 mm wide, the base broadly cuneate into the petiole 2-3 mm long. Inflorescence a weak, lightly flexuous, successively flowered raceme up to 5 cm long including the filiform peduncle 1-2.5 cm long; floral bract 1 mm long; pedicel 1.25 mm long; ovary 1.25 mm long; dorsal sepal peach colored, ovate, acute, shortly acuminate, deeply concave, 4 mm long, 2 mm wide unspread, the carinae and the narrowly everted margins lightly erose, connate to the lateral sepals for 1 mm; lateral sepals yellow, suffused with red centrally, completely connate into a cymbiform, ovate, acute lamina 3.5 mm long, 2.5 mm wide unexpanded, the carinae and margins similarly narrowly revolute and lightly erose; petals yellow, transversely bilobed, 1 mm long, 4 mm wide, connate to the column between the basal and middle thirds, the upper lobe setiform, the lower lobe much larger, narrowly triangular, attenuate, long-ciliate along the inner margin; lip bright rose, the blades thin, translucent, glabrous, narrowly oblong, 1.25 mm long, the ends obtuse, the connectives cuneate, connate to the column between the distal and middle thirds, the appendix a membranous triangle in the sinus; column very slender, 2 mm long, minutely pubescent, the anther dorsal, the stigma ventral.

Etymology: From the Latin *branchiae*, "the gills of a fish," and *-fer*, "bearing," referring to the appearance of the lower lobes of the petals.

Type: BOLIVIA COCHABAMBA: Prov. of Chapare: epiphytic in cloud forest between Cochabamba and Villa Tunari, alt. 1950 m, 26 Nov. 1978, C. Luer, F. Fuchs et al. 3506 (Holotype: SEL).

The dorsal sepal and synsepal gape to expose long-ciliate petals hanging to either side of the lip like gills while the narrow, pointed upper lobes crisscross above. Both the petals and the lip are connected to the very long, slender shaft of the column.

Lepanthes breneri Luer, sp. nov.

Planta minuta caespitosa, caulibus secundariis brevissimis, folio elliptico racemo flexuoso brevior, sepalis spiculatis acuminatis, petalis pubescentibus transverse bilobatis lobo inferiore uncinato, labelli lamini ovatis pubescentibus, appendice triangulari apice biglanduloso.

Plant minute, epiphytic, caespitose; roots slender. Secondary stems slender, erect, 1.5-2 mm long, enclosed by 2-3 minutely ciliate lepanthiform sheaths. Leaf erect, coriaceous, elliptical, subacute, apiculate, 6-8 mm long, 2.5-3.5 mm wide, the base cuneate into a petiole 1-1.5 mm long. Inflorescence a successively flowered, subdense, flexuous raceme up to 13 mm long including the filiform peduncle 7-9 mm long; floral bract 1 mm long, pubescent; pedicel 1.25 mm long; ovary 1 mm long, spiculate; sepals red-purple with yellow apices, carinate-spiculate, sparsely ciliate, triangular-ovate, acute, acuminate, the dorsal sepal 7 mm long, 3 mm wide, the lateral sepals 7 mm long, 2 mm wide, connate 1 mm; petals red-orange, transversely oblong, 0.6 mm long, 3 mm wide, minutely pubescent, the upper lobe oblong, obtuse, the lower lobe uncinato, acute; lip red-orange, the blades ovate, obtuse, 1 mm long, minutely pubescent, the connectives narrowly cuneate, connate to the under surface of the column, the appendix triangular with the apex ciliate, minutely biglandular; column 1 mm long, the anther apical, the stigma transverse, ventral.

Etymology: Named in honor of Joe Brenner, formerly of Puyo, Ecuador, who discovered this species.

Type: ECUADOR: PASTAZA: epiphytic in wet forest ca. 10 km north of Puyo, alt. 750 m, 21 March 1976, C. Luer, J. Luer, P. Taylor & J. Brenner 931 (Holotype: SEL).

This tiny plant produces flowers larger than the leaves on racemes just surpassing the leaves in length. The sepals are acuminate and spiculate, and the lower lobes of the petals are conspicuously uncinato.

Lepanthes ciliolata Luer & Vásquez, sp. nov.

Planta parva, racemo subdenso flexuoso plurifloro folio elliptico subaequilongo, sepalis ovatis ciliolatis marginibus sepalorum lateralium anguste incurvis, petalis transverse oblongis, labelli laminis oblongis, appendice minute bilobulata.

Plant small, epiphytic, caespitose; roots slender. Secondary stems erect, slender, 2.5-5 cm long, enclosed by 6-7 minutely ciliate lepanthiform sheaths. Leaf erect, coriaceous, elliptical, acute, 15-24 mm long including the petiole 2 mm long, 7-9 mm wide, the base cuneate into the petiole. Inflorescence a successive, subdense, flexuous, several-flowered raceme up to 15 mm long including the short, filiform peduncle; floral bract 1 mm long; pedicel 0.5 mm long; ovary 1.5 mm long; sepals purple-brown, ovate, acute, shortly acuminate, carinate, ciliate pubescent near the margins, the dorsal sepal 4.5 mm long, 2.5 mm wide, connate nearly 1 mm to the lateral sepals, the lateral sepals connate 1.5 mm, 5.25 mm long, 3.5 mm wide together, each 1-veined, the lateral margins narrowly incurved; petals yellow with brown margins, microscopically cellular-pubescent, transversely oblong, 1 mm long, 2.75 mm wide, the lobes oblong with rounded ends, the lower lobe slightly smaller; lip red-brown, microscopically pubescent, the blades oblong, 2 mm long, subacute at the apices, rounded at the bases, the connectives broadly cuneate, connate to the column above the base, the appendix minute, bilobulate; column 2 mm long, the anther dorsal, the stigma subapical.

Etyymology: From the Latin *ciliolatus*, "minutely ciliate," referring to the sepals.

Type: BOLIVIA: COCHABAMBA: Prov. of Chapare: epiphytic in cloud forest between Cochabamba and Villa Tunari, alt. 2500 m, 4 Feb. 1983, C. Luer, J. Luer, R. Vásquez & E. Besse 8684 (Holotype: SEL).

This species is a member of the "complicata" group as indicated by the narrowly incurved margins of the 1-veined lateral sepals. Instead of coarsely toothed, the margins are finely ciliate. Otherwise this species is distinct with the minute, bilobulate appendix.

Lepanthes columbar Luer, sp. nov.

Planta parva caespitosa, foliis anguste lineari-ovatis racemo debili triplongioribus, flore minuto, sepalis dorsali elliptico, uninervi, synsepalo late ovato, petalis transverse oblongis, labello transverse ovato ciliato apice rotundato leviter bilobato.

Plant small, epiphytic, caespitose; roots slender. Secondary stems erect, slender, 4-7 cm long, enclosed by 6-8 close lepanthiform sheaths, microscopically scabrous. Leaf erect, coriaceous, narrowly linear-ovate, acute, 24-27 mm long, 5 mm wide, the base cuneate into a petiole 3-4 mm long. Inflorescence a successively few-flowered raceme up to 6 mm long, borne by a capillary peduncle up to 6 mm long behind the leaf; floral bract 0.8 mm long; pedicel 0.75 mm long; ovary 1 mm long; sepals yellow, glabrous, the dorsal sepal elliptical, obtuse, 1.8 mm long, 1.2 mm wide, 1-nerved, the lateral sepals connate into a broadly ovate lamina 1.75 mm long and wide, 2-nerved, the obtuse apex minutely notched; petals orange, transversely oblong-bilobed, 0.4 mm long, 1.66 mm wide, the lobes about equal with the ends obtuse; lip red-orange, transversely ovate-oblong, 0.75 mm long, 1 mm wide, ciliate, the apex broadly rounded, shallowly bilobed, the basal lobes rounded, to either side of the column, the base connate to the under surface of the column; column 0.8 mm long, the anther and stigma apical.

Etyymology: From the Latin *columbar*, "a pillory-like yoke," in reference to the collarlike lip.

Type: ECUADOR: PICHINCHA: epiphytic in cloud forest between Quito and Santo Domingo, alt. ca. 3000 m, 28 Oct. 1979, C. Luer, J. Luer & A. Hirtz 4396 (Holotype: SEL); NAPO: epiphytic in cloud forest near Papallacta, alt. 2500 m, 29 Oct. 1979, C. Luer, J. Luer & A. Hirtz 4444 (SEL).

This species is notable for the narrow, little leaf, a short inflorescence of very small flowers, an elliptical, 1-veined dorsal sepal, and a ciliated, transversely ovate lip attached like a bib beneath the column.

Lepanthes complicata Luer & Vásquez, sp. nov.

Planta mediocris, inflorescentia foliis ellipticis breviter acuminatis brevior, racemo disticho densifloro, sepalis laciniatis acutis, lateribus sepalorum lateralium complicatis, petalis transverse late falcatis, labelli laminis anguste oblongis sinu protuberanti appendice parva.

Plant medium in size, epiphytic, caespitose; roots slender. Secondary stems relatively stout, erect, 3-7 mm long, enclosed by 5-8 long-ciliate lepanthiform sheaths. Leaf erect, coriaceous, elliptical, acute, shortly acuminate, 3-4 cm long, 1.5-1.8 cm wide, the base cuneate into a 2 mm long petiole. Inflorescence a dense, distichous, successively flowered raceme up to 15 mm long, borne behind the leaf by a filiform peduncle up to 10 mm long; floral bract 1.5 mm long, lightly verrucose; pedicel 1.5 mm long; ovary 1.25 mm long; sepals translucent light yellow, suffused with purple along the veins, with margins and carinate veins lacinate, triangular with short, thickened, acuminate apices, the dorsal sepal 5.5 mm long, 4 mm wide, connate to the lateral sepals for 1.5 mm, the lateral sepals with the lateral half to one-third sharply folded over onto the anterior surface, 5.5 mm long, 2.25 mm wide unexpanded, connate 1 mm; petals lemon yellow, essentially glabrous, at most microscopically pubescent, transversely bilobed, 1.5 mm long, 2.3 mm wide, the upper lobe transversely falcate, obtuse, the lower lobe obliquely triangular; lip dull white with a purple stripe, at most microscopically pubescent, the blades narrowly oblong, 2.1 mm long, the ends rounded, the apex narrowly incurved, the connectives short, broadly cuneate, connate to the column near the middle, the sinus protuberant and rounded, with a minute, round appendix; column 2.5 mm long, the anther and stigma apical.

Etymology: From the Latin *complicatus*, "folded together," referring to the sides of the lateral sepals.

Type: BOLIVIA: COCHABAMBA: Prov. of Chapare: epiphytic in cloud forest between Cochabamba and Villa Tunari, alt. 1900 m, 26 Nov. 1978, C. Luer, F. Fuchs et al. 3531 (Holotype: SEL).

This species is remarkable for the lacinate sepals. The lateral thirds, or nearly the lateral halves, are folded inward onto the surface of the medial halves. A lacinate, ribbed vein assumes the lateral margin of the blade, while the true margin lies folded inward reaching near the inner margin. Other newly described species from Bolivia also exhibit this character but to a less marked degree.

Lepanthes contingens Luer. sp. nov.

Planta mediocris caespitosa, foliis heteromorphis late ovatis vel anguste ellipticis, racemo brevi, sepalis glabris acutis, petalis transverse oblongis, labelli laminis anguste oblongis diaphanis ad apicem intus angulatis, connectivis erectis, corpore longi-unguiculato, appendice oblonga pubescenti cum glande terminali processo stigmatici contingenti.

Plant medium in size, epiphytic, caespitose; roots slender. Secondary stems slender, erect to suberect, 5-11 cm long, enclosed by 9-11 ciliate lepanthiform sheaths with broadly dilated ostia. Leaf erect, coriaceous, variable in size and shape, from broadly ovate to narrowly elliptical, from 3.5 cm long, 2 cm wide, to 5.5 cm long, 1 cm wide, the apex obtuse to acute, the base cuneate or rounded, contracted into a petiole 2-3 mm long. Inflorescence a congested, successively flowered raceme up to 12 mm long, borne by a filiform peduncle up to 10 mm long up the back of the leaf; floral bract 2 mm long; pedicel 1.25 mm long; ovary 2 mm long; sepals yellow with purple stripes along the veins, glabrous, the dorsal sepal triangular, 5 mm long, 3.75 mm wide, connate to the lateral sepals for 1 mm, the sub-acute apex shortly acuminate, the lateral sepals connate 2 mm into an ovate, acute synsepal, 5 mm long, 4 mm wide, the acuminate apices approximate; petals yellow, suffused with red-brown, transversely oblong, 1.1 mm long, 4 mm wide, with a small, obtuse angle on the margin at the midvein, the upper lobe oblong, truncate, the lower lobe smaller, triangular, acute; lip red-brown, the blades narrowly oblong, thin, membranous, transparent, 2.2 mm long, acutely angled on the inner margin near the narrowly obtuse apex, the connectives oblong, erect, lifting the blades above the column, the body with a slender, basal claw connate to the base of the column, the appendix oblong, pubescent, terminated by a small gland which is in contact with a strap-shaped process from the cavity of the stigma; column slender, clavate, 2 mm long, the anther dorsal, the stigma ventral.

Etymology: From the Latin *contingens*, "in contact with," in reference to the process from the stigma in contact with the apical gland of the appendix.

Type: ECUADOR: LOJA: epiphytic in cloud forest east of Yangana, alt. 2850 m, 4 March 1982, C. Luer, D. D'Alessandro & S. Dalström 7152 (Holotype: SEL); NAPO: epiphytic in cloud forest near Papallacta, alt. 2500 m, 29 Oct. 1979, C. Luer, J. Luer & A. Hirtz 4448 (SEL); COLOMBIA: NARINO: epiphytic in cloud forest east of La Victoria, alt. 3200 m, 4 Nov. 1979, C. Luer, J. Luer & A. Hirtz 4637 (SEL).

The leaves of this species are unusually variable in size and shape, but most remarkable is the appendix which is in contact with a process from the stigmatic cavity, a phenomenon also seen in *L. transparens*. The lips of both species are attached to the base of the column by a long, slender claw.

Lepanthes cosmos Luer & Esçobar, sp. nov.

Planta parva, caespitosa, inflorescentia folio ovato longi-acuminato brevior vel paulo excedenti, racemo congesto, sepalis glabris acutis, petalis transverse oblongis, labelli laminis ovatis acutis, connectivis erectis corpore extus dense pubescenti, appendice pubescenti decorata.

Plant small, epiphytic, caespitose; roots slender. Secondary stems slender, suberect, 3-6.5 cm long, enclosed by 7-9 close, minutely ciliate lepanthiform sheaths. Leaf suberect, coriaceous, ovate, 2.5-4 cm long, 1.3-1.9 cm wide, the apex long-acuminate, the base rounded, abruptly contracted into a petiole 1-2 mm long. Inflorescence a very congested, successively flowered raceme up to 15 mm long borne by a filiform peduncle 12-32 mm long up the back of the leaf, the inflorescence often surpassing the leaf; floral bract 1 mm long, minutely pubescent; pedicel 1 mm long; ovary 1.5 mm long; sepals yellow, glabrous, the dorsal sepal triangular, acute, 4.25 mm long, 3.5 mm wide, connate to the lateral sepals for 1 mm, the lateral sepals connate 2.5 mm into a broadly ovate, bifid lamina 4.25 mm long, 4.25 mm wide, the apices subacute; petals rose, transversely oblong, 1 mm long, 3.25 mm wide, with a minute marginal angle at the level of the midvein, the upper lobe oblong, oblique, subacute, the lower lobes shorter, triangular, acute; lip deep red, the lobes ovate, 1 mm long, minutely ciliate, the apices acute, the bases rounded, the connectives broadly cuneate, erect, the body densely pubescent externally, connate to the under surface of the middle of the column, the appendix broadly strap-shaped, decurved-sigmoid, pubescent, with a terminal pair of adjacent processes; column 1.5 mm long, the shaft slender, the anther dorsal, the stigma ventral.

Etymology: From the Greek *kosmos*, "an ornament," referring to the intricately decorated appendix of the lip.

Type: ECUADOR: MORONA-SANTIAGO: epiphytic in cloud forest between Gualaceo and Limon, alt. 2650 m, 29 Oct. 1982, C. Luer, R. Escobar & A. Pozo 8219 (Holotype: SEL).

This species resembles the larger *L. vespertilio* Rehb. f., but *L. cosmos* may be distinguished by the glabrous sepals, a densely pubescent body of the connectives of the lip, and a remarkably decorated "bait," (the appendix beneath the stigma).

Lepanthes cotyledon Luer, sp. nov.

Planta mediocris caespitosa, racemo congestissimo secundo folio elliptico purpureo longi-acuminato brevior, sepalo dorsali late ovato lateralibus semiconnatis acutis, petalis transverse oblongis cum processo filiformi e medio, labelli laminis tenuibus adhaerentibus lunatis, basi connectivorum latorum concava, appendice pubescenti ligulata.

Plant medium in size, epiphytic, caespitose; roots slender. Secondary stems slender, erect, 7-12 cm long, enclosed by 8-11 close, minutely ciliate lepanthiform sheaths. Leaf suberect, thinly coriaceous, purple beneath, reticulate veined, elliptical, 6-7 cm long, 2.5-3.5 cm wide, the apex long-acuminate, the bases rounded, abruptly contracted into a petiole 2 mm long. Inflorescence an extremely congested, secund raceme of successive, long-pedicellate flowers, up to 10 mm long, borne by a filiform peduncle up to 30 mm long along the back of the leaf; floral bract 1.5 mm long; pedicel 5-6 mm long; ovary 2.5 mm long; sepals brown, minutely ciliate, the dorsal sepal broadly ovate, acute, 4.75 mm long, 4.5 mm wide, connate to the lateral sepals for 1.5 mm, the lateral sepals ovate, oblique, lightly acuminate, acute, 5 mm long, 2.5 mm wide, connate 2 mm; petals greenish brown, transversely oblong, bilobed, 1 mm long, 4 mm wide, with a filament 0.5 mm long from the margin near the middle, the dorsal lobe dolabriform, the lower lobe oblong, rounded; lip brown, the blades thin, glabrous, lunate, adherent medially over the column, 2 mm long, the connective broadly cuneate, the united body with a central, cup-shaped cavity, connate posteriorly to the under surface of the column above the base, the appendix ciliate, ligulate, concave, acute, nearly 1 mm long, the column 1.5 mm long, the anther dorsal, the stigma ventral.

Etymology: From the Latin *cotyledon*, "a cup-shaped cavity," referring to the cavity of the lip.

Type: ECUADOR: NAPO: epiphytic in wet forest between Tena and Baeza, alt. 1000 m, 23 Feb. 1982, C. Luer & A. Hirtz 6975 (Holotype: SEL).

The flowers of this broad-leaved relative of the common *L. mucronata* Lindl. are distinguished by the semiconnate lateral sepals, and the broad base of the united connectives with a large, cup-shaped cavity.

Lepanthes craticia Luer, sp. nov.

Planta grandis caespitosa, inflorescentia folio elliptico acuminato brevior, racemo congesto, sepalis glabris acuminatis, petalis reniformibus, labelli laminis ellipticis convexis, appendice oblonga cum glande apicali truncata.

Plant large, epiphytic, caespitose; roots slender. Secondary stems slender, erect, 12-25 cm long, enclosed by 10-18 close, glabrous lepanthiform sheaths. Leaf erect, thinly coriaceous, elliptical, acuminate, acute, 5-8 cm long, 1.8-2.6 cm wide, the base cuneate into a petiole 3 mm long. Inflorescence a congested, successively flowered raceme up to 35 mm long, borne by a filiform peduncle up to 25 mm long behind the leaf; floral bract and pedicel each 1.25 mm long, ovary 2 mm long; sepals yellow, glabrous, the dorsal sepal ovate, acuminate, acute, 11 mm long, 4.75 mm wide, connate to the lateral sepals for 1.5 mm, the lateral sepals oblong, oblique, 11 mm long, connate 4 mm, 8 mm wide together, the apices acuminate acute; petals yellow with red margins, transversely bilobed, reniform, 2.5 mm long, borne by a filiform peduncle up to 25 mm long behind the leaf; floral bract with red-orange margins, the blades glabrous, elliptical with rounded ends, 2 mm long, the connectives short, broad, connate to the under surface of the column above the base, the appendix broadly oblong with a short, truncate, terminal gland; column 2.5 mm long, the anther dorsal, the stigma ventral.

Etymology: From the Latin *craticius*, "latticed," in reference to the appearance of the densely flowered rachis.

Type: ECUADOR: ZAMORA-CHIHCHIPE: epiphytic in scrub vegetation between Loja and Zamora, alt. 2700 m, 21 Sept. 1980, C. Luer, J. Luer, C. Dodson et al. 5523 (Holotype: SEL); same area, alt. 2700 m, 30 Dec. 1980, M. Madison et al. 7445 (SEL); MORO-NA-SA

NA-SANTIAGO: between Gualaceo and Limon, alt. 2650 m, 29 Oct. 1982, C. Luer, R. Escobar & A. Pozo 8215 (SEL).

This large species, one of a large group of similar species, is distinguished by the glabrous, acuminate sepals, reniform petals, glabrous blades of the lip, and an oblong appendix with a truncate, apical gland.

Lepanthes crista-piscis Luer & Vásquez, sp. nov.

Planta parva, folio elliptico inflorescentia subdensa successiviflora longiore, sepalis ovatis breviter acuminatis, sepalis lateralibus cristatis, petalis transverse oblongis, labelli laminis oblongis apice incurvatis, appendice microscopica.

Plant small, epiphytic, caespitose; roots slender. Secondary stems erect, slender, 10-35 mm long, enclosed by 4-6 shortly ciliate lepanthiform sheaths. Leaf erect, coriaceous, suffused with purple beneath, elliptical, subacute, 14-22 mm long including the 2 mm long petiole, 6-9 mm wide, the base cuneate into the petiole. Inflorescence a subdense, distichous, successively flowered raceme up to 7 mm long, borne behind the leaf by a filiform peduncle up to 6 mm long; floral bract 0.75-1 mm long, verrucose; pedicel 1-1.5 mm long; ovary 1.75 mm long; dorsal sepal purple, lightly spiculate externally, ovate, 3 mm long, 2 mm wide, the apex acute, acuminate; lateral sepals yellow, spiculate externally especially along the veins, with a membranous crest along the narrowly infolded lateral margins, ovate, oblique, concave, connate 1 mm, 3.75 mm long, 2.5 mm wide together unexpanded, the apices acute, shortly acuminate; petals transversely oblong, the apices rounded, microscopically pubescent, 0.5 mm long, 2.3 mm wide, the upper lobe purple, the lower lobes shorter, yellow-orange; lip yellow-orange, microscopically pubescent, the blades oblong with acute apices incurved beneath the apex of the column, the connectives broadly cuneate, connate to the column above the base, the appendix a microscopic lobe, pubescent; column 1.5 mm long, the anther and stigma apical.

Etymology: From the Latin *crista-piscis*, "crest of a fish," in reference to the crests along the margins of the lateral sepals.

Type: BOLIVIA: LA PAZ: Prov. of Nor Yungas; epiphytic in cloud forest east of Unduavi, alt. 2400 m, 22 Jan. 1983, C. Luer, J. Luer, R. Vásquez & E. Besse 8548 (Holotype: SEL).

By virtue of the folded margins of the lateral sepals a member of the "complicata" group, this species is most remarkable for the finlike, lacinate membrane that runs the length of the margins of the lateral sepals.

Lepanthes crista-pulli Luer & Escobar, sp. nov.

Planta parva caespitosa, racemo laxo paucifloro folio anguste elliptico brevior, sepalis acutis pubescentibus, petalis transverse oblongis, labelli laminis oblongis appendice extus cristata.

Plant small, epiphytic, caespitose; roots slender. Secondary stems slender, erect, 3-3.5 cm tall, enclosed by 3-4 minutely scabrous lepanthiform sheaths. Leaf erect, coriaceous, narrowly elliptical-ovate, acute, 3.5-4 cm long, 0.6-0.8 cm wide, the base narrowly cuneate into a petiole ca. 5 mm long. Inflorescence a loose, few-flowered, flexuous raceme up to 2 cm long including the filiform peduncle along the back of the leaf; floral bract and pedicel each 1.5 mm long; ovary 1 mm long; sepals yellow, suffused with brown toward the base, minutely pubescent, the dorsal sepal ovate, acute, 3 mm long, 2.33 mm wide, the lateral sepals ovate, oblique, acute, 3 mm long, 1.25 mm wide, connate 1 mm; petals purple, transversely oblong, 0.5 mm long, 2.33 mm wide, the upper lobe oblong, obtusely angled on the inner margin, the apex rounded, the lower lobe smaller, narrowly oblong, obtuse; lip purple, the blades oblong, glabrous, 1 mm long, the apex acute, the base round, the connectives broadly cuneate, connate to the under surface of the column near the base, the body with a forked crest externally, only slightly protruding beyond the sinus; column 1 mm long, the anther and stigma apical.

Etymology: From the Latin *cristapulli*, "the comb of a chick," referring to the small crest on the under surface of the lip.

Type: *ECUADOR: MORONA-SANTIAGO:* epiphytic in wet forest north of Gualaquiza, alt. 1650 m, 4 Nov. 1982, C. Luer, R. Escobar & D. D'Alessandro 8280 (Holotype: SEL).

This small species may be identified by the narrowly elliptical leaf with a short, loose inflorescence; minutely pubescent sepals; and a forked crest on the outside of the body of the united connectives of the lip.

Lepanthes dalessandroi Luer, sp. nov.

Planta mediocris caespitosa, foliis anguste oblongis, racemo longissimo, floribus grandibus, sepalis acuminatis, petalis transverse oblongis, labelli laminis late lunatis pubescentibus, appendice membranacea pubescenti.

Plant medium in size, epiphytic, caespitose; roots slender. Secondary stems erect, slender to comparatively stout, 3-8 cm long, enclosed by 3-6 close lepanthiform sheaths, microscopically scabrous. Leaf erect, coriaceous, narrowly oblong, subacute to obtuse, 1.5-4 cm long, 0.7-1.0 mm wide, the base narrowly cuneate into a petiole 3-5 mm long. Inflorescence a progressively lengthening, subflexuous, loosely flowered raceme up to 33 cm long including the peduncle 9-12.5 cm long; flowers large, orange-brown, 2-3 open simultaneously; floral bract 2.5 mm long; pedicel 4-5 mm long; ovary 1.5 mm long; sepals glabrous, the dorsal sepal triangular, 13-15 mm long, 8-9 mm wide, connate to the lateral sepals for 3 mm, the acute apex attenuated into a 4 mm long tail, the lateral sepals ovate, oblique, connate 7 mm into an ovate, bifurcated lamina 14-15 mm long, 9-10 mm wide, the attenuated apices curved outward; petals microscopically pubescent, transversely oblong, bilobed, 1 mm long, 3 mm wide, the lobes equal, oblong, obtuse; laminae of the lip broadly lunate, convex, pubescent, 1 mm long, 0.5 mm wide, the connective cuneate, connate to the under surface of the column above the base, the appendix a membranous, pubescent web in the sinus, with a minute apiculum; column 1.5 mm long, stout, the anther and stigma apical.

Etymology: Named in honor of Dennis D'Alessandro of Vilcabamba, Ecuador, who originally discovered this species.

Type: *ECUADOR: LOJA:* epiphytic in cloud forest south of Yangana, alt. 2400 m, 3 March 1982, C. Luer, D. O'Alessandro & S. Dalström 7087 (Holotype: SEL).

The exceptionally large, orange-brown flowers of this species are borne, two or three simultaneously, in a very long raceme. The blades of the lip are lunate, convex, and pubescent.

Lepanthes deleastes Luer, sp. nov.

Planta parva caespitosa, folio ovato acuto racemo congesto longiore, sepalis subacutis minute ciliatis, petalis transverse oblongis, labello laminis oblongis, connectivis brevibus, appendice pubescenti oblonga cum glande ovoidea.

Plant small, epiphytic, caespitose; roots slender. Secondary stems erect, slender, 2-6 cm long, enclosed by 6-8 close, minutely ciliate lepanthiform sheaths. Leaf erect, thinly coriaceous, ovate, 2.5-3.5 cm long, 1.6-1.8 cm wide, the apex acute to shortly acuminate, the rounded base abruptly contracted into a petiole 2 mm long. Inflorescence a congested, successively flowered raceme up to 5 mm long, borne by a filiform peduncle up to 12 mm long along the back of the leaf; floral bract 1 mm long; pedicel 0.5 mm long; ovary 1.5 mm long; sepals purple with a yellow border, microscopically ciliate, the dorsal sepal ovate, subacute, 3 mm long, 2.1 mm wide, connate 0.5 mm to the lateral sepals, the lateral sepals ovate, oblique, acute, 3.1 mm long, 1.5 mm wide, connate 0.5 mm; petals orange with a red border, transversely oblong, 1 mm long, 2.5 mm wide, the apices round, with a small, obtuse angle on the outer margin at the midvein, the upper lobe larger; lip purple, the blades oblong with obtuse ends, 1.5 mm long, ciliate on inner margin, the connectives short, cuneate, connate to the under surface of the column above the base, the appendix pubescent, oblong, with an ovoid gland below the apex; column 1.5 mm long, the anther dorsal, the stigma ventral.

Etymology: From the Greek *deleastes*, "a baiter," alluding to the presumed function of the appendix of the lip.

Type: ECUADOR: NAPO: epiphytic in wet forest north of Tena, alt. 1100 m, 22 Feb. 1982, C. Luer & A. Hirtz 6937 (Holotype: SEL); MORONA-SANTIAGO: north of Gualaquiza, alt. 1700 m, 29 Dec. 1982, S. Dalström 399 (SEL); ZAMORA-CHINCHIPE: Quebrada Honda, alt. 1100 m, 18 Jan. 1982, D. D'Alessandro 122 (SEL).

This not-too-remarkable species may be identified by the ovate leaves; the short, congested raceme of flowers with subacute sepals; comparatively large, transversely oblong petals; and a lip with oblong blades, short connectives, and an oblong appendix with an ovoid gland extending to the apex from the under surface of the appendix.

Lepanthes delphax Luer, sp. nov.

Planta mediocris caespitosa, racemo laxo folio oblongo breviter acuminato subaequilongo, sepalis glabris, sepalo dorsali late ovato lateralibus falcatis, petalis transverse oblongis, labelli laminis ovatis apicibus incurvatis acutis ciliatis, appendice brevi rotundata pubescenti.

Plant medium in size, epiphytic, caespitose; roots coarse. Secondary stems slender, erect, 5-12 cm long, enclosed by 6-10 close lepanthiform sheaths, microscopically ciliate. Leaf erect, coriaceous, oblong, 3-5 cm long, 1-1.5 cm wide, the subacute to obtuse apex abruptly contracted into a 5-10 mm long acumen, the base cuneate into a petiole 4-5 mm long. Inflorescence a loose, successively flowered raceme up to 4 cm long including the filiform peduncle; floral bract and pedicel each 1.25 mm long; ovary 2 mm long; sepals light yellow, glabrous, the dorsal sepal broadly ovate, concave, obtuse, 3.25 mm long, 3 mm wide expanded, connate 1 mm to the lateral sepals, the lateral sepals broadly oblong, falcate, acute, 3 mm long, 2 mm wide, connate 1 mm, 1-veined; petals orange, edged in purple, transversely oblong, 0.9 mm long, 2.9 mm wide, the upper lobe oblong with the apex rounded, the lower lobe smaller, oblong, oblique, obtuse; lip orange, the blades ovate, 1.5 mm long, the apices acute, incurved, ciliate, the connectives broadly cuneate, connate to the under surface of the column below the middle, the appendix a short, rounded, pubescent organ protruding from the sinus; column 1.25 mm long, stout, the anther and stigma apical.

Etymology: From the Greek *delphax*, "a little pig," in reference to the apical stigma looking like the nose of a pig.

Type: ECUADOR: COTOPAXI: epiphytic in cloud forest between Angamarca and Corazon, alt. 3000 m, 17 Feb. 1979, C. Luer, J. Luer & A. Hirtz 3986 (Holotype: SEL).

This species is characterized by a loose raceme about as long as the oblong, abruptly acuminate leaf, a broadly ovate dorsal sepal, broadly falcate lateral sepals, ovate blades of the lip with falcate, ciliate apices and a short, rounded, pubescent appendix. Common to the members of this group, the anther and stigma are apical. In this species the large, rounded, stigmatic cavity protrudes from between the apices of the blades of the lip.

Lepanthes dictyota Luer & Vásquez, sp. nov.

Planta mediocris plus minusve horizontalis vel pendens, foliis ovatis acuminatis valde reticulatis racemo subdense flexuoso longioribus, sepalo dorsali late ovato obtuso, sepalis lateralibus anguste ovatis obliquis acutis, petalis transverse oblongis, labelli lamina oblongis, appendice scopiformi.

Plant medium in size, epiphytic, densely caespitose; roots slender. Secondary stems slender, erect, horizontal to pendent, 4-8 cm long, enclosed by 8-10 minutely ciliate lepanthiform sheaths with thin dilated ostia. Leaf erect with the stem, thinly coriaceous, with purple reticulations on both surfaces, suffused with purple beneath, ovate, acute, acuminate, 4-5.5 cm long including the 2-4 mm long petiole, 1.6-2.1 cm wide, the rounded base contracted into the petiole. Inflorescence a subdense, distichous, flexuous, successively flowered raceme up to 20 mm long, borne behind the leaf by a filiform peduncle 9-11 mm long; floral bract 1.5-2 mm long, echinate; pedicel 2 mm long; ovary 2 mm long, crested; sepals yellow, suffused with purple centrally, the veins and margins minutely denticulate, the dorsal sepal broadly ovate, obtuse, 3.5 mm long, 2.5-3 mm wide, connate to the lateral sepals for 1 mm, the lateral sepals narrowly ovate, oblique, acute, connate 1 mm, 3.5 mm long, 3.25 mm wide together; petals red-orange, minutely pubescent, transversely oblong, 1 mm long, 2.5 mm wide, the ends rounded; lip yellow, suffused with red-orange, glabrous, narrowly oblong, 1.75 mm long, the ends rounded, the connectives short, cuneate, connate to the column above the base, the appendix ligulate, hinged at the acute sinus, pubescent, with a brushlike apical segment; column 2 mm long, the anther dorsal, the stigma ventral.

Etymology: From from the Greek *diktyotos*, "reticulated," referring to the purple-netted veins.

Type: BOLIVIA: COCHABAMBA: Prov. of Charasco: epiphytic in cloud forest below Monte Puncu along Rio Lope Mendoza, alt. 2400 m, 1 Feb. 1981, C. Luer, J. Luer, R. Vásquez & E. Besse 5820 (Holotype: SEL).

This handsome species may be recognized by the purple-reticulated, ovate, acuminate leaves; short, flexuous inflorescences; narrowly oblong blades of the lip; and a brush-like appendix.

Lepanthes dodsonii Luer, sp. nov.

Planta parvula caespitosa, inflorescentia folio cordato obtuso reticulato pubescenti brevior, racemo congesto, sepalis denticulatis breviacuminatis, petalis transverse oblongis pubescentibus, labelli lamina oblongis, connectivis posticis brevibus, appendice plana oblonga ciliata.

Plant small, epiphytic, caespitose; roots slender. Secondary stems slender, erect, 15-30 mm long, enclosed by 8-12 ciliate lepanthiform sheaths, widely dilated at the ostia. Leaf erect, coriaceous, pubescent-ciliate, reticulate-rugose, the elevated veins red on green, ovate-cordate, obtuse, 15-18 mm long, 13-17 mm wide, the base broadly cordate, abruptly contracted into a petiole 1 mm long. Inflorescence a congested, successively flowered raceme up to 5 mm long, borne by a filiform peduncle 6 mm long, on the dorsum of the leaf; floral bract 1 mm long; pedicel 1.5 mm long; ovary 1 mm long, ciliate on the ribs; sepals green, suffused with red centrally, denticulate, carinate-ciliate along the veins externally, the dorsal sepal ovate, obtuse, shortly acuminate, 5 mm long, 3.25 mm wide, connate 1 mm to the lateral sepals, the lateral sepals ovate, oblique, connate 2 mm, 6 mm long, 4 mm wide together, the acute apices attenuate; petals green, pubescent, transversely oblong, 0.8 mm long, 4.5 mm wide, the ends acute, the lower lobe smaller, narrower; lip red, the blades narrowly oblong, 1.75 mm long, angled on the inner margin below the apex, minutely ciliate, the connectives narrowly cuneate, from the posterior portion of the blade, connate to the base of the column, the appendix flat, oblong, ciliate; column 1.5 mm long, the anther dorsal, the stigma ventral.

Etymology: Named in honor of Calaway H. Dodson, investigator of the flora of Ecuador, who discovered this species.

Type: ECUADOR: EL ORO: epiphytic in an orange tree 10 km west of Pinas, alt. 900 m, 19 July 1979, C. H. Dodson et al. 8475 (Holotype: SEL), C. Luer illustr. 9085.

This species is remarkable for the small, bluntly cordate, rugose-pubescent leaves with red veins. Borne on top of the leaf is the green flower with denticulate sepals with acuminate apices, pubescent petals, narrow blades of the lip, and an oblong, ciliate appendix.

Lepanthes doloma Luer & Vásquez, sp. nov.

Planta mediocris, folio ovato leviter acuminato racemis pluribus congestis longiore, sepalis late ovatis denticulatis, petalis transverse oblongis, labelli laminis late oblongis apice longiciliatis, connectivis longissimis, appendice grandi loriformi ciliata.

Plant medium in size, epiphytic, caespitose, roots slender. Secondary stems slender, erect, 2-9 cm long, enclosed by 5-8 ciliate lepanthiform sheaths. Leaf erect, coriaceous, suffused with purple beneath, ovate, acute, lightly acuminate, apiculate, 3.5-4.5 cm long, 1-1.7 cm wide, the broadly cuneate base contracted into a 2 mm long petiole. Inflorescence racemose, several congested, distichous, successively flowered racemes up to 12 mm long, borne behind the leaf by filiform peduncles 8-15 mm long; floral bract 1.25 mm long, sparsely ciliate; pedicel 2 mm long; ovary 2 mm long, sparsely papillose, sepals translucent orange, broadly ovate, shortly acuminate, carinate, the carinae and margins conspicuously denticulate, the dorsal sepal 5 mm long, 4 mm wide, connate to the lateral sepals for 1.5 mm, the lateral sepals connate 2.5 mm, 5 mm long, 5 mm wide together; petals orange, edged in red-orange, microscopically pubescent, transversely oblong, 1.4 mm long, 3.75 mm wide, the upper lobe obtuse, the lower lobe acute, smaller; lip bright rose, edged in orange, the blades broadly oblong, 1.25 mm long, slightly concave with rounded ends, the anterior margins long-ciliate, otherwise microscopically pubescent, the connectives long, oblong, elevating the blades above the column, connate to the base of the column, the appendix large, straplike, concave at the attachment to the sinus, convex and ciliate above with an apical lobule; column 1 mm long, the anther dorsal, the stigma ventral.

Etymology: From the Greek *doloma*, "a bait, a decoy," referring to the probable role of the appendix.

Type: *BOLIVIA*: COCHABAMBA: Prov. of Chapare: epiphytic in cloud forest along the road to Tablas, alt. 2500 m, 9 Feb. 1980, C. Luer, J. Luer & R. Vásquez 5171 (Holotype: SEL); between Cochabamba and Villa Tunari, alt. 1900 m, 26 Nov. 1978, C. Luer, F. Fuchs et al. 3534 (SEL).

The sepals of this species with racemes shorter than the ovate, acuminate leaves are broadly ovate and conspicuously denticulate; the petals are large and transverse; the oblong blades of the lip, borne above the column by long connectives, are ciliate apically; and the appendix is large, straplike, and ciliate.

Lepanthes electilis Luer, sp. nov.

Species haec *L. elegantulae* Schltr. affinis sed foliis angustis acuminatis, floribus minoribus, labelli laminis glabris et appendice late triangulari ciliata differt.

Plant medium in size, epiphytic, caespitose; roots slender. Secondary stems slender, erect, enclosed by 5-9 minutely ciliate lepanthiform sheaths. Leaf erect, coriaceous, narrowly elliptical, acute, acuminate, 5-7.5 cm long, 2-2.8 cm wide, the base broadly cuneate into a pedicel 5 mm long. Inflorescence a progressively lengthening, loose, lightly flexuous raceme up to 15 cm long, 1-2 flowers open simultaneously, 1-2 racemes produced simultaneously; sepals rosy white, glabrous, triangular, acute, the dorsal sepal 5.5 mm long, 3.25 mm wide, connate basally for 1 mm to the lateral sepals, the lateral sepals connate 3 mm into a triangular, bifid lamina 5.5 mm long, 4 mm wide together, the apices acute; petals transversely oblong, bilobed, 1 mm long, 3.5 mm wide, the upper lobe dark purple, ovate, obtuse, the lower lobe yellow, smaller, triangular, acute; lip dark rose, the blades lunate, convex, 1.66 mm long, glabrous, the ends rounded, the connectives short, cuneate, connate to the under surface of the column near the middle, the appendix triangular, ciliate; column 1.5 mm long, the anther apical, the stigma ventral.

Etymology: From the Latin *electilis*, "choice," alluding to the attractive qualities of the plant.

Type: *ECUADOR*: NAPO: epiphytic in cloud forest east of Salcedo, alt. 3000 m, 12 Nov. 1979, C. Luer, J. Luer & A. Hirtz 4766 (Holotype: SEL).

This species with long, subflexuous racemes is related to *L. elegantula*, but the leaves of *L. electilis* are narrow and acuminate, the flowers are half the size, and the appendix of the lip is short, broadly triangular and ciliate.

Lepanthes eumeces Luer, sp. nov.

Planta perpusilla caespitosa, caulibus secundariis abbreviatis folio elliptico obtuso brevioribus, racemo longissimo flexibili flexuoso, sepalis apiculatis spiculatis, petalis transverse anguste oblongis, labelli laminae oblongis antice longiciliatis.

Plant very small, epiphytic, caespitose; roots slender. Secondary stems abbreviated, 2-4 mm long, enclosed by 2-3 microscopically ciliate, ribbed sheaths. Leaf erect, coriaceous, elliptical, obtuse, 8-15 mm long including a petiole 1-5 mm long, 5-7 mm wide, the base cuneate. Inflorescence a progressively lengthening, flexible, lightly flexuous raceme up to 17 cm long including the filiform peduncle, 2-3 flowers open simultaneously; floral bract 1-1.5 mm long; pedicel 1.5-2 mm long; ovary 0.75 mm long, spiculate; sepals dull red-brown, the margins and carinae along the veins irregularly spiculate, the dorsal sepal ovate, obtuse, apiculate, connate 2 mm, 3.75 mm long, 3.75 mm wide together, each 1-veined; petals transversely narrowly oblong, 0.5 mm long, 3.5 mm wide, the lobes subequal, lightly curved, obtuse; blades of the lip narrowly oblong with rounded ends, the apical end sparsely long-ciliate, the connectives short, cuneate, connate to the under surface of the basal third of the column, the appendix minute, double, pubescent, the anterior of the two parts clavate, protruding beyond the sinus; column 0.75 mm long, the anther dorsal, the stigma ventral.

Etymology: From the Greek *eumeces*, "of good length," referring to the exceedingly long inflorescence.

Type: ECUADOR: NAPO: epiphytic in wet forest between Tena and Baeza, alt. 1000 m, 23 Feb. 1982, C. Luer & A. Hirtz 6974 (Holotype: SEL).

This tiny species produces a long, flexible, lightly flexuous (zigzag) raceme of small, spiculate flowers.

Lepanthes falcata Luer & Vásquez, sp. nov.

Planta parva, racemo laxo folio elliptico subaequilongo, sepalis libris attenuatis spiculatis, petalis anguste transverse oblongis, labelli lobis falcatis columnam amplectentibus, appendice minuta.

Plant small, epiphytic, caespitose; roots slender. Secondary stems erect, slender, 10-30 mm long, enclosed by 4-6 ciliate lepanthiform sheaths. Leaf erect, coriaceous, suffused with purple beneath, elliptical, subacute to obtuse, 11-18 mm long including a petiole 2-3 mm long, 5-11 mm wide, the base cuneate into the petiole. Inflorescence a loose, fractiflex, successively flowered raceme up to 13 mm long including the peduncle, often with 2 flowers open simultaneously; floral bract 1-1.5 mm long; pedicel 1-1.5 mm long; ovary 1 mm long, more or less minutely papillose; sepals brown, widely spread, free nearly to the base, spiculate externally along the thickened veins, the dorsal sepal narrowly ovate, acute, acuminate, 4.5 mm long, 1-1.5 mm wide, the lateral sepals narrowly triangular, acute, curved upward, 4.5-5 mm long, 0.8-1 mm wide, 1-veined, the outer margins narrowly and lightly incurved; petals brown, microscopically pubescent, transversely oblong, 0.2-0.3 mm long, 1.5-2.75 mm wide, the lobes narrowly obtuse; lip brown, bilobed, 1.3 mm long, the lobes falcate, surrounding the column, the acute apices incurved beneath the apex of the column, minutely pubescent along the inner margins, the sinus acute with a minute, triangular appendix; column 1.5 mm long, the anther and stigma apical.

Etymology: From the Latin *falcatus*, "sickle-shaped," in reference to the lobes of the lip.

Type: BOLIVIA: LA PAZ: Prov. of Nor Yungas: epiphytic in cloud forest west of Coroico, alt. 2800 m, 4 Feb. 1980, C. Luer, J. Luer, R. Vásquez & R. Lara 5113 (Holotype: SEL); COCHABAMBA: Prov. of Chapare: epiphytic in cloud forest between Cochabamba and Villa Tunari, alt. 1500 m, 26 Nov. 1978, C. Luer, F. Fuchs et al. 3582 (SEL).

The sepals of this small species are attenuate and widely spread, the petals are slender and transverse, and the falcate lobes of the lip embrace the column.

Lepanthes flexuosa Luer, sp. nov.

Planta perpusilla caespitosa, racemo fractiflexo crasso foliis ellipticis multilongiore, flore grandi, foliis rubris spiculatis acuminatis, petalis transverse bilobatis, labelli lamina subfalcatis pro flore grandibus, appendice extus oblonga pubescenti.

Plant very small, epiphytic to terrestrial, caespitose; roots proportionately coarse. Secondary stem erect, stout, 5-15 mm long, enclosed by 3-4 close lepanthiform sheaths, minutely scabrous. Leaf erect, coriaceous, purple beneath, the blade elliptical, obtuse, 6-11 mm long, 5-9 mm wide, the base abruptly contracted into a petiole 3-4 mm long. Inflorescence a gradually lengthening, successively flowered, fractiflex raceme up to 7 cm long including the peduncle, the rachis and peduncle comparatively stout; floral bract 1.5-2 mm long; pedicel 1.5 mm long; ovary 1.25 mm long; flowers red, comparatively large for the plant; sepals narrowly triangular, acuminate, acute, minutely spiculate along the margins and carinate nerves externally, the dorsal sepal 6.5 mm long, 3 mm wide, connate to the lateral sepals for 1 mm, the lateral sepals 6.5 mm long, 2.25 mm wide, connate 1 mm; petals transversely oblong, bilobed, 1 mm long, 3.5 mm wide, the lobes equal, lightly recurved with rounded ends; blades of the lip oblong-subfalcate, 3.5 mm long, surrounding the column just below its apex with the rounded apices overlapping, the bases also rounded, the connectives short, cuneate, connate to the under surface of the column above the middle, the appendix a longitudinal, oblong body beneath the united connectives, the pubescent apex barely protruding beyond the sinus; column 2.5 mm long, the anther and stigma apical.

Etymology: From the Latin *flexuosus*, "zigzag," referring to the fractiflex rachis.

Type: ECUADOR: MORONA-SANTIAGO: terrestrial on the road cut east of Sigsig, alt. 2850 m, 6 May 1981, C. Luer, J. Luer et al. 6110 (Holotype: SEL).

This very small species is notable for the comparatively stout, fractiflex raceme much longer than the leaves. The red flowers are comparatively large for the size of the plant, and the lip is comparatively large for the size of the flower.

Lepanthes focalis Luer, sp. nov.

Planta mediocris caespitosa, folio oblongo apice in acumen angustum abrupte constricto, racemo congestissimo folio dimidio brevior, sepalis glabris acuminatis, petalis transverse longi-oblongis, labello pubescenti transverse cordato columnam aplectenti apice rotundato.

Plant medium in size, epiphytic, caespitose; roots slender. Secondary stems stout, erect, 4-11.5 cm long, enclosed by 7-12 ciliated lepanthiform sheaths. Leaf erect, coriaceous, oblong, 3.5-6.5 cm long, 1.6-3.2 cm wide, the rounded apex abruptly constricted into a narrow acumen ca. 1 cm long, the rounded base abruptly contracted into a petiole ca. 4 mm long. Inflorescence a successively flowered, markedly congested raceme up to 8 mm long, borne by a slender peduncle up to 15 mm long, the peduncles in a fascicle along the back of the leaf; floral bract 1.25 mm long; pedicel 1 mm long; ovary 1.25 mm long; sepals glabrous (color notes lost), the dorsal sepal ovate, acuminate, acute, 7 mm long, 3.5 mm wide, connate to the lateral sepals for 1 mm, the lateral sepals connate 3 mm into a broadly ovate bifid lamina, 6.5 mm long, 5.75 mm wide, the acute apices oblique, diverging; petals transversely oblong, bilobed, 1.25 mm long, 5 mm wide, the upper lobe ovate, obtuse, the lower lobe longer, narrowly linear, obtuse, minutely pubescent; lip fleshy, pubescent, transversely cordate, 1.5 mm long, 1.75 mm wide, the broadly rounded apex minutely apiculate, the obtuse, concave basal lobes embracing the column, the base connate to the under surface of the column near the middle; column cylindrical, 1.75 mm long, the anther apical, the stigma ventral.

Etymology: From the Latin *focale*, "a muffler to keep the neck warm," referring to the appearance of the lip.

Type: ECUADOR: LOJA: epiphytic in cloud forest west of the pass between Loja and Zamora, alt. 2700 m, 21 Sept. 1980, C. Luer, J. Luer, C. H. Dodson et al. 5524 (Holotype: SEL).

An abruptly constricted apex of an oblong leaf is seen in several other species, but the transversely cordate, pubescent lip embracing the column is unusual.

Lepanthes fusiformis Luer, sp. nov.

Planta parva caespitosa, foliis linearifusiformibus crassissimis vel anguste teretibus racemo fractiflexo congesto duplolongioribus, sepalis ovatis acutis ciliatis, petalis transverse oblongis, labelli lamini oblongis acutis, appendice spatulata.

Plant small, epiphytic, caespitose; roots very slender. Secondary stems slender, erect, 3-7 cm long, enclosed by 4-6 close lepanthiform sheaths, minutely ciliate. Leaf erect, narrowly ovate, fleshy-thickened to terete, acute, 20-43 mm long, 5-6 mm wide, 4-5 mm thick, the base narrowly cuneate into a 2-3 mm long petiole. Inflorescence a congested, lightly zigzag, successively flowered raceme up to 10 mm long, borne by a filiform peduncle up to 18 mm long; floral bract 1 mm long; pedicel 1.5 mm long; ovary 2.5 mm long; sepals red with yellow margins, ciliate, ovate, acute, the dorsal sepal 3.66 mm long, 2 mm wide, the lateral sepals oblique, 3 mm long, 1.6 mm wide, connate to about the middle; petals red, edged in yellow, transversely oblong, 0.66 mm long, 2.66 mm wide, the upper lobe longer, the apices rounded; lip red-orange, the blades of the lateral lobes oblong, 1.2 mm long, the apices acute, the bases rounded, the connectives cuneate, connate to the under surface of the column, the appendix spatulate, 0.5 mm long, protruding beyond the sinus; column 1 mm long, the anther apical, the stigma ventral.

Etymology: From the Latin *fusiformis*, "narrowly ellipsoid," referring to the leaf.

Type: *ECUADOR*: LOJA: epiphytic in cloud forest south of Yangana, alt. 2450 m, 12 May 1981, C. Luer, J. Luer, D. D'Alessandro et al. 6210 (Holotype: SEL); same area, 3 March 1982, C. Luer et al. 7086 (SEL).

Lepanthes fusiformis grows locally abundantly near the locality where *L. teres* was found. They are the only two known species in the genus with terete leaves. This species is distinguished by the ciliated dorsal sepal, narrow petals, and the proportionately large, spatulate appendix.

Lepanthes glaberrima Luer & Vásquez, sp. nov.

Planta mediocris, racemo disticho densifloro foliis anguste ovatis multibreuiore, floribus parvis longipedicellatis, ovario longissimo sepalis ovatis obtusis, petalis grandibus glaberrimis transverse bilobis incis, labelli lamini glaberrimis ellipticis, appendice pubescenti cum glande apicali.

Plant medium in size, epiphytic, caespitose; roots slender. Secondary stems slender, erect, 2.5-6.5 cm long, enclosed by 5-6 close, minutely ciliate lepanthiform sheaths. Leaf erect, coriaceous, narrowly ovate, acute, lightly acuminate, 2-4 cm long, 0.9-1.2 cm wide, the base cuneate into the petiole 1.5 mm long. Inflorescence a congested, distichous, successively flowered raceme up to 6 mm long, borne behind the leaf by a filiform peduncle 4-7 mm long; floral bract 1 mm long; pedicel 2 mm long; ovary slender, 4 mm long; sepals red-orange, edged in yellow, glabrous, the dorsal sepal broadly ovate, 2.5 mm long, 2.25 mm wide, the apex obtuse to rounded, the base connate to the lateral sepals for 0.5 mm, the lateral sepals ovate, oblique, subacute, connate 1.5 mm, 2.2 mm long, 2.5 mm wide together; petals orange, glabrous, transversely oblong, bilobed, 1 mm long, 2.75 mm wide, the outer margin incised near the middle, the lobes triangular-oblong with rounded ends, the lower lobe smaller; lip purple, tinged with orange, the blades elliptical, glabrous, 1.75 mm long, the ends rounded, the connectives narrowly cuneate, connate to the column above the base, the appendix ovoid, pubescent, hinged at the sinus, with an ovoid apical gland; column 1.5 mm long, the anther dorsal, the stigma ventral.

Etymology: From the Latin *glaberrimus*, "very smooth, without hair," referring to the petals and blades of the lip.

Type: *BOLIVIA*: COCHABAMBA: Prov. of Chapare: epiphytic in cloud forest on the road to Tablas, alt. 2500 m, 9 Feb. 1980, C. Luer, J. Luer & R. Vásquez 5181 (Holotype: SEL).

This species is notable for the small, long-pedicellate flowers produced in a congested, distichous raceme. The petals and blades of the lip are proportionately large and completely glabrous. The petals are incised on the outer margin between the upper and middle lobes.

Lepanthes grypha Luer, sp. nov.

Planta mediocris caespitosa, inflorescentia folio anguste elliptico acuminato brevior, racemo congesto, sepalis glabris breviter acuminatis, petalis grandibus transverse oblongis, labelli lamini oblongis planis ciliatis, connectivis angustis erectis, corpore subsphaerico pubescenti appendice antice conica pubescenti.

Plant medium in size, epiphytic, caespitose; roots slender. Secondary stems slender, weak, 5-11.5 cm long, enclosed by 9-11 microscopically scabrous lepanthiform sheaths. Leaf suberect to horizontal, thinly coriaceous, narrowly elliptical-ovate, acute, acuminate, 4.5-7 cm long, 1-1.5 cm wide, the base cuneate into a petiole 2 mm long. Inflorescence a very congested, successively flowered raceme to 15 mm long, borne by a filiform peduncle 10-25 mm long on top of the leaf; floral bract 1.5 mm long, pedicel 2 mm long, ovary 2 mm long; sepals light green, glabrous, the dorsal sepal triangular, 4 mm long, 2.75 mm wide, the apex acute, shortly acuminate, the lateral sepals ovate, oblique, connate 1.5 mm, 3.5 mm long, 3.75 mm wide together, the margins minutely sub-irregular, the acute, acuminate apices close; petals greenish brown, transversely oblong, bilobed, 1.25 mm long, 3.5 mm wide, shortly pubescent, the lobes oblong, obtuse, the lower lobe smaller; lip greenish brown, the blades flat, oblong, 1.66 mm long, ciliate, adherent to each other medially over the column, the ends rounded, the connectives narrowly cuneate, erect, lifting the blades above the column, connate to the column at the base, the body thickened, subspherical, pubescent, the appendix conical, pubescent, protruding from the front of the body; column 2 mm long, the anther dorsal, the stigma ventral.

Etmology: Named for a *grypha*, a mythological creature, half lion and half eagle, referring to the appearance of the central apparatus.

Type: ECUADOR: PICHINCHA: epiphytic in cloud forest between San Juan and Chiriboga, alt. ca. 2000 m, 7 March 1982, A. Hirtz and X. Leon 210 (Holotype: SEL), C. Luer illustr. 9073.

This species with a short, congested inflorescence lying upon the narrowly acuminate leaf is notable for the large pubescent petals, flat, winglike blades of the lip elevated over the column by narrow connectives from a pubescent, subspherical body with the conical appendix protruding from the front surface.

Lepanthes hirtzii Luer, sp. nov.

Planta grandis caespitosa, racemo subdenso multifloro folio elliptico acuminato aequilongo vel paulo longiore, floribus grandibus, sepalis in cupulam non profundam connatis, petalis transverse rhomboideis, labelli lamini ellipticis ciliatis, appendice minutissima triglandulosa glabra.

Plant large, epiphytic, caespitose; roots slender; secondary stems erect, slender to stout, 7-30 cm long, enclosed by 8-15 close, glabrous to microscopically scabrous lepanthiform sheaths. Leaf erect, thinly coriaceous, elliptical 8-12 cm long, 2-4.5 cm wide, the apex long-acuminate, the base broadly cuneate into a petiole 5-7 mm long. Inflorescence a densely to subdensely flowered raceme 8-10 cm long, rarely to 14 cm long, including the peduncle 5-8 cm long, 2-3 flowers open simultaneously; floral bract 2 mm long; pedicel 3 mm long; ovary 1.5 mm long, curved, narrowly winged; sepals orange with brown or purple veins, carinate, ovate, acute, acuminate, minutely ciliate or glabrous, the dorsal sepal 11 mm long, 9 mm wide, connate to the lateral sepals for 4 mm to form a shallow cup, the margins of all 3 sepals more or less erose and dilated above the angles of connation, the lateral sepals oblique, 11 mm long, 6 mm wide, connate 3 mm; petals yellow, more or less suffused with brown or purple, transversely elliptical, 1.25 mm long, 2.75 mm wide, minutely pubescent, the lobes about equal, subtriangular, obtuse; lip orange to brown, the blades elliptical, 2 mm long, minutely ciliate, the ends rounded, the connectives broadly cuneate, connate to the column above the base, the appendix very small with a rounded gland bearing a pair of even smaller terminal rounded glands, glabrous; column 2 mm long, the anther dorsal, the stigma ventral.

Etmology: Named in honor of Alexander C. Hirtz of Quito, Ecuador, who has discovered innumerable species of orchids new to science.

Type: ECUADOR: PICHINCHA: epiphytic in cloud forest between Quito and Tandapi, alt. ca. 3000 m, 28 Oct. 1979, C. Luer, J. Luer & A. Hirtz 4394 (Holotype: SEL); LOJA: epiphytic in cloud forest at the pass north of Loja, alt. 3100 m, 30 Oct. 1982, C. Luer & R. Escobar 8246 (SEL); cloud forest east of Yangana, alt. 2650 m, 4 Mar. 1982, C. Luer et al. 7145 (SEL); COLOMBIA: PUTUMAYO: cloud forest between La Cocha and Sibundoy, alt. ca. 2700 m, 30 July 1978, C. Luer et al. 3118 (SEL).

This large species may be distinguished from *L. nanegalensis* Rchb. f. and *L. rhombipetala* Schltr. by the larger flowers with the sepals connate into a shallow cup. The sepals are more or less erose and dilated above their connation. The petals are without the minute appendages on the outer margin as in *L. rhombipetala*. Differing from both, the appendix of *L. hirtzii* is a minute glabrous gland bearing a pair of even more minute rounded terminal glands.

Lepanthes homotaxis Luer & Escobar, sp. nov.

Planta perparva caespitosa, racemo subdensifloro folio elliptico acuto subaequilongo, flore minuto, sepalò dorsali synsepaloque ovatis similibus, petalis bifurcatis lobis triangularibus similibus, labello pubescenti transverse bilobato rotundato.

Plant very small, epiphytic, caespitose; roots slender. Secondary stems slender, erect, 2-3 cm long, enclosed by 6-9 close, microscopically scabrous lepanthiform sheaths. Leaf erect, thinly coriaceous, elliptical, acute, 13-18 mm long, 7-9 mm wide, the base obtuse to rounded, contracted into a petiole 1 mm long. Inflorescence a subdense, successively flowered raceme up to 16 mm long including the filiform peduncle, along the back side of the leaf; flowers very small, light yellow-green, glabrous; floral bract less than 1 mm long; pedicel 1 mm long; ovary 1 mm long; dorsal sepal ovate, acute, 1.75 mm long, 1.2 mm wide, 1-veined, the lateral sepals connate into a synsepal similar to the dorsal sepal, ovate, the acute apex minutely notched, 1.75 mm long, 1.25 mm wide; petals forked, bilobed, 0.6 mm long, 1 mm wide, the lobes equal, oblong-triangular, subacute, spreading 90°; lip transversely cordate-bilobed, 0.6 mm long, 0.9 mm wide, pubescent, the apex cleft with a minute apiculum in the sinus, the apices and bases of the lobes rounded, the lower lobes flanking the column, the base connate to the under surface of the middle of the column; column 0.8 mm long, cylindrical, the anther and stigma apical.

Etymology: From the Greek *homo-*, "similar," and *taxis*, "an arrangement," referring to the similarity of the halves of the floral parts.

Type: ECUADOR: MORONA-SANTIAGO: epiphytic in cloud forest between Gualaceo and Limon, alt. 2050 m, 29 Oct. 1982, C. Luer, R. Escobar & A. Pozo 8228 (Holotype: SEL).

This tiny species is characterized by the minute flowers with a similar dorsal sepal and synsepal, similar upper and lower lobes of the forked petals, and a pubescent, transversely bilobed lip joined to the middle of a cylindrical column.

Lepanthes ictalurus Luer, sp. nov.

Planta pusilla caespitosa, caulibus secundariis foliis orbicularibus multilongioribus, racemo elongato fractiflexo, sepalis anguste triangularibus spiculatis, lobo inferiore petalorum attenuato pubescenti, lobo superiore brevi truncato, labelli laminis ellipticis apice in caudam filiformem abrupte attenuato.

Plant small, epiphytic, caespitose; roots slender. Secondary stems slender, suberect, 2.5-6 cm long, enclosed by 5-8 ciliate lepanthiform sheaths. Leaf erect, coriaceous, broadly elliptical to suborbicular, 12-15 mm long, 8-11 mm wide, the apex obtuse to rounded, the rounded base abruptly contracted into a petiole ca. 2 mm long. Inflorescence a progressively lengthening, successively flowered, fractiflex raceme up to 7 cm long including the filiform peduncle; floral bract 1.5 mm long; pedicel 2.5 mm long; ovary 1.5 mm long, with serrulate wings; sepals purple with yellow margins, spiculate along the edges and carinate nerves externally, the dorsal sepal narrowly triangular, concave, 7 mm long, 2.5 mm wide, connate to the lateral sepals for 1 mm, the lateral sepals connate 5 mm into an ovate, bifid lamina 7 mm long, 3.5 mm wide, the apices approximate, acute; petals yellow, suffused with rose, pubescent, markedly unequally transversely bilobed, 0.75 mm long, 4.5 mm wide, the upper lobes short, more or less truncate, incurved into apposition over the column, the lower lobes attenuate, linear triangular; lip yellow, suffused with rose, the blades elliptical, glabrous, 2 mm long, the apex of each abruptly contracted into a filiform appendage 2 mm long, the connectives short, broadly rectangular, connate to the under surface of the column above the middle, the sinus pubescent with the appendix reduced to a minute apiculum; column slender, 2.5 mm long, the anther dorsal, the stigma ventral.

Etymology: Named for the genus *Ictalurus*, the genus of the common catfish.

Type: ECUADOR: LOJA: epiphytic in cloud forest east of Yangana, alt. 2650 m, 4 March 1982, C. Luer, D. D'Alessandro & S. Dalström 7151 (Holotype: SEL); south of Yangana, alt. 2400 m, 22 Sept. 1980, C. Luer, J. Luer & H. H. Morgan 5530 (SEL).

The column of this species is long and slender. Between the middle and lower thirds the petals are attached; between the middle and upper thirds the lip is attached. The short upper lobes of the petals meet over the column while the attenuated lower lobes descend behind the lip and protrude below. The apices of the blades of the lip are contracted into equally long, filiform appendages. These four descending tails of the petals and lip resemble the barbels of a catfish.

Lepanthes illex Luer, sp. nov.

Planta mediocris caespitosa, racemo sublaxo folio anguste elliptico acuminato brevior, sepalo dorsali synsepaloque anguste ovatis acutis similibus minute pubescentibus ciliatis, petalis transverse panduriformibus parvulis, labelli laminis ovatis glabris appendice pedunculata ovata ciliata.

Plant medium in size, epiphytic, caespitose; roots coarse. Secondary stems slender, erect, 6-10 cm long, enclosed by 7-8 glabrous to microscopically scabrous lepanthiform sheaths. Leaf thinly coriaceous, erect, narrowly elliptical, acute, acuminate, 4.5-7.5 cm long, 1.5-1.8 cm wide, the base cuneate into the petiole 4 mm long. Inflorescence a successive, sublaxly flowered raceme up to 6 cm long including the filiform peduncle behind the leaf; floral bract 2 mm long; pedicel 1.5 mm long; ovary 2 mm long, irregularly rose-winged; sepals yellow, suffused with purple centrally, carinate-ciliate externally, the margins microscopically ciliate, microscopically pubescent within, the dorsal sepal triangular, acute, 10 mm long, 4 mm wide, connate basally for 1.5 mm to the lateral sepals, the lateral sepals connate 6 mm into an ovate, shortly bifid lamina 9.5 mm long, 5 mm wide, the apices acute; petals orange, suffused with purple medially, transversely panduriform, 0.6 mm long, 2 mm wide, the lobes ovate, obtuse, the lower lobe slightly smaller; lip bright purple, the blades oblong-ovate, 1.5 mm long, glabrous, the apices subacute, the bases rounded, the connectives broadly cuneate, connate to the column above the base, the appendix ovate, ciliate, pedunculate; column 1.5 mm long, the anther dorsal, the stigma ventral.

Etymology: From the Latin *illex*, "seductive," in allusion to the presumed attractive function of the appendix.

Type: ECUADOR: CARCHI: epiphytic in cloud forest above El Carmelo, alt. 3200 m, 17 May 1981, C. Luer, J. Luer A. Hirtz et al. 6263 (Holotype: SEL).

This species may be recognized by the sublax raceme of large, successive flowers shorter than the acuminate leaf. The petals and lip are comparatively small, the petals transversely pandurate, the appendix of the lip is a small, ovate, ciliate, pedunculated gland.

Lepanthes inamoena Luer, sp. nov.

Planta parva caespitosa, racemo gracili folio ovato brevior, flore parvo flavo, sepalo dorsali et synsepalo ovatis aequalibus, petalis transverse bilobatis, labelli lobis falcatis minute ciliatis, appendice minuta acuta pubescentis.

Plant small or nearly medium in size, epiphytic, caespitose; roots slender. Secondary stems slender, erect, 3-7.5 cm long, enclosed by 6-10 close, minutely ciliate lepanthiform sheaths. Leaf erect, coriaceous, narrowly ovate, acute, 2.5-4.5 cm long, 1-1.5 cm wide, the base cuneate into a 3-4 mm long petiole. Inflorescence a weak, successively flowered, subdense raceme, up to 3 cm long, erect behind the leaf, the filiform peduncle from a node near the apex of the secondary stem; floral bract 1 mm long; pedicel 0.75 mm long; ovary 0.75 mm long; sepals translucent yellow, glabrous, the dorsal sepal ovate, acute, 2.5 mm long, 1.75 mm wide, the lateral sepals connate into an ovate, narrowly obtuse lamina 2.25 mm long, 1.75 mm wide; petals transversely oblong bilobed, 0.75 mm long, 2 mm wide, the apices rounded, the upper lobe slightly larger than the lower; blades of the lip falcate, 1 mm long, minutely ciliate, the apices acute, the bases rounded, the connectives narrowly cuneate, the attachment near the base of the lobes, connate to the under surface of the column, the appendix a minute, pubescent apiculus in the sinus; column scarcely 1 mm long, the anther and stigma apical.

Etymology: From the Latin *inamoenus*, "not pretty," referring to the drab, little flower.

Type: ECUADOR: MORONA-SANTIAGO: epiphytic in tall forest near Rio Calagrás, alt. 1600 m, 19 Sept. 1980, C. Luer, J. Luer, C. H. Dodson et al. 5501 (Holotype: SEL).

Vegetatively this species is not remarkable, bordering between medium and small in size. The bilabiate, yellow flowers are among the smallest and least showy of the genus noted for its intricate flowers. The dorsal sepal and synsepal are similar and the two lobes of the petals are also similar in size and shape.

Lepanthes incisa Luer & Vásquez, sp. nov.

Planta mediocris, folio anguste ovato acuminato racemis congestis distichis duplongiore, floribus parvis, sepalis ovatis obtusis, petalis grandibus pubescentibus transverse bilobis incisus, labelli laminis oblongis, connectivis angustis elongatis, appendice pubescenti quadrilobata.

Plant medium in size, epiphytic, densely caespitose; roots slender. Secondary stems slender, erect, 4.9 cm long, enclosed by 5-8 close, minutely ciliate lepanthiform sheaths. Leaf erect, coriaceous, narrowly ovate-elliptic, acute, acuminate, 3-5 cm long, 1-1.3 cm wide, the base cuneate into a 3 mm long petiole. Inflorescence a congested, distichous, successively many-flowered raceme up to 13 mm long, borne behind the leaf by a filiform peduncle 6-10 mm long; floral bract 1.5-2 mm long; pedicel 2 mm long; ovary 2.5 mm long; sepals yellow-orange, suffused with purple basally, glabrous, the dorsal sepal broadly ovate, subacute, 2.8 mm long, 2 mm wide, connate to the lateral sepals for 0.5 mm, the lateral sepals ovate, connate to above the middle, 2.2 mm long, 2.4 mm wide together, the apices obtuse; petals yellow-orange, suffused with purple at the base, minutely pubescent, transversely elliptical, bilobed, 1 mm long, 4 mm wide, the outer margin incised near the middle, the lobes obtusely triangular with rounded ends, the lower lobe smaller; lip red-orange, cellular pubescent, the blades oblong with rounded ends, 1.5 mm long, the connectives narrow, lifting the blades above the column, the narrow body connate to the column above the base, the appendix pubescent, 4-lobed, hinged at the sinus in contact with the rostellum; column 1 mm long, the anther apical, the stigma ventral.

Etymology: From the Latin *incisus*, "cut into," referring to the incision on the petals.

Type: BOLIVIA: LA PAZ: Prov. of Inquisivi: epiphytic in cloud forest between Inquisivi and Circuata, alt. 2550 m, 27 Jan. 1981, C. Luer, J. Luer, R. Vásquez & E. Besse 5796 (Holotype: SEL).

The species seems superficially similar to *L. glaberrima*, even the petals being similar in size and shape with the incision on the outer margin. However, the petals of *L. incisa* are pubescent; the connectives of the lip are long, elevating the blades above a short column; and the appendix is four-lobed.

Lepanthes intonsa Luer, sp. nov.

Planta parva caespitosa, foliis ovatis acuminatis racemo congesto longioribus, sepalis minute ciliatis ovatis obtusis, petalis grandibus transverse bilobatis, labelli lobis oblongis apice sparsim longiciliatis, connectivis oblongis elongatis, appendice loriformi sigmoidea.

Plant small, epiphytic, caespitose; roots slender. Secondary stems slender, erect, 2.5-4.5 mm long, enclosed by 5-6 close, minutely ciliate lepanthiform sheaths. Leaf erect, thin coriaceous, ovate, acuminate, acute, 2.5-3 cm long, 1.2-1.7 cm wide, the rounded base abruptly contracted into a petiole 2 mm long. Inflorescence a congested, successively flowered raceme up to 10 mm long, borne by a filiform peduncle up to 8 mm long along the back side of the leaf; floral bract 1-1.25 mm long, pedicel 1.5-2 mm long; ovary 2.5 mm long; sepals yellow, suffused with rose, minutely ciliate, broadly ovate, obtuse, the dorsal sepal 3.5 mm long, 3.1 mm wide, connate 0.5 mm to the lateral sepals, the lateral sepals oblique, 3 mm long, 2.25 mm wide, connate 1 mm; petals yellow, suffused with orange, transversely oblong, bilobed, 1.25 mm long, 3.75 mm wide, the outer margin acutely angled at the junction between the oblong, apically rounded upper lobe and the smaller oblique, obtuse lower lobe; lip yellow, suffused with rose, the blades oblong, 1.3 mm long, both ends obtuse, the apical margin with a few, very long cilia, the connectives oblong, elongated, lifting the blades above the column, connate to the under surface of the column near the middle, the appendix straplike, terminating in a small gland, S-shaped, shortly pubescent, hinged to the sinus; column 1.5 mm long, the anther apical, the stigma ventral.

Etymology: From the Latin *intonsus*, "unshaven," referring to the long hairs on the lip.

Type: ECUADOR: LOJA: epiphytic in cloud forest south of Yangana, alt. 2450 m, 12 May 1981, C. Luer, J. Luer, D. D'Alessandro et al. 6212 (Holotype: SEL); same area, 3 March 1982, C. Luer et al. 7088 (SEL).

The most distinguishing feature of this species is the lip with the pair of oblong lobes long-ciliate anteriorly, held high above the column by elongated connectives.

Lepanthes intricata Luer, sp. nov.

Planta parva caespitosa, inflorescentia folio ovato acuminato brevior, racemo congesto, sepalis acutis, petalis transversale oblongis, labelli laminis subfalcatis, connectivis anguste cuneatis, appendice intricata glande pedunculata multilobata.

Plant small, epiphytic, caespitose; roots slender. Secondary stems slender, erect, 4.5-7.5 cm long, enclosed by 8-11 minutely ciliate lepanthiform sheaths, the ostia markedly dilated. Leaf erect, thinly coriaceous, ovate, lightly acuminate, acute, 4-5 cm long, 1-1.5 cm wide, the rounded base contracted into a petiole 2 mm long. Inflorescence a congested, fractiflex, successively flowered raceme up to 8 mm long, borne by a filiform peduncle up to 12 mm long behind the leaf; floral bract 1 mm long; pedicel 1 mm long; ovary 1.5 mm long; sepals greenish white, suffused with rose centrally, carinate externally along the veins, the dorsal sepal ovate, shortly acuminate, acute, 4 mm long, 2.3 mm wide, the lateral sepals ovate, oblique, acute, 4 mm long, 1.75 mm wide, connate 0.5 mm; petals yellow-orange, transversely oblong, bilobed, 1 mm long, 2.75 mm wide, the upper lobe oblong, obtuse, the lower lobe half as large, triangular, obtuse; lip rose-purple, the laminae narrowly subfalcate, 1.5 mm long, the connectives short, narrowly cuneate, connate to the under surface of the column in the lower third, the appendix proportionately large, pubescent, ligulate, with a more or less 4-lobed, pedunculated, apical gland; column 1.5 mm long, the anther dorsal, the stigma ventral.

Etymology: From the Latin *intricatus*, "intricate," referring to the appendix of the lip.

Type: ECUADOR: LOJA: epiphytic in cloud forest south of Yangana, alt. 2450 m, 12 May 1981, C. Luer, J. Luer, D. D'Alessandro et al. 6209 (Holotype: SEL).

This species is distinguished by the narrow, subfalcate blades of the lip with short, narrow connectives, and the intricately sculptured appendix. From the apex of a pubescent, tongue-like stalk, the terminal, more or less 4-lobed gland is delicately attached by a nearly invisible thread.

Lepanthes iricolor Luer, sp. nov.

Planta parva caespitosa, inflorescentia folio ovato reticulato brevior, racemo congesto, floribus parvis multicoloribus, sepalis ovatis breviter acuminatis denticulatis, petalis grandibus transverse oblongis, labelli laminis ovatis appendice parva triangulari ciliata.

Plant very small, epiphytic, caespitose; roots slender. Secondary stems slender, erect, 0.5-2.5 cm long, enclosed by 4-6 ciliate lepanthiform sheaths. Leaf erect, coriaceous, purple-reticulate, ovate, subacute, 7-14 mm long, 5-9 mm wide, the broadly cuneate base contracted into a twisted petiole 1 mm long. Inflorescence a congested raceme of successive flowers, up to 3 mm long, borne by a filiform peduncle up to 3 mm long, along the back of the leaf; floral bract 1 mm long; pedicel 0.75 mm long; ovary 1 mm long, narrowly winged; sepals ovate, acute, shortly acuminate, denticulate, connate basally, the dorsal sepal purple with green margins, 2.1 mm long, 1.3 mm wide, the lateral sepals oblique, yellow with the midvein red, 2 mm long, 1.1 mm wide; petals orange, transversely oblong, 0.6 mm long, 2 mm wide, obtusely angled on the outer margin at the midvein, the upper lobe oblong, truncate, the lower lobe triangular, obtuse; lip orange, the blades ovate, 1.25 mm long, the apices acute, the bases rounded, glabrous, the connectives broadly cuneate, ciliate, connate to the column above the base, the appendix small, triangular, ciliate; column 1 mm long, the anther dorsal, the stigma ventral.

Etymology: From the Latin *iricolor*, "with the colors of the rainbow," referring to the multiple colors of the flowers.

Type: ECUADOR: NAPO: epiphytic in wet forest near Rio Jatunyacu west of Tena, alt. 600 m, 21 Feb. 1982, C. Luer & A. Hirtz 6895 (Holotype: SEL).

The multiple, brilliant colors of the flowers of this little species with purple-reticulated leaves are probably variable as they are in other species. The flowers are tiny with denticulate sepals and proportionately large petals.

Lepanthes jubata Luer, sp. nov.

Planta parva caespitosa, inflorescentia folio acuminato brevior, racemo congesto, sepalis breviter laciniatis ovatis breviter acuminatis, petalis transverse oblongis, labelli lamina longiciliatis super columnam, appendice minute bilobata.

Plant small, epiphytic, caespitose; roots slender. Secondary stems slender, suberect, 2-5.5 cm long, enclosed by 5-8 minutely ciliate lepanthiform sheaths. Leaf suberect, coriaceous, ovate, acuminate, acute, 10-28 mm long, 7-9 mm wide, the margins smooth or minutely undulate, the rounded base abruptly contracted into a petiole ca. 2 mm long. Inflorescence a congested, successively flowered raceme up to 5 mm long, borne by a filiform peduncle up to 12 mm long up the back of the leaf; floral bract 1-1.25 mm long, minutely spiculate; pedicel 0.5-1 mm long; ovary 0.5-1.5 mm long, echinate; flower parts red to yellow; sepals ovate, shortly acuminate, the margins shortly lacinate, the carinae along the nerves spiculate, the dorsal sepal acute, 3-4 mm long, 1.8-2.25 mm wide, connate basally, the lateral sepals oblique, obtuse, connate to about the middle, 3-4 mm long, 3.5-4 mm wide together; petals transversely oblong, bilobed, 1 mm long, 3.25-4.25 mm long, both lobes obtuse, the upper longer; laminae of the lip oblong, oblique, the margins with long, straight hairs, the connectives broad, rectangular, erect, lifting the laminae above the column, connate to the base of the column, the sinus broadly rounded and protruding with a minute, pedunculated, bilobed appendix; column 1 mm long, the anther dorsal, the stigma ventral.

Etymology: From the Latin *jubatus*, "crested with hairs," referring to the long hairs on the margins of the laminae of the lip.

Type: ECUADOR: NAPO; epiphytic in cloud forest near Papallacta, alt. 2500 m, 29 Oct. 1979, C. Luer, J. Luer & A. Hirtz 4447 (Holotype: SEL); southeast of El Carmelo, alt. 2050 m, 17 May 1981, C. Luer, J. Luer, A. Hirtz et al. 6309 (SEL).

This species may be distinguished by the minutely lacinate sepals, large petals, and the long-ciliate borders of the blades of the lip which are lifted over the column by erect connectives. The margins of the leaves of 4447 are smooth, the margins of the leaves of 6309 are minutely undulate.

Lepanthes lloënsis Luer, sp. nov.

Planta grandis caespitosa, inflorescentia folio oblongo acuminato brevior, racemo congesto, sepalis dorsalibus triangularibus acutis, synsepalo transverse ovato apicibus obtusis, labelli laminae lunatis convexis, appendice minutissima.

Plant large, epiphytic, caespitose; roots slender. Secondary stems erect, slender, 9-22 cm long, enclosed by 8-15 minutely scabrous lepanthiform sheaths. Leaf erect, thinly coriaceous, ovate-oblong, acuminate, acute, 8-11 cm long, 2.2-3.4 cm wide, the base rounded or lightly cordate, abruptly contracted into a petiole 3-4 mm long. Inflorescence an extremely congested, successively flowered raceme up to 10 mm long, borne by a filiform peduncle up to 20 mm long, along the back of the leaf; floral bract 1.5 mm long; pedicel 1 mm long, ovary 1.5 mm long; sepals translucent light yellow, glabrous, the dorsal sepal triangular, acute, 8 mm long, 5.75 mm wide, connate 1.5 mm to the lateral sepals, the lateral sepals ovate, oblique, connate 4.5 mm into a transversely ovate lamina 8 mm long, 9.5 mm wide expanded, the obtuse apices distant; petals bright yellow with purple margins, transversely oblong, bilobed, 1.66 mm long, 3.5 mm wide, the upper lobe triangular with the apex rounded, the lower lobe falcate, acute; lip yellow, suffused with purple, the blades ovate-lunate, convex, 2 mm long, the apices acute, minutely ciliate, the connectives broadly cuneate, connate to the under surface of the column below the middle, the appendix a minute, slender filament from a minutely pubescent membrane in the sinus; column 1.5 mm long, the anther dorsal, the stigma ventral.

Etymology: Named for the community of Lloa, near Quito, where the species was discovered.

Type: ECUADOR: PICHINCHA; epiphytic in cloud forest remnant below Lloa, alt. 2700 m, 27 Oct. 1979, C. Luer, J. Luer & A. Hirtz 4363 (Holotype: SEL).

This large species is recognized by the short, congested raceme of rather large flowers with a broad synsepal with distant, obtuse apices. The blades of the lip are convex and the appendix is reduced to a microscopic filament.

Lepanthes lophius Luer & Escobar, sp. nov.

Planta mediocris caespitosa pulchra, inflorescentia folio anguste ovato brevior, racemo congesto fractiflexo, sepalis anguste attenuatis, petalis transverse oblongis, labelli laminis oblongis, appendice spatulata pubescenti.

Plant medium in size, epiphytic, caespitose; roots slender. Secondary stems slender, erect, 3-8.5 cm long, enclosed by a 10-14 ciliated lepanthiform sheaths with markedly dilated ostia. Leaf erect, coriaceous, purple beneath, narrowly ovate, acute, 3-5 cm long, 1.2-1.5 cm wide, cuneate below into a petiole 3-4 mm long. Inflorescence a congested, flexuous, successively flowered raceme up to 2 cm long, borne by a filiform peduncle up to 2.5 cm long, up the back of the leaf; floral bract 1.5 mm long; pedicel 1.25 mm long; ovary 2 mm long, papillose; sepals purple with the outer thirds cream, carinate-spiculate, the dorsal sepal triangular, slightly concave, acute, attenuate, 11 mm long, 5 mm wide, connate 1.5 mm to the lateral sepals, the margins distantly subserrulate, the lateral sepals narrowly ovate, oblique, acute, attenuate, 11 mm long, 3 mm wide, connate 1.5 mm, the margins serrulate, petals orange, suffused with red-purple, transversely oblong, 2 mm long, 5 mm wide, the upper lobe more or less quadrate, truncate, the lower lobe shorter, narrowly oblong, obtuse; lip rose, the blades oblong with rounded ends, 2.66 mm long, ciliate anteriorly, the connectives cuneate, connate to the under surface of the column above the base, the appendix spatulate, pubescent; column 2 mm long, the anther dorsal, the stigma ventral.

Etymology: Named for the genus of common anglers (*Lophius*) because of the similarity of the appendix to the pedunculated "bait" peculiar to these fish.

Type: *ECUADOR:* MORONA-SANTIAGO: epiphytic in cloud forest between Gualaceo and Limon, alt. 2650 m, 29 Oct. 1982, *C. Luer, R. Escobar & A. Pozo 8212* (Holotype; SEL).

This species is notable for the congested raceme of pretty flowers with attenuated sepals and truncate petals. The blades of the lip are oblong, and the appendix is spatulate and pubescent. The appendix undoubtedly acts as a lure for pollinators, much the same as the pedunculated "bait" of an agler acts as a lure for a meal.

Lepanthes magnifica Luer, sp. nov.

Planta grandis caespitosa, inflorescentia folio magno ovato acuminato brevior, racemo congestissimo disticho multifloro, sepalis albis apicibus breviter acuminatis laterali-bus pubescentibus, petalis transverse bilobatis, labelli laminis anguste oblongis glabris, appendice oblonga ciliata cum glandibus duobus terminalibus.

Plant large, epiphytic, caespitose; roots coarse. Secondary stems stout, erect, 20-30 cm long, enclosed by 15-19 ciliate lepanthiform sheaths. Leaf erect, thinly coriaceous, ciliate along the veins beneath, ovate, acute, acuminate, 12-15 cm long, 5-6.5 cm wide, the base rounded to subcordate, abruptly contracted into a twisted petiole 3-4 mm long. Inflorescence a very congested, distichous, successively many-flowered raceme up to 3 cm long, borne by a filiform peduncle up to 4 cm long along the back of the leaf; floral bract 1.5 mm long; pedicel 2 mm long; ovary 3 mm long; sepals white, the dorsal sepal glabrous, triangular, the acute apex shortly acuminate, 12 mm long, 5.5 mm wide, connate basally to the lateral sepals for 2 mm, the lateral sepals oblong, pubescent, concave basally, 10-5 mm long, 5 mm wide, connate 3.5 mm, the obtuse apices abruptly contracted into recurved, setiform tails 1.5 mm long; petals white with a broad red margin, transversely oblong, oblique, obtuse, the lower lobe smaller; lip rose, the blades narrowly oblong, obtuse, glabrous, 2.25 mm long, the connectives short-cuneate, connate to the column above the base, the appendix oblong, ciliate, with a pair of terminal lobules; column 2 mm long, the anther dorsal, the stigma ventral.

Etymology: From the Latin *magnificus*, "magnificent," referring to the large plant with large white and purple flowers.

Type: *ECUADOR:* PINCHINCHA: epiphytic in cloud forest between Mindo and Puerto Quito, alt. 1600 m, 13 March 1982, *C. Luer, A. Hirtz & S. Dalström 7333* (Holotype; SEL); above Mindo, alt. 2200 m, 15 Oct. 1979, *A. Hirtz s.n.* (SEL).

This huge, spectacular species is notable for the large white flower produced successively in a congested raceme behind the leaf. The lateral sepals are pubescent with the obtuse apices contracted into short tails; the small petals are rimmed in purple; the blades of the lip are glabrous and narrow; and the appendix is oblong and ciliate with a pair of apical lobules.

Lepanthes mastodon Luer, sp. nov.

Planta mediocris caespitosa vaginis caulium secundariorum dilatatis ciliolatisque, folio ovato acuto coriaceo purpureo inflorescentia longiore, flore super folium, sepalis ciliatis carinatis caudatis, caudis sepalorum lateralium longis attenuatis incurvis, petalis transverse oblongis, labelli lobis oblongis appendice vestigiali.

Plant medium in size, epiphytic, caespitose; roots slender. Secondary stems suberect, slender, 3-10 cm long, enclosed by 8-12 lepanthiform sheaths markedly dilated at the ostia, ciliate along the margins and ribs. Leaf dark green, purple beneath, suberect to horizontal, coriaceous, more or less sulcate dorsally between convex halves, ovate, 2.5-4 cm long, 1.5-2.2 cm wide expanded, the apex acuminate, acute, the base broadly cuneate or rounded, sessile. Inflorescence a congested, successively flowered raceme up to 15 mm long lying in the sulcus of the dorsum of the leaf, the filiform peduncle from a node at the apex of the secondary stem; floral bract 1 mm long; pedicel 1.5 mm long; ovary 2.5 mm long; sepals purple-black or red-brown, with yellow or green margins, carinate-spiculate along the veins, the margins ciliate, the dorsal sepal concave, ovate, 6 mm long, 3.5 mm wide expanded, the apex acuminate, acute, the lateral sepals ovate, oblique, connate 2 mm, 4 mm wide together, the acute apices attenuated into incurved tails, the entire length of the lateral sepal 10 mm; petals green, yellow or purple, minutely pubescent, transversely oblong-bilobed, 1.25 mm long, 4.25 mm wide, the upper lobe oblong, obtuse, the lower lobe narrowly triangular, oblique, obtuse; lip with the blades flat, oblong, 2 mm long, minutely ciliate, the connectives narrow, cuneate, the appendix reduced to an obtuse angle in the sinus; column 1.5 mm long, the anther dorsal, the stigma ventral.

Etymology: Named for the elephantlike Mastodon, referring to the tusklike tails of the lateral sepals.

Type: *ECUADOR:* CARCHI: epiphytic in cloud forest above Maldonado, alt. ca. 2000 m, 25 Aug. 1978, C. Luer, J. Luer & A. Hirtz 3381 (Holotype: SEL). Additional material examined: same area, 20 May 1973, L. Holm-Nielsen, S. Jeppesen, B. Løjtnant & B. Ollgaard 6145 (AAU, SEL); IMBABURA: epiphytic in cloud forest, Selva Alegre, west of Otavalo, alt. 1900 m, 2 May 1981, C. Luer, J. Luer A. Hirtz et al. 6085 (SEL); *COLOMBIA:* NARINO: epiphytic in cloud forest east of Ricuarte, alt. 1800 m, 1 Nov. 1979, C. Luer, J. Luer & A. Hirtz 4521 (SEL).

The flower of this unusual species lies in the midline groove on the dorsum of the leaf. The color varies remarkably among the three collections, but morphologically the flowers are identical. Most remarkable are the long, upcurved tails of the lateral sepals which resemble a pair of tiny tusks.

Lepanthes megalostele Luer, sp. nov.

Planta mediocris caespitosa, inflorescentia folio elliptico brevior, racemo congesto disticho, sepalis glabris subacutis quam petalis transverse oblongis brevioribus, labello laminis ellipticis ciliatis columna minoribus, appendice grossa pubescenti apice incurvato.

Plant medium in size, epiphytic, caespitose; roots slender. Secondary stems slender, erect, 5-8 cm long, enclosed by 7-8 blackish, close, microscopically ciliate lepanthiform sheaths. Leaf erect, coriaceous, elliptical, acute, 3-4 cm long, 1.5-1.8 cm wide, the base cuneate into a petiole 3 mm long. Inflorescence a congested, distichous, successively flowered raceme up to 7 mm long, borne by a filiform pedicel 10-22 mm behind the leaf; floral bract 1 mm long, spiculate; pedicel 1.75 mm long; ovary 2 mm long; sepals light yellow, glabrous, carinate, subacute, the dorsal sepal ovate-triangular, 2.66 mm long, 1.9 mm wide, connate 0.66 mm basally to the lateral sepals, the lateral sepals ovate, connate 1.5 mm, 2.66 mm long, 2.5 mm wide together; petals orange, suffused with red, transversely oblong, 0.8 mm long, 3.33 mm wide, microscopically pubescent, the upper lobe elliptical, obtuse, the lower lobe smaller, oblong, obtuse; lip red, the blades elliptical, 1 mm long, the apices acute, ciliate, the bases rounded, the connectives and body narrow, connate to the base of the column, the appendix thick, broadly triangular, pubescent, with an acute, incurved apex; column proportionately large, 1.5 mm long, the anther and stigma apical.

Etymology: From the Greek *megalo-*, "large," and *stete*, "column," in reference to the large column of the species.

Type: *ECUADOR:* NAPO: epiphytic in wet forest north of Tena, "Cotundo," alt. 1100 m, June 1983, A. Hirtz 917B (Holotype: SEL), C. Luer illustr. 9090.

This species is notable for the congested, distichous inflorescence shorter than the elliptical leaf; the small flowers with petals longer than the sepals; the column larger than the blades of the lip; and the thick, pubescent appendix with an incurved apex.

Lepanthes micropogon Luer, sp. nov.

Planta parva caespitosa, inflorescentia folio elliptico brevior, racemo congesto disticho, sepalis glabris ovatis acutis, petalis transverse oblongis sepalis longioribus, labelli laminis ellipticis apicibus ciliatis connectivis anguste cuneatis cum sinu rotundato pubescenti et appendice minuta pedunculata ciliata.

Plant small, epiphytic, caespitose; roots slender. Secondary stems slender, erect, 2-3 cm long, enclosed by 5-7 close, microscopically ciliate lepanthiform sheaths. Leaf erect, coriaceous, elliptical, subacute, 20-22 mm long, 9-11 mm wide, the base cuneate into a twisted petiole ca. 2 mm long. Inflorescence a congested, distichous, successively flowered raceme up to 4 mm long, borne by a filiform peduncle up to 10 mm long behind the leaf; floral bract 1 mm long, ciliate; pedicel 2 mm long; ovary 1.5 mm long; sepals glabrous, light yellow, ovate, acute, the dorsal sepal 2.5 mm long, 1.5 mm wide, connate basally to the lateral sepals, the lateral sepals connate 1.5 mm, 2.5 mm long, 2.25 mm wide together; petals bright yellow, transversely oblong, bilobed, 1 mm long, 3.5 mm wide, the lobes oblong, obtuse, the lower lobe smaller; lip rose, the blades elliptical with rounded ends, 1.2 mm long, the apices ciliate, the connectives narrowly cuneate, connate to the column above the base, the sinus protruding forward, rounded, pubescent, with a small, rounded, ciliate, pedunculated appendix; column 1.3 mm long, the anther dorsal, the stigma ventral.

Etymology: From the Greek *micro*, "small," and *pogon*, "a beard," referring to the protruding sinus of the lip with the little, ciliate appendix.

Type: ECUADOR: NAPO: epiphytic in wet forest north of Tena along the new road to Coca, alt. 1100 m, 22 Feb. 1982, C. Luer & A. Hirtz 6952 (Holotype: SEL).

This small species with a congested, distichous inflorescence shorter than the elliptical leaf is notable for the proportionately large petals, and the pubescent sinus of the lip that bulges forward with a small, pedunculated, ciliate appendix.

Lepanthes miraculum Luer & Vásquez, sp. nov.

Planta mediocris, racemo laxe plurifloro foliis ellipticis multilongiore, floribus grandibus, sepalis erosis breviter acuminatis, petalis bilobatis ciliatis, lobo superiore minimo acuto reflexo, lobo inferiore grandi falcato acuto, labelli laminis breviter ciliatis oblongis, sinu obtuso cum appendice lata membranacea retusa.

Plant medium in size, epiphytic, caespitose; roots relatively coarse. Secondary stems slender, erect to suberect, 3-9.5 cm long, enclosed by 6-9 ciliate lepanthiform sheaths with markedly dilated ostia. Leaf erect, coriaceous, suffused with purple beneath, elliptical, acute, 2-3 cm long, 0.9-1.1 cm wide, the base cuneate into a petiole 2-4 mm long. Inflorescence a loose, subflexuous, distantly successively flowered raceme up to 10 cm long including the slender peduncle 2.5-4 cm long; floral bract 1.5 mm long, ciliate; pedicel 2.5 mm long; ovary 1.5 mm long, papillose-winged; sepals dark red, the margins erose, the carinae serrate, the dorsal sepal triangular, acute, acuminate, 10.5 mm long, 6.5 mm wide, connate to the lateral sepals for 3 mm; the lateral sepals connate 5 mm into a bifid lamina 11.5 mm long, 8.5 mm wide, shortly pubescent, concave basally, the apices ovate, acute, shortly acuminate; petals red, ciliate, bilobed, the upper lobe 1 mm long, acute, reflexed, the lower lobe falcate, acute, 3 mm long, 1 mm wide, long-ciliate; lip bright purple, the blades oblong, 1.75 mm long, glabrous except for short cilia at the narrowly obtuse apices, the bases rounded and continuous with the cuneate connectives connate to the column near the middle below the stigma, the sinus obtuse with a broad, membranous, retuse, ciliate appendix in contact with a clavate appendage from the stigma; column 2 mm long, the apical half dilated with the dorsal anther and ventral stigma, the shaft extremely slender.

Etymology: From the Latin *miraculum*, "a marvel," referring to the grotesque features of the flowers.

Type: BOLIVIA: COCHABAMBA: Prov. of Chapare: epiphytic in cloud forest between Cochabamba and Villa Tunari, alt. 2500 m, 22 Jan. 1980, C. Luer, J. Luer & R. Vásquez 4906 (Holotype: SEL); same area, alt. 2600 m, 26 Nov. 1978, C. Luer, F. Fuchs et al. 3490 (SEL); same area, collected by B. Wuerstle, alt. 2700 m, 13 Jan. 1981, C. Luer 5662 (SEL); Pampa Tambo, alt. 2800 m, 24 Dec. 1979, R. Vásquez 234 (SEL).

This remarkable species produces large, dark red flowers in loose racemes. The sepals are erose, shortly pubescent and shortly acuminate. The lower lobes of the ciliate petals flank the column, while the minute upper lobes twist behind. The lobes of the lip are narrowly oblong and cover the column, the shaft of which is very slender like that of *L. vespa*. The weblike appendix is in contact with a clavate process from the stigma like that seen in the Ecuadorian *L. contingens*.

Lepanthes monitor Luer, sp. nov.

Planta mediocris caespitosa, inflorescentia folio oblongo acuminato brevior, racemo congesto, sepalis glabris acutis, petalis transverse bilobatis, labelli laminis ovatis convexis glabris, appendice parvula pubescenti.

Plant medium in size, epiphytic, caespitose; roots coarse. Secondary stems slender, erect, 8-25 cm long, enclosed by 9-14 close, minutely ciliate lepanthiform sheaths. Leaf erect, thinly coriaceous, oblong-ovate, acute, acuminate, 6.5-12 cm long, 1.9-3 cm wide, the rounded base contracted into a petiole 3 mm long. Inflorescence a congested, successively flowered raceme up to 30 mm long, borne by a filiform peduncle up to 25 mm long behind the leaf; floral bract 1.5 mm long; pedicel 1 mm long; ovary 2 mm long; sepals yellow-white, glabrous, the dorsal sepal triangular, acute, 5 mm long, 2.6 mm wide, connate to the lateral sepals for 1 mm, the lateral sepals 5 mm long, connate 2.5 mm into an ovate, bifid lamina 4 mm wide, the acute apices shortly acuminate; petals white with purple margins, transversely bilobed, 1.25 mm long, 3.5 mm wide, the upper lobe broadly oblong-falcate, obtuse, the lower lobe smaller, narrowed to an oblong, rounded apex; lip white with purple margins, the blades ovate, convex, 1.5 mm long, glabrous, the apices narrowly rounded, the bases rounded, the connectives short, cuneate, connate to the base of the column, the sinus rounded with a small, rounded, pubescent appendix; column 1.5 mm long, protruding from between the blades of the lip, the anther dorsal, the stigma ventral.

Etymology: From the Latin *monitor*, "a reminder," referring to the morphological features reminiscent of *L. elata* Rchb. f. and its relatives.

Type: *ECUADOR*: LOJA: epiphytic in cloud forest south of Yangana, alt. 1400 m, 3 March 1982, C. Luer, D. D'Alessandro & S. Dalström 7096 (Holotype: SEL); NAPO: south of Baeza, alt. 1900 m, 20 Feb. 1982, C. Luer & A. Hirtz 6863 (SEL); ZAMORA-CHINCHIPE: near Km 41 between Loja and Zamora, alt. 1500 m, 3 Nov. 1982, C. Luer, R. Escobar & D. D'Alessandro 8275 (SEL).

This large species seems to be the austral counterpart of *L. elata* Rchb. f. from Central America and northern Colombia. The leaves of large specimens of *L. monitor* are oblong-ovate, not broadly cordate as they are in large specimens of *L. elata*. Small specimens of both species have similar leaves. The flowers of the two species are also similar in size, shape and colors, but the appendix is pedunculate and narrowly hinged in the sinus of the lip in *L. elata*, while the appendix in *L. monitor* is a broad, triangular membrane across the sinus.

Lepanthes muscula Luer & Escobar, sp. nov.

Planta grandis caespitosa, caulibus secundariis folio elliptico acuminato multilongioribus, racemis paucis laxe multifloris subflexuosis folio multilongioribus, sepalis ovatis acutis, petalis transverse bilobatis, labelli laminis oblongis minute ciliatis, appendice triglandulosa.

Plant medium in size to large, epiphytic, caespitose; roots coarse. Secondary stems erect, slender to stout, 7-22 cm long, enclosed by 10-14 close, minutely ciliate lepanthiform sheaths. Leaf erect, thinly coriaceous, elliptical, acute, acuminate, 5-7 cm long, 1.5-1.5-2 cm wide, the base cuneate into the petiole 2-3 mm long. Inflorescence a progressively lengthening, loose, lightly flexuous raceme to 20 cm long, 2-3 flowers open simultaneously; floral bract 1.5 mm long; pedicel 0.75 mm long; ovary 2 mm long; sepals purple-brown, glabrous, narrowly ovate, acute, acuminate, the dorsal sepal 7.5 mm long, 3 mm wide, connate basally 1 mm to the lateral sepals, the lateral sepals 7 mm long, 2.25 mm wide, connate 2 mm; petals dark red, microscopically cellular, transversely oblong, bilobulate, 1.25 mm long, 3.75 mm wide, the upper lobe oblong, the apex obliquely narrowed, obtuse, the lower lobe similar but smaller; lip dark red, the blades oblong with rounded ends, 1.75 mm long, minutely ciliate, the connectives cuneate, connate to the under surface of the column, the appendix minute, pubescent, orbicular with a pair of rounded, terminal glands; column 1.5 mm long, the anther dorsal, the stigma ventral.

Etymology: From the Latin *musculus*, "a little mouse," in reference to the appearance of the trilobed appendix.

Type: *ECUADOR*: CARCHI: epiphytic in cloud forest above San Gabriel, alt. 3400 m, 8 Nov. 1982, C. Luer & R. Escobar 8300 (Holotype: SEL).

This species may be recognized by the long stems and long, flexible, subflexuous racemes with several flowers open simultaneously. The appendix is a small, spherical, pubescent organ with a pair of rounded, terminal glands.

Lepanthes mystax Luer & Escobar, sp. nov.

Planta mediocris, foliis suborbiculatis breviter acuminatis patentibus racemo congestissimo longioribus, sepalis ovatis, petalis grandibus ciliatis transverse bilobis, labelli laminis ellipticis divergentibus marginibus interioribus longissime ciliatis, appendice ligulata, stigmata hi-auriculata.

Plant medium in size, epiphytic, caespitose; roots slender. Secondary stems slender, erect, 4-12 cm long, enclosed by 5-10 close lepanthiform sheaths, minutely ciliate on the narrow ostia. Leaf more or less spreading, thinly coriaceous, broadly ovate to suborbicular, 2.5-4.5 cm long, 1.5-2.7 cm wide, the apex abruptly acuminate, acute, the rounded base abruptly contracted into a twisted petiole 2-3 mm long. Inflorescence an extremely congested, distichous, successively flowered raceme up to 10 mm long, borne below the leaf by a filiform peduncle 10-12 mm long; floral bract 1.5 mm long; pedicel 2.5 mm long; ovary 2 mm long; sepals yellow, glabrous, the dorsal sepal ovate, subacute, 5 mm long, 3 mm wide, connate 0.5 mm to the lateral sepals, the lateral sepals ovate, oblique, connate 1 mm, the subacute apices in apposition, together forming a synsepal 3 mm long, 3.75 mm wide; petals orange, ciliate, minutely pubescent, transversely oblong, bilobed, 1.75 mm long, 5 mm wide, the upper lobe suborbicular, the lower lobes obliquely triangular, obtuse; lip red, the blades elliptical, 1.25 mm long, with rounded ends, the apices diverging, the inner margins with long, straight, lavender hairs over the column, the connectives broadly cuneate, connate to the column above the base, the appendix pubescent, ligulate; column 1.25 mm long, the anther dorsal, the stigma transversely bilobed, the lobes auriculate, lateral.

Etymology: From the Greek *mystax*, "a moustache," in reference to the long-ciliated lobes of the lip.

Type: COSTA RICA: SAN JOSE: epiphytic in cloud forest below La Georgina, alt. 2850 m, 20 Sept. 1979, C. Luer, J. Luer & K. Walter 4237 (Holotype: SEL); CARTAGO: forest along road to Cerro de la Muerte, alt. 2530 m, 10 July 1983, R. Escobar & K. Anderson 2759 (SEL).

This species with round, shortly acuminate leaves is remarkable for the small flowers with seemingly over-sized petals, and a lip with diverging, long-ciliate blades. The straight, purple hairs point diagonally inward, the longest toward the apex, together forming a screenlike cover for the column. The stigma is transversely bilobed with the lobes projecting laterally, reminiscent of the genus *Stelis* Sw.

Lepanthes nebulina Luer & Vásquez, sp. nov.

Planta mediocris, racemo laxo multifloro foliis ellipticis acutis multilongiore, sepalis acuminatis, petalis transverse bilobis lobo superiore oblongo majore, labelli laminis oblongis, appendice parva gracili incurvata.

Plant medium in size, epiphytic, caespitose; roots slender. Secondary stems slender, erect, 3.5-9 cm long, enclosed by 7-9 ciliate lepanthiform sheaths. Leaf erect, coriaceous, elliptical, acute, 2.5-4 cm long including the petiole 2-3 mm long, 10-17 mm wide, the base cuneate into the petiole. Inflorescence a loose, subflexuose, successively several-to many-flowered raceme up to 15 cm long including the filiform peduncle, 2-3 flowers open simultaneously; floral bract 1.5 mm long, spiculate; pedicel 1 mm long; ovary 1 mm long; sepals purple to yellow suffused with purple, minutely ciliate, otherwise glabrous, ovate, acute, acuminate, the dorsal sepal concave, 7 mm long, 3.25 mm wide unexpanded, connate to the lateral sepals for 1 mm, the lateral sepals connate 2 mm, 7 mm long, 3.75 mm wide together; petals orange, suffused with purple or brown, transversely oblong, microscopically pubescent, 1 mm long, 2.75 mm wide, the upper lobe oblong, rounded, the lower lobe much smaller, triangular, curved, narrowly obtuse; lip red, minutely pubescent, the blades oblong with rounded ends, 1.6 mm long, the connectives broadly cuneate above the middle of the blades, connate to the column above the base, the sinus obtuse with a small, thin, slender, incurved appendix; column 1.5 mm long, the anther and stigma apical.

Etymology: From the Latin *nebulinis*, "belonging to fog," referring to the cool, wet, foggy habitat.

Type: BOLIVIA: COCHABAMBA: Prov. of Chapare: epiphytic in cloud forest between Cochabamba and Villa Tunari, alt. 2650 m, 9 Feb. 1980, C. Luer, J. Luer & R. Vásquez 5185 (Holotype: SEL); same area, alt. 2600 m, 26 Nov. 1978, C. Luer, F. Fuchs et al. 3494 (SEL); same area, alt. 2500 m, 4 Feb. 1983, C. Luer, J. Luer, R. Vásquez & E. Besse 8679 (SEL).

This species may be identified by the long raceme of flowers with acuminate, minutely ciliate sepals, obtuse petals, and oblong blades of the lip with a tiny, slender, incurved appendix.

Lepanthes nivea Luer, sp. nov.

Planta grandis caulibus gracilibus, inflorescentia folio tenui acuminato purpurascenti brevior, racemo congestissimo, sepalis niveis breviter pubescentibus caudatis, petalis parvis transverse oblongis; labelli lobis lateralibus oblongis et appendice minuta pubescenti.

Plant large, epiphytic, densely caespitose; roots numerous, coarse. Secondary stems erect, slender, 20-30 cm long, enclosed by 15-17 close lepanthiform sheaths, microscopically ciliate along the ribs and ostia. Leaf erect, thinly coriaceous, purple beneath, oblong, 7-11 cm long, 2.5-3.5 cm wide, the apex acuminate, acute, the base rounded, abruptly contracted into a petiole 3-4 mm long. Inflorescence a successively flowered, congested raceme up to 3.5 cm long, borne by a filiform peduncle up to 2.5 cm long behind the leaf; floral bract 1.5 mm long; pedicel 2 mm long; ovary 5 mm long; sepals snow white, microscopically pubescent within, the dorsal sepal triangular, 13 mm long including the attenuate apex ca. 5 mm long, 7.25 mm wide, connate to the lateral sepals for 3 mm, the lateral sepals ovate, oblique, 14 mm long, 9.5 mm wide together, connate 5 mm, with a pair of rounded convexities at the base below the central apparatus; petals white, edged in purple, transversely oblong-bilobed, 1.75 mm long, 2.75 mm wide, the upper lobe oblong, the lower shorter, subfalcate; lip cream, the blades oblong, glabrous, 2 mm long, the apices narrowly obtuse, the bases rounded, the connectives broad, connate to the ventral surface of the column, the appendix triangular, pubescent, with a minute, terminal, pubescent gland; column flat, 1.5 mm long, the anther dorsal, the stigma ventral.

Etymology: From the Latin *niveus*, "snow-white," in allusion to the sepals.

Type: *ECUADOR*: ZAMORA-CHINCHIPE: epiphytic in cloud forest near the pass south of Yangana, alt. 2730 m, 12 May 1981, C. Luer, J. Luer, D. D'Alessandro et al. 6205 (Holotype: SEL).

The secondary stems of this species are proportionately slender for their length. The comparatively large, snow-white flowers with an edge of purple on the tiny petals contrasts with the thin, purple leaves. *Lepanthes nivea* is locally abundant at high altitudes in cold cloud forests in southern Ecuador.

Lepanthes nontecta Luer, sp. nov.

Planta parva caespitosa, inflorescentia folio ovato subacuto brevior, racemo congesto, sepalis glabris diaphanis ovatis subacutis, petalis transverse oblongis, labelli laminis ovatis apicibus acutis nontectis, appendice membranacea rotundata ciliata.

Plant small, epiphytic, caespitose; roots slender. Secondary stems slender, erect, 20-35 mm tall, enclosed by 5-6 close, microscopically ciliate lepanthiform sheaths. Leaf erect, coriaceous, purple beneath, ovate, subacute to obtuse, 12-18 mm long, 10-15 mm wide, the rounded base contracted into a twisted petiole ca. 1 mm long. Inflorescence a congested, successively flowered raceme up to 5 mm long, borne by a filiform peduncle 3-6 mm long behind the leaf; floral bract and pedicel each 1 mm long; ovary 1.5 mm long; sepals glabrous, translucent light rose, ovate, subacute, connate basally, the dorsal sepal 3.5 mm long, 2 mm wide, the lateral sepals 3 mm long, 1.9 mm wide; petals red-orange, transversely oblong, 1 mm long, 3 mm wide, the upper lobe oblong, truncate, the lower lobe triangular, acute; lip red, the blades ovate, 1.6 mm long, the apical third minutely ciliate on the inner margin, not covered by the more or less involute surface of the blade, the bases rounded, the connectives cuneate to a narrow body, connate to the column above the base, the appendix membranous, round, ciliate; column 1.25 mm long, the anther dorsal, the stigma ventral.

Etymology: From the Latin *nontectus*, "uncovered," referring to the apices of the blades of the lip.

Type: *ECUADOR*: NAPO: epiphytic in wet forest near Rio Jatunyacu west of Tena, alt. 600 m, 21 Feb. 1982, C. Luer & A. Hirtz 6887 (Holotype: SEL).

This small species with translucent flowers (not really unusual in the genus) is most notable for the apices of the blades of the lip which are uncovered extensions of the connectives. The more or less flattened top surface of the blade is lacking in the apical third. The appendix is a rounded, ciliate, shallowly concave membrane across the sinus.

Lepanthes nycteris Luer and Vásquez, sp. nov.

Planta parva, caulibus secundariis folio subrotundato multolongioribus, racemo flacido laxifloro longissimo, sepalis laceratis, sepalo dorsali orbiculato, synsepalo angustiore infra medium concavo ad medium convexo pubescenti apice bifido acuminato, petalis transverse bilobatis lunatis, labello bilobato lobis bilobatis erectis falcatis pubescentibus.

Plant small, epiphytic, caespitose; roots slender. Secondary stems slender, 1.7 cm long, enclosed by 7-9 minutely ciliate lepanthiform sheaths. Leaf erect, coriaceous, broadly elliptical to suborbicular, 10-23 mm long including a 2-4 mm long petiole, 8-14 mm wide, the rounded apex minutely notched, the rounded base abruptly contracted into the slender petiole. Inflorescence a loose, flexible, successively flowered raceme 4-10 cm long including the filiform peduncle; floral bract and pedicel each 1.5 mm long; ovary 1-1.5 mm long, the ribs long-papillose; sepals light rose suffused with purple, the margins and carinate veins conspicuously lacerate externally, the dorsal sepal suborbicular, shallowly concave, 13 mm long, 9 mm wide, 7-veined, the rounded apex abruptly contracted into a fine apiculum 2-3 mm long, the lateral sepals connate ca. 10 mm into a multiangular, more or less ovate, bifid lamina 15 mm long, 7 mm wide, abruptly and deeply concave in the basal third, forming a pair of convexities below the middle, narrowed and pubescent in the middle third with revolute margins, the pair of apices attenuate, acute, approximate, 5 mm long; petals purple, microscopically pubescent, transversely bilobed, lunate, 0.8 mm long, 4 mm wide, the upper lobe oblong-sigmoid, obtuse, the lower lobe falcate, acute; lip purple, pubescent, transversely bilobed, 1.5 mm long, 5.5 mm wide expanded, the lobes falcate, acute, bilobed, erect to either side of the column, with the acute angle or lobe on the anterior margin meeting with the angle from the other petal above the column, the base connate near the base of the column, the sinus with a short, obtuse, pubescent appendix: column slender, 2.5 mm long, the anther dorsal, the stigma subapical.

Etymology: From the Greek *nykteris*, "a bat," referring to the resemblance of the central apparatus to a star-nosed bat.

Type: BOLIVIA: COCHABAMBA: Prov. of Chapare: epiphytic in cloud forest between Cochabamba and Villa Tunari, alt. 1750 m, Nov. 1982, R. Vásquez & N. Williams s.n. (Holotype: SEL), C. Luer illustr. 8525.

Similarly shaped, peculiar sepals are seen in a few other species, but the erect, bi-angled, pubescent, lateral lobes of the lip are apparently unique. They are flanked by the narrowly lunate petals, and they surround the protruding column, altogether suggesting the face of some bats.

Lepanthes nymphalis Luer, sp. nov.

Species haec *L. chameleone* Ames similis, sed sepalo dorsali erecto leviter concavo, sepalis lateralibus glabris et labelli laminis longiciliatis differt.

Plant medium in size, epiphytic, densely caespitose; roots slender. Secondary stems ascending to erect, comparatively stout, 3-13.5 cm long, enclosed by 8-16 long-ciliate lepanthiform sheaths, occasionally producing a plantlet at the apex. Leaf erect, coriaceous, elliptical, acute, 2.5-4.5 cm long, 1.2-2.4 cm wide, the base cuneate into a petiole 2-4 mm long. Inflorescence a dense, distichous, successively flowered raceme up to 5 cm long, borne by a filiform peduncle 2.5-4 cm long; floral bract 2 mm long; pedicel 2.5 mm long; ovary 2 mm long, sparsely spiculate; dorsal sepal widespread, yellow, suffused with purple along the midvein, glabrous, denticulate, ovate, shallowly concave, acute, long-acuminate, 22 mm long, 4 mm wide, connate to the lateral sepals for 1 mm; lateral sepals red-brown, edged in yellow, glabrous, denticulate, narrowly ovate-triangular, attenuate, connate 4 mm, 23 mm long, 6.25 mm wide together; petals yellow, minutely pubescent, transversely oblong with rounded ends, 0.75 mm long, 3.5 mm wide, with a minute apiculum on the outer margin between the lobes, the upper lobe shorter and broader than the lower lobe; lip red-brown, the blades elliptical with narrowly rounded ends, 1.6 mm long, long-ciliate, the connectives cuneate, connate to the column near the middle, the appendix pubescent, slender, ligulate, with an apical gland; column 2 mm long, the anther dorsal, the stigma ventral.

Etymology: From the Latin *nymphalis*, "of a nymph, a mythological woodland deity," referring to the dark, mossy, wooded habitat.

Type: COSTA RICA: HEREDIA: epiphytic in cloud forest, Alto Gallito, alt. 2000 m, 21 June 1981, C. Luer & A. Luer 6356 (Holotype: SEL).

This species is closely allied to *L. chameleon*, but the flowers of *L. nymphalis* are widely spread with a shallowly concave dorsal sepal. The flowers of *L. chameleon* are not widely spread, the deeply concave dorsal sepal curving over the pubescent lateral sepals. The lateral sepals of *L. nymphalis* are glabrous, but the sepals of both species are minutely denticulate. The blades of the lip are long-ciliate in *L. nymphalis*. Other minor differences exist in the sepaline tails and petals.

Lepanthes ophioglossa Luer, sp. nov.

Planta parva caespitosa, racemo laxo fractiflexo folio elliptico multilongiore, sepalo dorsali concavo caudato, synsepalo oblongo longiore bicaudato, petalis transverse bilobatis, labelli laminis anguste ovatis connectivis brevibus ex basibus, appendice sigmoidea apice pubescenti.

Plant small, epiphytic, caespitose; roots slender. Secondary stems slender, erect, 2.5-4.5 cm long, enclosed by 4-6 close, microscopically scabrous lepanthiform sheaths. Leaf erect, coriaceous, elliptical, obtuse, 2-2.5 cm long, 1 cm wide, the base cuneate into a 2-4 mm long petiole. Inflorescence a loose, successively flowered, flexuous raceme up to 7 cm long including the filiform peduncle; floral bract 1.5-2 mm long; pedicel 2-2.5 mm long; ovary 1.25 mm long; sepals light brown with darker brown veins, the dorsal sepal essentially free from the lateral sepals, ovate, concave, 5.5 mm long, 3.5 mm wide unexpanded, the acute apex contracted into a filiform tail 4 mm long, the lateral sepals connate into a more or less flat lamina 7 mm long, 3.25 mm wide, minutely ciliate, the approximate apices acute, contracted into tails 2 mm long; petals red-brown, transversely bilobed, 1 mm long, 3.5 mm wide, the upper lobe oblong, obtuse, the lower lobe smaller, narrowly oblong, incurved; lip red-brown, the laminae narrowly ovate, 2.25 mm long, glabrous, longitudinally channeled, the apices narrowly obtuse, the bases continuous with the short connectives, connate to the under surface of the column above the base, the appendix straplike, folded upon itself, with a pubescent apical gland; column 1 mm long, the anther dorsal, the stigma ventral.

Etymology: From the Greek *ophis*, "snake," and *glossa*, "tongue," in reference to the bilabiate flower with the forked apex of the synsepal resembling the tongue of a serpent.

Type: *ECUADOR*: CARCHI: epiphytic in cloud forest above Maldonado, alt. ca. 2000 m, 25 Aug. 1978, C. Luer, J. Luer & A. Hirtz 3400 (Holotype: SEL).

This species with a loose raceme much longer than the leaf is characterized by the bilabiate flowers with an oblong "lower lip" ending in a pair of adjacent tails. The lobes of the lip are continuous at the base with the short connectives.

Lepanthes orchestris Luer & Vásquez, sp. nov.

Planta mediocris plus minusve horizontalis, foliis ellipticis acuminatis pendentibus racemo secundo densifloro duplongioribus, sepalis ovatis caudatis, petalis transverse oblongis, labelli laminis oblongis, appendice apiculata.

Plant medium in size, epiphytic, caespitose; roots slender. Secondary stems slender, more or less horizontal, 4-7 cm long, enclosed by 8-10 ciliate lepanthiform sheaths with thin, markedly dilated ostia. Leaf more or less pendent, coriaceous, suffused with purple beneath, elliptical, acute, acuminate, 4-5.5 cm long, 1.2-1.8 cm wide, the base cuneate into a petiole 2 mm long. Inflorescence a dense, secund, successively flowered raceme up to 15 mm long, borne behind the leaf by a filiform peduncle 5-15 mm long; floral bract 1 mm long; pedicel 2.5 mm long; ovary 2 mm long; sepals red-brown with yellow margins, the margins minutely and distantly denticulate, the blades ovate, carinate, acute, acuminate into short, slender tails, the dorsal sepal 6.25 mm long, 3.75 mm wide, connate to the lateral sepals for 1 mm, the lateral sepals 7.5 mm long, 2.3 mm wide, connate 1.5 mm; petals yellow, suffused with red, transversely oblong with rounded ends, 1 mm long, 4.5 mm wide, broadly angled near the middle on the outer margin, the upper lobe narrowly oblong, 3 mm long, the ends rounded, microscopically ciliate at the apices, the connectives short, cuneate, connate to the column above the middle, the appendix small, subquadrate with an equally long apiculum in contact with a stigmatic process; column 2 mm long, the anther dorsal, the stigma ventral.

Etymology: From the Greek *orchestris*, "a dancer," referring to the dainty, tailed flowers.

Type: *BOLIVIA*: LA PAZ: Prov. of Nor Yungas: epiphytic in cloud forest west of Coroico, alt. 2550 m, 27 Jan. 1983, C. Luer, J. Luer R. Vásquez & E. Bessé 8610 (Holotype: SEL).

This pretty species may be recognized by the pendent, purple leaves with short racemes of graceful, caudate flowers; the narrowly transversely oblong petals; and the narrowly oblong blades of the lip with the apiculum of the small appendix in contact with a process from the stigma.

Lepanthes otara Luer, sp. nov.

Planta parva caespitosa, folio elliptico racemo laxo paucifloro longiore, sepalis brevicaudatis lateralibus serrulatis, petalis transverse bilobatis, labelli laminae late ellipticis columnam amplectentibus, appendice pubescenti conica.

Plant small, epiphytic, caespitose; roots slender. Secondary stems erect, slender, 15-35 mm long, enclosed by 4-5 close, minutely ciliate lepanthiform sheaths. Leaf erect, coriaceous, oblong-elliptical, subacute, 17-34 mm long, 6-8 mm wide, the base cuneate into a petiole 2-3 mm long. Inflorescence a loose, successively few-flowered, flexuous raceme up to 2 cm long including the filiform peduncle; floral bract 2 mm long, pubescent, pedicel 1 mm long; ovary 1.5 mm long, irregularly carinate; sepals dull red-brown, carinate, the dorsal sepal ovate, concave, 7 mm long, 4.25 mm wide unexpanded, the acute apex attenuated into a 1.5 mm long tail, connate basally, the lateral sepals ovate, connate 4 mm into a bifid lamina 8 mm long, 5 mm wide, the margins serrulate, the apices attenuated into 1.5 mm long tails; petals bright rose, cellular pubescent, transversely oblong, 1.66 mm long, 2.33 mm wide, with a short, acute angle on the outer margin below the middle, the upper lobe slightly larger than the lower lobe, the ends rounded; lip bright rose, the blades broadly elliptical, rounded at the apex and base, 1.3 mm long, 1 mm broad, clasping the column, cellular pubescent, the connectives very short, connate to the under surface of the middle of the column, the appendix short, conical, pubescent; column 1.5 mm long, the anther apical, the stigma ventral.

Etymology: From the Greek *otaros*, "with large ears," in reference to the appearance of the lobes of the lip.

Type: ECUADOR: LOJA: epiphytic in cloud forest east of Yangana, alt. 2850 m, 4 Mar. 1982, C. Luer, D. D'Alessandro & S. Dalström 7163 (Holotype: SEL).

This little species is notable for the short setaceous tails of the sepals, the serrulate lateral sepals, and the broadly elliptical lobes of the lip that resemble a pair of large ears as they embrace the column.

Lepanthes oxyphylla Luer & Vásquez, sp. nov.

Planta mediocris, foliis angustissime ovatis racemo subdenso flexuoso longioribus, sepalis ovatis breviter acuminatis sparsim et minute denticulatis, petalis transverse oblongis plus minusve obliquis, labelli laminae anguste oblongis, appendice pubescenti biloba.

Plant medium in size, caespitose, epiphytic; roots slender. Secondary stems slender, erect, 3-7.5 cm long, enclosed by 6-10 minutely ciliate lepanthiform sheaths with dilated stomata. Leaf erect, coriaceous, suffused with purple beneath, very narrowly ovate, acute, 3-5.5 cm long including the petiole 2-3 mm long, 6-9 mm wide, the base cuneate into the petiole. Inflorescence a subdense, flexuous, successively several-flowered raceme up to 25 mm long, borne behind the leaf by a filiform peduncle 6-12 mm long; floral bract 1 mm long; pedicel 1.5 mm long; ovary 2.5 mm long; sepals bright purple, edged in white, sparsely and minutely denticulate, ovate, acute, acuminate, the dorsal sepal 4.5 mm long, 3.25 mm wide, connate to the lateral sepals for 1 mm, the lateral sepals oblique, 4.5 mm long, 2 mm wide, connate 1 mm; petals yellow, suffused with purple, glabrous, at most microscopically cellular-pubescent, transversely oblong, 1 mm long, 2.8 mm wide, with a small obtuse angle on the outer margin near the middle, the lobes more or less oblique, obtuse; lip yellow, suffused with purple, glabrous, microscopically ciliate, the blades narrowly oblong, 1.75 mm long, the ends obtuse, the connectives narrowly cuneate, the body narrow, connate to the column above the base, the sinus deeply cleft, the appendix pubescent, ovoid basally, narrowed centrally, with a bilobed apical segment; column 1.5 mm long, the anther dorsal, the stigma ventral.

Etymology: From the Greek *oxys*, "pointed," and *phylon*, "leaf," referring to the narrowly ovate leaf.

Type: BOLIVIA: COCHABAMBA: Prov. of Chapare: epiphytic in cloud forest between Cochabamba and Villa Tunari, alt. 1900 m, 26 Nov. 1978, C. Luer, F. Fuchs et al. 3533 (Holotype: SEL); LA PAZ: Prov. of Sud Yungas: cloud forest along the Rio Unduavi, alt. 2450 m, 6 Feb. 1980, C. Luer, J. Luer, R. Vásquez & M. Manon 5150 (SEL).

This species is notable for the narrowly ovate blades of the leaves with shorter, flexuous, subdensely flowered racemes, sparsely and minutely denticulate sepals, narrowly oblong blades of the lip, and an appendix with a bilobed apical segment.

Lepanthes panicellus Luer & Vásquez, sp. nov.

Planta mediocris, inflorescentia foliis ovatis acuminatis breviori, racemo congesto disticho, sepalis niveis breviter acuminatis, petalis transverse bilobis lobo inferiore breviter falcato, labelli lamina lunatis obtusis convexis sulcatis, appendice ligulata pubescenti.

Plant medium in size, epiphytic, caespitose; roots slender. Secondary stems stout, erect, 6-10 cm long, enclosed by 7-9 ciliate lepanthiform sheaths. Leaf erect, coriaceous, ovate, acute, acuminate, apiculate, 4-6 cm long including a petiole 3-4 mm long, 2-2.8 cm wide, the base rounded to broadly cuneate into the petiole. Inflorescence a congested, distichous, successively flowered raceme up to 8 mm long, borne behind the leaf by a filiform peduncle up to 15 mm long; floral bract 1.5 mm long; pedicel 1 mm long; ovary 2 mm long; sepals white, glabrous, the dorsal sepal triangular, acute, shortly acuminate, 6 mm long, 3.5 mm wide, connate to the lateral sepals for 1.5 mm, the lateral sepals ovate, acute, shortly acuminate, connate 3 mm, 6 mm long, 5 mm wide together; petals white with purple margins, microscopically pubescent, transversely oblong, 1 mm long, 2.2 mm wide, the upper lobe oblong, obtuse, the lower lobe smaller, broadly falcate, obtuse; lip white, microscopically pubescent, the blades lunate, convex, with rounded ends, 1 mm long, longitudinally sulcate, the connectives broad, connate to the column below the middle by a short claw, the obtuse sinus with a short, ligulate, pubescent appendix; column 1.5 mm long, the anther dorsal, the stigma ventral.

Etymology: From the Latin *panicellus*, "a roll, a small loaf of bread," referring to the appearance of the lobes of the lip.

Type: **BOLIVIA**: COCHABAMBA: Prov. of Chapare: epiphytic in cloud forest between Cochabamba and Villa Tunari, alt. 2500 m, 4 Feb. 1983, C. Luer, J. Luer, R. Vásquez & E. Besse 8673 (Holotype: SEL); LA PAZ: Prov. of Sud Yungas: epiphytic in cloud forest along the Rio Unduavi, alt. 2450 m, 6 Feb. 1980, C. Luer, J. Luer, R. Vásquez & M. Manon 5139 (SEL).

Although closely related to a hoard of other species with a similar habit, this species may be distinguished by the snow-white flowers with purple-bordered petals, at least in the specimens we saw, and a lip with thick, convex, sulcate lobes that resemble bread rolls. The appendix is a small, pubescent flap beneath the stigma.

Lepanthes panisca Luer & Vásquez, sp. nov.

Planta parva, racemo laxifloro folium ellipticum paulo excedenti, sepalis concavis extus verrucosis intus pubescentibus, petalis transverse bilobis pubescentibus, labelli laminae longis longi-ciliatis, corpore lato, appendice triangulari protuberanti.

Plant small, epiphytic, caespitose; roots slender. Secondary stems slender, erect, 5-6 cm long, enclosed by 7-8 ciliate lepanthiform sheaths. Leaf erect, coriaceous, elliptical, subacute, 22-25 mm long including the petiole 4-5 mm long, cuneate below into the petiole, 8-9 mm wide. Inflorescence an erect, loose, successively few-flowered raceme up to ca. 15 mm long, borne behind the leaf by a filiform peduncle up to 20 mm long; floral bract 2 mm long; pedicel 1.5 mm long; ovary 1.25 mm long; sepals yellow-green with purple veins, the veins thickened, verrucose externally, pubescent within, ovate, acute, acuminate, concave, the margins narrowly involute, the dorsal sepal 3.5 mm long, 2.25 mm wide, connate 0.75 to the lateral sepals, the lateral sepals oblique, diverging, 3.25 mm long, 1.5 mm wide, connate 1 mm; petals green, suffused with purple, transversely elliptical, 1.25 mm long, 3.5 mm wide, the upper lobe long-ciliate, triangular, the lower lobe short-ciliate, narrowly triangular, obtuse; lip green, suffused with purple, the blades oblong, 1.6 mm long, pubescent and long-ciliate, with obtuse ends, the connectives broadly rectangular, connate to the base of the column, the sinus protruding, subacute, triangular, shortly pubescent, shallowly cleft centrally, without an appendix; column 2 mm long, the anther dorsal, the stigma long-protruding, apical.

Etymology: Named for the diminutive of Pan, Paniskos, the Greek god of the satyrs.

Type: **BOLIVIA**: COCHABAMBA: Prov. of Chapare: epiphytic in cloud forest between Cochabamba and Villa Tunari, alt. 1500 m, 26 Nov. 1978, C. Luer, F. Fuchs, et al. 3526 (Holotype: SEL).

This species may be recognized by the loose raceme slightly topping the elliptical leaf, sepals verrucose externally and pubescent internally, pubescent transverse petals, and long-ciliate blades of the lip with a protruding, triangular sinus without an appendix.

Lepanthes papilio Luer & Vásquez, sp. nov.

Planta parva, folio anguste ovato racemo congesto disticho duplolongiore, floribus parvis vivide coloratis, sepalis ovatis, petalis grandibus transverse oblongis bilobis, labelli laminis obovatis, appendice grandi loriformi pubescenti.

Plant small, epiphytic, caespitose; roots slender. Secondary stems slender, erect, 3-6 cm long, enclosed by 5-6 microscopically scabrous lepanthiform sheaths. Leaf erect, coriaceous, narrowly ovate, acute, 2-3 cm long, 0.7-0.8 cm wide, the base cuneate into a petiole 1.5 mm long. Inflorescence a congested, distichous, successively several-flowered raceme up to 7 mm long, borne behind the leaf by a filiform peduncle 8-10 mm long; floral bract 0.75 mm long, minutely muriculate; pedicel 1.25 mm long; ovary 2.5 mm long; sepals yellow-orange, glabrous, ovate, subacute, the dorsal sepal 3 mm long, 2 mm wide, connate to the lateral sepals for 0.5 mm, the lateral sepals connate 1 mm, 2.25 mm long, 2.5 mm wide together; petals proportionately large, bright orange, cellular-pubescent, transversely oblong, 1.25 mm long, 3 mm wide, the upper lobe oblong, subtruncate, the lower lobe obtusely triangular, smaller; lip bright rose, cellular-pubescent, the blades obovate, convex, 1.33 mm long, the ends rounded, the connectives narrow, the body narrow, verrucose, connate to the base of the lip, the appendix large, pubescent, flaplike, concave, hinged from the sinus; column 1.33 mm long, the anther dorsal, the stigma ventral.

Etyymology: From the Latin *papilio*, "a butterfly," in allusion to the proportionately large pair of colorful petals flanking the colorful lip.

Type: BOLIVIA COCHABAMBA. Prov. of Chapare: epiphytic in cloud forest between Cochabamba and Villa Tunari, alt. 1900 m, 26 Nov. 1978, C. Luer, F. Fuchs et al. 3532 (Holotype: SEL).

This narrowly-leaved species with short racemes is distinguished by the small, brightly colored flowers. The petals are proportionately very large, resembling the wings of a butterfly. The appendix of the lip is large, flaplike and pubescent.

Lepanthes paradoxa Luer, sp. nov.

Planta perpusilla caespitosa, caulibus secundariis abbreviatis, racemo laxo plurifloro folio elliptico triplolongiore, floribus pro planta grandissimis, sepalis ovatis setaceis, petalis nanis, labelli laminis antice elongatis, appendice anguste lineari.

Plant very small, epiphytic, caespitose; roots slender. Secondary stems slender, erect, 3-4 mm long, enclosed by 2 close, microscopically scabrous sheaths. Leaf erect, coriaceous, elliptical, obtuse, 6-11 mm long, 4-6 mm wide, the base cuneate into a petiole 1 mm long. Inflorescence a loose, flexuous raceme up to 35 mm long with up to 10 flowers, several (3-4) open simultaneously; floral bract 1.5 mm long, pubescent; pedicel 1.5 mm long; ovary winged, 1 mm long; sepals light red-brown, ovate, carinate, the acute apices setaceous, the dorsal sepal 7 mm long including the 2 mm long tail, 3.5 mm wide, connate basally to the lateral sepals for 1 mm, the lateral sepals connate 2.5 mm, 7.75 mm long including the 2.5 mm long tails, 5 mm wide together; petals red-brown, transversely oblong with rounded ends, 0.6 mm long, 1.5 mm wide, the lobes about equal; lip red-brown, the blades narrowly oblong, 2 mm long, the medial margins obtusely angled near the middle, prolonged beyond the column to rounded, ciliate apices, the connectives posterior, narrowly cuneate, connate to the column below the middle, the appendix small, narrowly linear; column 1 mm long, the anther apical, the stigma ventral.

Etyymology: From the Latin *paradoxus*, "contrary to expectation," referring to the inflorescence, huge for the size of the plant.

Type: ECUADOR: NAPO: epiphytic in cloud forest, Cosanga, alt. 1850 m, 17 June 1983, C. H. Dodson, P. Dodson, D. Benzing & A. Hirtz 14033A (Holotype: SEL), C. Luer illustr. 9088.

This minute species produces a loose, flexuous raceme of seemingly over-sized flowers, often three simultaneously, each about as large as the leaf. The sepals are with short, slender tails; the petals are minute. The blades of the lip are prolonged beyond the column about an additional length. The appendix is a very slender organ beneath the stigma.

Lepanthes peniculus Luer, sp. nov.

Planta mediocris vel grandis caespitosa, racemo laxo flexuoso folio elliptico breviter acuminato duplolongiore, sepalis glabris breviter acuminatis, petalis transverse cuneatis, labelli lamina ellipticis oblongis convexis minute pubescentibus, appendice parva cum glande terminali.

Plant medium to large in size, epiphytic, caespitose; roots slender. Secondary stems slender, erect, 3-17 cm long, enclosed by 5-10 ciliated lepanthiform sheaths. Leaf erect, coriaceous, elliptical, 3-6 cm long, 1-2 cm wide, the acute to obtuse apex shortly acuminate, the cuneate base contracted into a petiole 3-5 mm long. Inflorescence racemose, 2-5 loose, flexuous, flexible successively flowered racemes up to 15 cm long including the short, filiform peduncle; floral bract 1.5-2 mm long; pedicel 1-2 mm long; ovary 1.5 mm long; sepals yellow-green, obtuse, abruptly short-acuminate, glabrous, the dorsal sepal 5-5.5 mm long, 3.25 mm wide, connate to the lateral sepals for 1 mm, the lateral sepals connate 2-3 mm into a broadly ovate, bifid lamina 4.5-5 mm long, 4.25 mm wide; petals bright purple, minutely pubescent, transversely cuneate-oblong, 1 mm long, 2.2 mm wide, the lobes triangular with rounded apices, the lower lobe smaller; lip bright purple, the blades elliptical convex with rounded ends, minutely pubescent, 1.5 mm long, the connectives broad, oblong, short, connate to the column above the base, the appendix short, oblong, pubescent, with a small, rounded, apical gland; column 1.5 mm long, the anther apical, the stigma ventral.

Etymology: From the Latin *peniculus*, "a small organ," in reference to the appearance of the appendix.

Type: ECUADOR: NAPO; epiphytic in cloud forest above El Playon, alt. 3200 m, 5 Nov. 1979, C. Luer, J. Luer & A. Hirtz 4672 (Holotype: SEL); CARCHI: above San Gabriel, alt. 3340 m, 16 May 1981, C. Luer, J. Luer, A. Hirtz et al. 6249 (SEL); same area, 8 Nov. 1982, C. Luer & R. Escobar 8299 (SEL).

This species may be identified by the loose, flexuous racemes about twice longer than the shortly acuminate leaves; the transversely cuneate petals; the elliptical, convex blades of the lip; and the small appendix with a terminal gland.

Lepanthes pentoxys Luer, sp. nov.

Planta mediocris grandisve, inflorescentia folio tenui ovato longi-acuminato brevior, racemo congesto secundo, sepalo dorsali synsepaloque late ovatis, petalis quinquelobatis labelli lamina lunatis adhaerentibus, appendice loriformi glande apicali.

Plant medium to large in size, epiphytic, caespitose; roots slender. Secondary stems slender, erect, 8-20 cm long, enclosed by 10-16 minutely scabrous lepanthiform sheaths. Leaf suberect, thinly coriaceous, purple beneath, ovate, 7-13 cm long, 2.5-5.5 cm wide, the apex long-acuminate, tridenticulate, the base obtuse to rounded, contracted into a petiole 2-5 mm long. Inflorescence an extremely congested, secund, successively flowered raceme up to 1.5 cm long, borne by a slender peduncle up to 5 cm long along the back of the leaf; floral bract 1.5 mm long; pedicel 4-4.5 mm long; ovary 2 mm long; flowers small for the size of the plant, glabrous; dorsal sepal orange-brown, broadly ovate, convex, obtuse, apiculate, 4 mm long, 3 mm wide; lateral sepals rose, connate 2.5 mm into a sub-orbicular, convex lamina 4 mm long, 3.5 mm wide, the apices close, shortly acuminate; petals yellow, transversely bilobed, 0.6 mm long, 2.8 mm wide, with a slender appendage 1 mm long from the middle, the upper lobe suboblong, acuminate, acute, with an obtuse angle midway on the inner margin, the lower lobe triangular, narrowly acute with an acute tooth about midway on the inner margin; lip bright rose, the laminae lunate, 2 mm long, glabrous, adherent medially over the column, the connectives short, broadly cuneate, connate to the under surface of the basal third of the column, the appendix pubescent, broadly strap-shaped, with a minute, apical gland; column 2 mm long, the anther dorsal, the stigma ventral.

Etymology: From the Greek *penta*, "five-," and *oxys*, "pointed," referring to the 5-lobed petals.

Type: ECUADOR: PICHINCHA; epiphytic in cloud forest above Mindo, alt. 2000 m, 11 Nov. 1979, C. Luer, J. Luer & A. Hirtz 4730 (Holotype: SEL); same area, west of Mindo toward Puerto Quito, alt. 1600 m, 13 March 1982, C. Luer, A. Hirtz & S. Dalström 7338 (SEL).

Vegetatively this species is similar to *L. rhodophylla* Schltr., but the five-lobed lip of *L. pentoxys* immediately distinguishes it. It is a relative of the ubiquitous, vegetatively variable *L. mucronata* Lindl.

Lepanthes pileata Luer & Vásquez, sp. nov.

Planta medioeris, racemo laxe plurifloro foliis ellipticis acutis multilongiore, floribus parvis, sepalo dorsali pileato acuminato, synsepalo triangulari pubescenti marginibus involutis, petalis transverse oblongis, labelli lamina oblongis, appendice minuta trilobulata.

Plant medium in size, epiphytic, caespitose; roots slender. Secondary stems slender, erect, 3.5-9 cm long, enclosed by 8-9 minutely ciliate lepanthiform sheaths. Leaf erect, coriaceous, elliptical, acute, 20-33 mm long including the 2-3 mm long petiole, 10-15 mm wide, the base cuneate into the petiole. Inflorescence a loose, subflexuous, several-to many-flowered raceme up to 20 cm long including the filiform peduncle, flowers small, 2-3 open simultaneously; floral bract 1.5 mm long, pedicel 0.5 mm long, ovary 1 mm long, sepals yellow, suffused with purple centrally, the dorsal sepal ovate, deeply concave, cucullate, acute, acuminate, 4.5 mm long, 2 mm wide unexpanded, connate to the lateral sepals for 0.5 mm, the margins cellular-erose, the lateral sepals connate 3 mm into a triangular lamina, 5 mm long, 2.25 mm wide, split at the acute apex into two approximate tails 1.5 mm long, the surface cellular-pubescent, the margins narrowly involute; petals red, transversely oblong, microscopically pubescent, 0.5 mm long, 1.75 mm wide, the upper lobe oblong, rounded, the lower lobe much smaller, triangular; lip red, microscopically pubescent, the blades oblong with rounded ends, the connectives cuneate, connate to the column near the middle, the appendix minutely pubescent, minutely bilobed at the sinus with a third lobule beneath; column 1.5 mm long, the anther and stigma apical.

Etymology: From the Latin *pileatus*, "with a cap," referring to the appearance of the concave dorsal sepal.

Type: BOLOVIA: COCHABAMBA: Prov. of Chapare: epiphytic in cloud forest between Cochabamba and Villa Tunari, alt. 2650 m, 9 Feb. 1980, C. Luer, J. Luer, R. Vásquez 5184 (Holotype: SEL); same area, alt. 2500 m, 26 Nov. 1978, C. Luer, F. Fuchs et al. 3566 (SEL).

This species may be recognized by the long raceme of small flowers with a pointed, caplike dorsal sepal; a bifid synsepal with infolded margins; small, transverse, obtuse petals; and oblong blades of the lip with a minute trilobulate appendix.

Lepanthes pleurorachis Luer, sp. nov.

Planta parva caespitosa, inflorescentia folio anguste ovato acuminato brevior, racemo congestissimo disticho, flore perparvo, sepalis aequalibus libris ovatis uninerviis, petalis transverse bilobatis, labello transverse cordato ciliato apice retuso.

Plant small, epiphytic, caespitose; roots slender. Secondary stems slender, erect, 2.5-6 cm long, enclosed by 6-8 close, minutely scabrous lepanthiform sheaths. Leaf suberect, thinly coriaceous, narrowly ovate, acuminate, acute, 18-28 mm long, 8-9 mm wide, the base obtuse to rounded, contracted into a petiole 1-2 mm long. Inflorescence an extremely congested, distichous, successively flowered raceme up to 5 mm long, borne by a slender peduncle up to 6 mm long along the back of the leaf; floral bract 0.5 mm long; pedicels 1 mm long, closely arranged in 2 rows; ovary 1 mm long; flowers very small; sepals yellow, glabrous, subequal, ovate, subacute, 1-veined, reflexed, the dorsal sepal 1.5 mm long, 0.8 mm wide, the lateral sepals 1.2 mm long, 0.8 mm wide, connate basally; petals orange, transversely bilobed, 0.3 mm long, 2 mm wide, the upper lobe triangular, oblique, acute, with a second point midway on the inner margin, the lower lobe equally long, falcate, acute; lip red-brown, ciliate, transversely cordate, 0.6 mm long, 0.6 mm wide, the apex retuse between 2 rounded lobes and with a minute apiculum in the sinus, the basal lobes rounded, to either side of the column, the base connate to the under surface of the basal third of the column; column 0.5 mm long, the anther and stigma apical.

Etymology: From the Greek *pleura*, "rib" and *rachis*, "the rachis or a backbone," in reference to the appearance of the inflorescence.

Type: ECUADOR: PICHINCHA: epiphytic in cloud forest, silver mine road above Toachi, alt. 1500 m, 14 March 1982, C. Luer, A. Hirtz & S. Dalström 7373 (Holotype: SEL); same area, 27 Feb. 1982, A. Hirtz & J. Leon 109 (SEL).

This species is remarkable for the closely distichous raceme producing successively a minute flower with a cordate, retuse, ciliate lip.

Lepanthes pollex Luer, sp. nov.

Planta mediocris caespitosa, inflorescentia folio oblongo acuminato brevior, racemo congestissimo, sepalis denticulatis subacutis, petalis transverse oblongis, labelli laminis ovatis acutis, appendice grandi oblonga pubescenti.

Plant medium in size, epiphytic, caespitose; roots slender. Secondary stems slender, erect, 7-12 cm long, enclosed by 9-12 long-pubescent lepanthiform sheaths. Leaf erect, coriaceous, oblong-ovate, acute, acuminate, 4.5-6 cm long, 1.2-1.8 cm wide, the base cuneate into a petiole 3-4 mm long. Inflorescence a very congested, distichous, successively flowered raceme up to 10 mm long, borne by a filiform peduncle 5-10 mm long along the back of the leaf; floral bract 1 mm long, minutely spiculate; pedicel 1.5 mm long; ovary 1.25 mm long; sepals pale yellow, ovate, subacute, the veins spiculate externally, the margins denticulate, the dorsal sepal 4 mm long, 2.2 mm wide, the lateral sepals 4 mm long, connate 2 mm, 3.75 mm wide together; petals yellow, suffused with bright purple, transversely oblong, 1 mm long, 2.9 mm wide, the apices rounded, obtusely angled on the outer margin at the midvein, the lower lobe smaller; lip yellow, suffused with bright purple, the blades ovate, 1.5 mm long, the apices narrow, acute, lightly short-ciliate, the bases rounded, the connectives broadly cuneate, connate to the base of the column, the appendix large, oblong, pubescent, ca. 0.5 mm long; column 1.25 mm long, the anther apical, the stigma ventral.

Etymology: From the Latin *pollex*, "a thumb," referring to the appearance of the appendix of the lip.

Type: *ECUADOR*: PICHINCHA: epiphytic in cloud forest below Lloa, alt. 2700 m, 27 Oct. 1979, C. Luer, J. Luer & A. Hirtz 4360 (Holotype: SEL); same area, alt. 2800 m, Aug. 1982, A. Hirtz 339 (SEL).

This species with long-pubescent lepanthiform sheaths bears its flowers in racemes shorter than the acuminate leaves. The sepals are denticulate, the petals are transversely oblong, and the appendix of the lip is large, oblong, and pubescent.

Lepanthes polytricha Luer, sp. nov.

Planta mediocris caespitosa, racemo foliis rotundatis superne verruculosus infra pubescentibus brevior, sepalis acutis pilosis, petalis quadrisetaceis, labelli laminis hispida, appendice parva furcata.

Plant medium in size, epiphytic, caespitose; roots coarse. Secondary stems stout, erect, 3-9 cm long, enclosed by 4-13 loose lepanthiform sheaths with markedly dilated ostia, the margins and ribs ciliate. Leaf erect, coriaceous, pubescent beneath, minutely verrucose dorsally, transversely ovate, narrowly margined, 3-4 cm long, 3-4 cm wide, the apex obtuse to rounded, the cordate base abruptly contracted into a petiole 4 mm long. Inflorescence a successively few-flowered raceme up to 7 mm long, borne by a filiform peduncle up to 12 mm long, produced in a fascicle behind the leaf; floral bract 1.5 mm long; pedicel 1 mm long; ovary 2 mm long; sepals red-purple, pilose externally, the dorsal sepal ovate, concave, acuminate, acute, 4.5 mm long, 2.75 mm wide, the lateral sepals ovate, oblique, acute, 4 mm long, 1.75 mm wide, connate 1 mm; petals cream colored, transversely oblong, 4-pronged, 1 mm long, 2.5 mm wide unspread, both lobes terminating in a slender, recurved, tapering tail, each with a shorter process nearer the middle; lip purple, the blades stout, oblong, 2 mm long with rounded ends, the upper surface of the apical halves densely hispid, the connectives cuneate, short, connate to the under surface of the column above the base, the appendix small, pubescent, narrowly forked; column 1.5 mm long, the anther dorsal, the stigma ventral.

Etymology: From the Greek *poly-*, "many-," and *thrix*, *trichos*, "hair," referring to the many kinds of hair found on the species.

Type: *ECUADOR*: LOJA: epiphytic in cloud forest south of Yangana, alt. ca. 2500 m, D. D'Alessandro 81-104, flowered in cultivation at the Predesur Orquideario at Vilcambamba, 10 May 1981, C. Luer 6134 (Holotype: SEL).

This species is remarkable for the transversely cordate leaves pubescent on the under surface, pilose sepals, 4-setose petals, and densely hispid or brushlike blades of the lip.

Lepanthes porcula Luer, sp. nov.

Planta mediocris caespitosa, racemo laxo folio oblongo acuminato subaequilongio, sepalis glabris, sepalo dorsali orbiculato lateralibus ovatis obliquis breviter acuminatis, petalis transverse oblongis, labelli lamina ovatis apicibus incurvatis acutis, appendice vestigiali.

Plant medium in size, epiphytic, caespitose; roots coarse. Secondary stems slender, erect, 5-10 cm long, enclosed by 6-8 microscopically ciliate lepanthiform sheaths. Leaf erect, coriaceous, oblong, shortly acuminate, acute, 3.5-5.5 cm long, 1.3-2 cm wide, the base cuneate into the petiole 5-7 mm long. Inflorescence a loose, successively flowered, subflexuous raceme up to 5 cm long including the filiform peduncle; floral bract 1.5 mm long, inflated; pedicel 1 mm long; ovary 1.5 mm long; flowers yellow, glabrous; dorsal sepal orbicular, concave, 2.75 mm long, 2.5 mm wide, connate to the lateral sepals for 0.66 mm, the apex rounded; lateral sepals ovate, oblique, shortly acuminate, acute, 2.75 mm long, 1.75 mm wide, connate 1 mm, 1-veined; petals transversely oblong, 0.75 mm long, 2.25 mm wide, the lobes oblong with rounded apices, about equal in size and shape; blades of the lip ovate, 1.4 mm long, the apices acute, incurved, the connectives broadly oblong, connate to the under surface of the column at the base, the appendix reduced to a minute, acute angle in the sinus; column 1.25 mm long, stout, the anther and stigma apical.

Etymology: From the Latin *porculus*, "a little pig," in reference to the protruding apical stigma that resembles the nose of a pig.

Type: ECUADOR: PICHINCHA: epiphytic in cloud forest between Quito and Chiriboga, alt. 2700 m, 6 Feb. 1979, C. Luer, J. Luer & R. Escobar 3852 (Holotype: SEL).

This species is closely allied to *L. delphax* Luer, but *L. porcula* may be distinguished by the ovate, oblique, shortly acuminate lateral sepals (instead of broadly falcate), petals with equal lobes, and glabrous lobes of the lip with a vestigial appendix.

Lepanthes ptyxis Luer & Vásquez, sp. nov.

Species haec *L. complicatae* Luer & Vásquez affinis, sed foliis non-acuminatis, petalis transverse oblongis et marginibus sepalorum lateralium circa quarta latitudine plicatis differt.

Plant small, epiphytic, caespitose; roots slender. Secondary stems erect, slender, 2-7 cm long, enclosed by 4-7 long-ciliate lepanthiform sheaths. Leaf erect, coriaceous, suffused with purple beneath, elliptical, acute, 17-27 mm long including a petiole 2-3 mm long, 7-15 mm wide, the base broadly cuneate into the petiole. Inflorescence a congested, distichous, successively several-flowered raceme up to 10 mm long, borne behind the leaf by a filiform peduncle 3-7 mm long; floral bract 1.5 mm long, lightly muricate; pedicel 1.5-2 mm long; ovary 1.5 mm long, sparsely papillose; sepals red-orange to yellow suffused with purple, spiculate along the margins and externally, the dorsal sepal ovate, concave, acute, acuminate, 4.5-6 mm long, 2.5-3 mm wide unexpanded, connate to the lateral sepals for ca. 1 mm, the lateral sepals ovate, oblique, acute, acuminate, connate 1 mm, 4.5-6.5 mm long, 1.75-2 mm wide together, each 1-veined, the lateral margins sharply folded over the surface of the blades about one-fourth the width, the edges of the folds as well as the margins and carinae spiculate; petals yellow with red to purple margins, microscopically pubescent, transversely oblong, 1 mm long, 3.4 mm wide, the ends rounded, the lower lobe slightly smaller; lip red-purple, microscopically pubescent, the blades ovate-oblong, 2 mm long, the apices narrowly obtuse and incurved beneath the apex of the column, the bases rounded, the connectives broadly cuneate, connate to the base of the lip, the sinus protuberant and rounded with a minute, rounded appendix at the summit; column 2 mm long, the anther and stigma apical.

Etymology: From the Greek *ptyxis*, "a fold," referring to the folded margins of the lateral sepals.

Type: BOLIVIA: LA PAZ: Prov. of Sud Yungas: epiphytic in cloud forest along the Rio Unduavi, alt. 2450 m, 6 Feb. 1980, C. Luer, J. Luer, R. Vásquez & M. Manon 5140 (Holotype: SEL); Prov. of Nor Yungas: epiphytic in cloud forest west of Coroico, alt. 2550 m, 27 Jan. 1983, C. Luer, J. Luer, R. Vásquez & E. Besse 8612 (SEL).

The folded margins of the lateral sepals of this species reach only about a fourth of the distance to the inner margin as compared to the marked folding over for nearly the entire width in *L. complicata*. The upper lobe of the petals is oblong in *L. ptyxis* instead of broadly falcate as in *L. complicata*.

Lepanthes pubes Luer & Escobar, sp. nov.

Planta mediocris caespitosa, folio anguste ovato infra reticulato-ciliato racemo congesto longiore, sepalis serratis apiculatis, petalis grandibus transverse oblongis, labelli laminis carnosus ellipticis pubescentibus, appendice obovata pubescenti.

Plant medium in size, epiphytic, caespitose; roots slender. Secondary stems slender, erect, 2-7 cm long, enclosed by 7-12 ciliate lepanthiform sheaths with widely dilated ostia. Leaf erect, coriaceous, purple, reticulate-ciliate beneath, narrowly ovate, lightly acuminate, acute, 3-5 cm long, 1-1.2 cm wide, the base cuneate into a petiole 2 mm long. Inflorescence a congested, flexuous, successively flowered raceme up to 8 mm long, borne by a filiform peduncle up to 10 mm long, along the back of the leaf; floral bract and pedicel each 1 mm long; ovary 2 mm long, densely spiculate; sepals bright purple with white margins, carinate-spiculate, the margins serrate, ovate, shortly apiculate at the subacute apex, the dorsal sepal elliptic-ovate, 4 mm long, 2.5 mm wide, the lateral sepals 4 mm long, connate 2.3 mm, 3.5 mm wide together; petals orange with red margins, transversely oblong, 1.33 mm long, 3.33 mm wide, the upper lobe more or less obliquely carinate, obtuse, the lower lobe smaller, oblong with the apex rounded; lip rosy white, the blades thick, fleshy, oblong with rounded ends, convex, rather long-pubescent, the connectives oblong, erect, lifting the blades above the column, connate to the under surface of the column above the base, the appendix obovate, obtusely angled above the middle, pubescent, 0.3 mm long, hinged at the sinus; column 1 mm long, the anther dorsal, the stigma ventral.

Etymology: From the Latin *pubes*, "pubescent," referring to the pubescent lobes of the lip.

Type: ECUADOR: MORONA-SANTIAGO: epiphytic in cloud forest between Gualaceo and Limon, alt. 2050 m, 29 Oct. 1982, C. Luer, R. Escobar & A. Pozo 8230 (Holotype: SEL).

This pretty species is distinguished by the congested inflorescence shorter than the narrowly ovate leaf which is ciliate on the reticulated veins beneath. The ovaries are spiculate, the sepals are serrate, and the fleshy, convex blades of the lip are pubescent.

Lepanthes pubescens Luer, sp. nov.

Planta mediocris caespitosa, inflorescentia folio elliptico acuto interdum pubescenti breviori, racemo congesto, sepalis ciliatis ovatis longi-attenuatis, petalis transverse oblongis, labelli laminis anguste oblongis, connectivis brevibus, appendice oblonga ciliata.

Plant medium in size, epiphytic, caespitose; roots slender. Secondary stems erect, slender, 3-7 cm long, enclosed by 8-10 ciliate, loose, markedly dilated lepanthiform sheaths. Leaf erect, elliptical, acute, lightly acuminate, about 20% of the leaves densely pubescent dorsally, 80% glabrous, suffused with purple beneath, 4-5 cm long, 1.6-2.4 cm wide, the base broadly cuneate into the petiole 2 mm long. Inflorescence a congested, secund, successively flowered raceme up to 10 mm long, borne by a filiform peduncle 15-20 mm long, on the dorsum of the leaf, the flowers red-brown; floral bract 1.5 mm long, sparsely ciliate; pedicel 2 mm long, ciliate at the junction with the ovary; ovary 1 mm long, ciliate along the ribs; sepals ciliate, carinate-ciliate externally along the veins, the dorsal sepal ovate, subacute, attenuate, 8 mm long including the subulate tail 2.5 mm long, connate to the lateral sepals for 1 mm, the lateral sepals ovate, oblique, acute, long-attenuate, 9 mm long including the 4 mm long tails in apposition, connate 2 mm, 4.5 mm wide together; petals transversely oblong, 1 mm long, 3.5 mm wide, the upper lobe oblong, obtuse, the lower lobe smaller, narrowly oblong, incurved, truncate; blades of the lip narrowly oblong, 2.5 mm long, angled on the inner margin below the apex, glabrous, the connectives short, narrowly cuneate, connate to the column above the base, the appendix flat, ciliate, oblong, obscurely 3-lobed at the apex; column 2 mm long, the anther dorsal, the stigma ventral.

Etymology: From the Latin *pubescens*, "becoming hairy," referring to the pubescent qualities of the species.

Type: ECUADOR: MORONA-SANTIAGO: epiphytic in cloud forest near Rio Calagras, alt. 1600 m, 19 Sept. 1980, C. H. Dodson, C. Luer et al. 10486 (Holotype: SEL), C. Luer illustr. 9086.

Only about 20% of the leaves of the plants examined are densely pubescent on the dorsum. The fellow leaves are glabrous, but this phenomenon could be an abnormality. The sepals are ciliate and long-acuminate, the petals are transversely oblong, the blades of the lip are narrowly oblong, and the appendix is oblong and ciliate associated with a straplike process from the stigmatic cavity.

Lepanthes puck Luer & Vásquez, sp. nov.

Planta parva, inflorescentia folio anguste elliptico breviori, racemo subdensifloro disticho, sepalis anguste ovatis acuminatis, petalis transverse bilobis truncatis, labelli laminis ovatis connectivis angustis basalibus, appendice anguste triangulari pubescenti.

Plant small, epiphytic, caespitose, roots slender. Secondary stems slender, erect, 1.5-5 cm long, enclosed by 4-6 close, minutely ciliate-scabrous lepanthiform sheaths. Leaf erect, coriaceous, narrowly elliptical, acute, 12-23 mm long, 3-6 mm wide, the base cuneate into a 1 mm long petiole. Inflorescence an erect, subdense, distichous raceme up to 10 mm long, borne behind the leaf by a filiform peduncle 6-9 mm long, floral bract 1 mm long, pedicel 1.5 mm long; ovary 2.3 mm long, sepals light yellow, glabrous, narrowly ovate, acute, acuminate, the dorsal sepal 6.5 mm long, 2.75 mm wide, connate 1 mm to the lateral sepals, the lateral sepals oblique, connate 1.5 mm, 6 mm long, 4.25 mm wide together; petals bright red, cellular-pubescent, transversely oblong, 1 mm long, 3.5 mm wide, the upper lobe subquadrate, truncate, the lower lobe ovate, obtuse; lip bright red, cellular-pubescent, the blades ovate, the apices obscurely notched, the bases rounded, the connectives narrow, from the bases of the blades, connate to the base of the column, the appendix narrowly triangular, pubescent, protruding from the sinus; column 2 mm long, the anther dorsal, the stigma ventral.

Etymology: Named for Puck, a mischievous elf.

Type: BOLIVIA: COCHABAMBA: Prov. of Chapare: epiphytic in cloud forest between Cochabamba and Villa Tunari, alt. 2500 m, 4 Feb. 1983, C. Luer, J. Luer, R. Vásquez & E. Besse 8672 (Holotype: SEL).

This undistinguished little plant with narrowly elliptical leaves and short inflorescences is most notable for the flowers with acuminate sepals with reflexed apices, truncate petals, ovate blades of the lip borne along the column by narrow connectives from the base. As a narrowly pubescent organ, the appendix protrudes from the sinus below the base of the column.

Lepanthes quaternaria Luer, sp. nov.

Planta grandis caespitosa, inflorescentia folio oblongo longi-acuminato breviori, racemo congesto, sepalis acuminatis, petalis transverse oblongis, labelli laminis oblongis convexis pubescentibus corpore connectivorum transverse subquadrato bilobato.

Plant large, epiphytic, caespitose; roots coarse. Secondary stems slender, erect, 16-27 cm long, enclosed by 12-15 close lepanthiform sheaths, glabrous to microscopically scabrous. Leaf erect, thinly coriaceous, oblong, 8-10.5 cm long, 2.5-3.5 cm wide, the acute apex long-acuminate, the rounded base abruptly contracted into a petiole 4-5 mm long. Inflorescence racemose, 2-8 congested, successively flowered racemes up to 2 cm long borne by peduncles up to 2 cm long, in a fascicle along the back of the leaf; floral bract and pedicel each 1 mm long; ovary 2 mm long, sepals yellow-white, glabrous, the dorsal sepal ovate, acute, acuminate, 6 mm long, 3 mm wide, connate to the lateral sepals for 1 mm, the lateral sepals connate 3 mm into an ovate, bifurcated lamina 5.5 mm long, 5 mm wide, the apices acuminate, acute, diverging; petals yellow, suffused with purple medially, microscopically pubescent, transversely oblong, bilobed, 1.2 mm long, 6 mm wide, the upper lobe oblong-subfalcate, obtuse, the lower lobe similar but smaller; lip yellow, suffused with brown, the blades oblong, convex, pubescent, 1.2 mm long, the ends obtuse, the connectives broad, erect, the body of the connectives transversely subquadrate, pubescent, bilobed anteriorly beneath the apical lobes of the blades above, the lobes falcate, incurved, obtuse, the body connate posteriorly to the under surface of the column above the base, the appendix a minute nubbin in the sinus, column stout, 1.5 mm long, the anther apical, the stigma subapical.

Etymology: From the Latin *quaternarius*, "consisting of four," in reference to the four anterior lobes of the lip.

Type: ECUADOR: NAPO: epiphytic in cloud forest southeast of El Carmelo, alt. 2050 m, 17 May 1981, C. Luer, J. Luer, A. Hirtz et al. 6307 (Holotype: SEL).

This species can be distinguished from all others known to date by the broad body of the united connectives of the lip which, in addition to the usual pair of blades above the column, is bilobed below the column, providing the lip with four anterior lobes.

Lepanthes repens Luer, sp. nov.

Planta grandis repens, inflorescentia folio elliptico acuminato brevior, racemo congesto, flore magno, sepalis glabris acuminatis setaceis, petalis transverse oblongis, labelli laminis trapeziformibus appositis, appendice minuta.

Plant large, epiphytic to terrestrial, repent, the rhizome 1-3 cm long between secondary stems; roots coarse. Secondary stems stout, ascending to erect, 15-33 cm tall, enclosed by 10-13 microscopically scabrous lepanthiform sheaths. Leaf erect, thinly coriaceous, ovate-elliptical, acute, acuminate, 8-11.5 cm long, 2-3.3 cm wide, the base broadly cuneate into a petiole 5-9 mm long. Inflorescence a congested, distichous raceme up to 40 mm long, borne by a filiform peduncle 15-40 mm long, 1-3 racemes behind the leaf; floral bract 2.5 mm long; pedicel 3 mm long; ovary 3 mm long; sepals light yellow, glabrous, ovate, acute, attenuate, the dorsal sepal 10 mm long, 6 mm wide, connate to the lateral sepals for 2 mm, the lateral sepals oblique, 9.5 mm long, connate for 3 mm, 7.5 mm wide together; petals yellow, edged in purple, transversely oblong, 1.9 mm long, 3.75 mm wide, the upper lobe triangular, obtuse, the outer margin rounded, the lower lobe smaller, acute; lip orange, edged in purple, the blades trapeziform, 2.8 mm long, in apposition over the column, the ends obliquely truncate, the apex weakly ciliate, the connectives short, cuneate, connate to the base of the column, the appendix minute, pedunculate in the sinus; column 2 mm long, the anther apical, the stigma ventral.

Etymology: From the Latin *repens*, "creeping," referring to the repent rhizome.

Type: ECUADOR: CARCHI: terrestrial on the road cut above El Carmelo, alt. 3200 m, 17 May 1981, C. Luer, J. Luer, A. Hirtz et al. 6261 (Holotype: SEL); COLOMBIA: NARIÑO: epiphytic in cloud forest around the crater lake of Volcan Galeras, alt. 3200 m, 21 Jan. 1979, C. Luer & J. Luer 3748 (SEL).

The stout, repent habit of this large species is unusual in the genus. The large flowers are borne successively in congested racemes which may approach the leaf in length. The trapezoid blades of the lip close like doors over the column. The appendix is a minute, pedunculated gland in the sinus.

Lepanthes rhynchion Luer, sp. nov.

Planta mediocris vel grandis, inflorescentia folio ovato acuminato brevior, racemo congesto, sepalis serratis breviter acuminatis, petalis transverse bilobatis, labelli laminis glabris ellipticis acutis, appendice vestigiali, stigmatibus apicalibus transversalibus protrudentibus.

Plant medium to large, epiphytic, caespitose; roots coarse. Secondary stems stout, erect, 6-37 cm long, enclosed by 7-15 loose lepanthiform sheaths, glabrous to microscopically ciliate. Leaf erect, coriaceous, elliptical-ovate, acuminate, acute, 4.5-10 cm long, 2-3.5 cm wide, the base cuneate into a petiole 3-5 mm long. Inflorescence racemose, the rachis congested, successively flowered, up to 35 mm long, borne by a filiform peduncle up to 30 mm long, in a fascicle of up to 10 along the back of the leaf; floral bracts 1.5 mm long, more or less spiculate; pedicel 1-2 mm long; ovary 1.5-2 mm long, spiculate; sepals yellow, serrate, carinate-lacerate, ovate, acute, shortly acuminate, the dorsal sepal 4.5-5.75 mm long, 2.25-3.6 mm wide, connate 0.5-1 mm to the lateral sepals, the lateral sepals oblique, 4-4.5 mm long, 2-2.5 mm wide, connate 1 mm; petals yellow, sometimes edged in purple, transversely bilobed, 1.25 mm long, 2.5 mm wide, the upper lobe broadly oblong, the apex rounded, the lower lobe smaller, narrowly oblong with the apex rounded; lip orange to red, the blades narrowly elliptical, 2 mm long, glabrous, the apices acute, the bases obtuse to round, the connectives broadly oblong, connate to the under surface of the column below the middle, the appendix reduced to a small, pubescent nubbin in the sinus; column 2 mm long, the anther dorsal, the stigma apical, narrowly transverse.

Etymology: From the Greek *rhynchion*, "a little snout," referring to the protruding stigma.

Type: ECUADOR: PICHINCHA: epiphytic in cloud forest between San Jose de Minas and Otavalo, alt. ca. 2800 m, 24 Aug. 1978, C. Luer, J. Luer & A. Hirtz 3333 (Holotype: SEL); LOJA: south of Yangana, alt. 2250 m, 11 May 1981, C. Luer, J. Luer, D. D'Alessandro et al. 6141 (SEL); IMBABURA: west of Otavalo toward Selva Alegre, alt. 3000 m, 7 Feb. 1979, C. Luer, J. Luer, A. Hirtz & R. Escobar 3885 (SEL); COLOMBIA: PUTUMAYO: between La Cocha and Sibundoy, alt. 2700 m, 30 July 1978, C. Luer, J. Luer, R. Escobar et al. 3158 (SEL); NARIÑO: between Pasto and La Cocha, alt. 3000 m, 21 Jan. 1979, C. Luer & J. Luer 3766 (SEL).

This species may be identified by the congested racemes shorter than the acuminate leaf; the serrate, shortly acuminate sepals; petals with a large, rounded upper lobe; the glabrous lobes of the lip; a rudimentary, pubescent appendix; and a transverse, protruding, apical stigma.

Lepanthes saltator Luer, sp. nov.

Planta grandis caespitosa, inflorescentia folio ovato acuminato brevior, racemo congestissimo disticho, sepalo dorsali anguste triangulari, sepalis lateralibus ovatis apicibus divergentibus, petalis late transverse bilobatis, labelli laminis anguste oblongis glabris, appendice oblonga cum glande pubescenti apicali.

Plant large, epiphytic, caespitose; roots slender. Secondary stems slender, erect, 6-25 cm tall, enclosed by 9-16 ciliate lepanthiform sheaths. Leaf erect, thinly coriaceous, sparsely ciliate along the veins beneath, elliptic-ovate, acute, long-acuminate, 5-12 cm long, 2-5.5 cm wide, the base rounded to subcordate, abruptly contracted into a petiole 4 mm long. Inflorescence a very congested, distichous, successively flowered raceme up to 25 mm long, borne by a filiform peduncle up to 40 mm long along the back of the leaf; floral bract 1.25 mm long; pedicel 1-1.25 mm long; ovary 2.5 mm long; sepals yellow, glabrous, the dorsal sepal narrowly triangular, acute, 6.5 mm long, 3.25 mm wide, connate basally to the lateral sepals for 1.5 mm, the lateral sepals ovate, oblique, 6 mm long, 3.5 mm wide, connate 1 mm, the subacute apices shortly acuminate, widely spread; petals yellow, edged in purple, broadly transversely elliptical, bilobed, 2.1 mm long, 4.1 mm wide, the upper lobe ovate, obtuse, the lower lobe smaller, triangular, acuminate, obtuse; lip rose, suffused with purple, the blades narrowly oblong, 2.2 mm long, the apices acute, the bases narrowly obtuse, the connectives cuneate, connate to the column at the base, the appendix oblong, channeled, with a ciliate, apical gland; column 1.5 mm long, the anther dorsal, the stigma ventral.

Etymology: From the Latin *saltator*, "a male dancer," referring to the fancied appearance of the flower.

Type: ECUADOR: PICHINCHA: epiphytic in cloud forest toward the silver mine above Toachi, alt. 1500 m, 14 March 1982, C. Luer, A. Hirtz & S. Dalström 7372 (Holotype: SEL); same area, alt. 1300 m, 21 May 1983, C. H. Dodson & A. Gentry 13696 (SEL); COTOPAXI: west of El Corazon, alt. 1200 m, 18 Feb. 1979, C. Luer, J. Luer & A. Hirtz 4019 (SEL).

The flowers of this large species with a congested raceme shorter than the leaf, which is ciliate beneath, are of medium size with a narrowly triangular dorsal sepal and broad lateral sepals with diverging apices. The petals are proportionately broad and large; the blades of the lip are narrowly oblong and glabrous; and the appendix is an oblong organ with a pubescent apical gland.

Lepanthes scalaris Luer, sp. nov.

Planta mediocris scandens, racemo successivifloro folio elliptico duplolongiore, sepalis glabris ovatis acutis, petalis transverse oblongis, labelli lobis oblongi-lunatis glabris, appendice cupulata lobis pubescentibus.

Plant medium in size, epiphytic, scandent; roots slender. Secondary stems slender, erect, prolific, 5.5-9.5 cm long, enclosed by 5-7 close lepanthiform sheaths, minutely ciliate at the ostia. Leaf erect, coriaceous, elliptical, acute, 20-36 mm long, 9-12 mm wide, cuneate below into a petiole 3-4 mm long. Inflorescence a loose, successively flowered raceme up to 7 cm long, the filiform peduncle from a node near the apex of the secondary stem; floral bract 2.5 mm long; pedicel curved, 1.2 mm long; ovary 1.5 mm long; sepals glabrous, rosy salmon in color, the veins prominent externally, the dorsal sepal ovate, 7 mm long, 4.75 mm wide, the apex shortly acuminate, acute, the lateral sepals oblong, oblique, 8 mm long, 6 mm wide together, connate to near the middle, the apices shortly acuminate; petals transversely oblong, 1.25 mm long, 5 mm wide, the upper lobe purple, the lower lobe smaller, orange; lip rosy brown, the blades oblong-lunate, the ends rounded, 2.2 mm long, the connectives cuneate, connate to the under surface of the column, the appendix cup-shaped with a ciliate margin; column 1.5 mm long, the anther dorsal, the stigma ventral.

Etymology: From the Latin *scalaris*, "ladderlike," referring to the prolific habit of growth.

Type: ECUADOR: CARCHI: epiphytic in scrub cloud forest above San Gabriel, alt. 3340 m, 16 May 1981, C. Luer, J. Luer, A. Hirtz et al. 6255 (Holotype: SEL). Additional material examined: COLOMBIA: NARINO: epiphytic in cloud forest, east slope of Volcan Galeras, alt. ca. 3200 m, 21 Jan. 1979, C. Luer & J. Luer 3738 (SEL).

This species is related to *L. superposita* Schltr., but *L. scalaris* may be distinguished by the non-reniform petals, and the glabrous lobes of the lip with narrow connectives attached near the bases instead of near the middle of the lamina. The cuplike appendix is minutely bilobed at the apex.

Lepanthes scansor Luer & Escobar, sp. nov.

Planta mediocris scandens, racemo successivifloro subfractiflexo folio elliptico breviori, sepalis glabris late ovatis acutis, petalis transverse oblongis, labelli lobis subfalcatis, appendice parva pubescenti.

Plant medium in size, epiphytic, scandent; roots slender. Secondary stems erect, slender, prolific, 4-16 cm long, enclosed by 6-8 close lepanthiform sheaths minutely ciliate at the ostia. Leaf erect, coriaceous, elliptical, acute, 2-5 cm long, 1-1.5 cm wide, cuneate below into the petiole 3-4 mm long. Inflorescence a subdense, successively flowered, lightly fractiflex raceme up to 3 cm long, the filiform peduncle from a node near the apex of the secondary stem; floral bract 2 mm long, pedicel 1 mm long; ovary 1.5 mm long, ribbed; sepals glabrous, yellow, suffused with purple centrally, the veins prominent externally, the dorsal sepal broadly ovate, acute, 4.75 mm long, 3.75 mm wide, the lateral sepals ovate, oblique, subfalcate, acute, connate to the middle, 4.75 mm wide together; petals yellow-orange, suffused with red medially, transversely oblong, 1.1 mm long, 3.5 mm wide, the upper lobe oblong, the lower lobe smaller, narrowly oblong, slightly incurved; labellar laminae oblong-falcate, 2 mm long, the apices acute, incurved, minutely pubescent, the bases rounded, the connectives broadly cuneate, connate to the under surface of the column, the appendix small, rounded, densely pubescent; column 1.5 mm long, the anther apical, the stigma apical and protruding.

Etymology: From the Latin *scansor*, "a climber," referring to the scandent habit.

Type: ECUADOR: LOJA: epiphytic in cloud forest at the pass north of Loja, alt. 3100 m, 30 Oct. 1982, C. Luer & R. Escobar 8240 (Holotype: SEL).

This species may be distinguished from *L. prolifera* Foldvats, the other scandent *Lepanthes* with the inflorescence shorter than the leaf, by the less densely flowered rachis, smaller flowers, broad, glabrous sepals, a smaller appendix, and an apical stigma.

Lepanthes schizix Luer, sp. nov.

Planta parva caespitosa, racemo laxe plurifloro fractiflexo folio duplo-vel triplo-longiore, sepalis atropurpureis minute ciliatis breviter caudatis, sepalo dorsali concavo, synsepalo latissime oblongo, labelli lobis lunatis glabris, appendice parva cylindrica cum glande apicali.

Plant small, epiphytic, caespitose; roots slender. Secondary stems erect, slender, 10-30 mm long, enclosed by 4-6 close lepanthiform sheaths, the markedly dilated ostia ciliate. Leaf erect, coriaceous, elliptical, obtuse, 12-15 mm long, 7-9 mm wide, the base broadly cuneate into a petiole ca. 2 mm long. Inflorescence a loose, successively flowered, zigzag raceme 3-5 cm long, the filamentous peduncle from a node near the apex of the secondary stem; floral bract pubescent, 1 mm long; pedicel 1.75-2 mm long; ovary 1.25 mm long; sepals dark purple, carinate, the margins minutely ciliate, the dorsal sepal ovate, concave, 5.5 mm long, 3 mm wide unexpanded, the apex attenuated into a short, decurved tail, the lateral sepals 10 mm long, 3 mm wide together, connate 5 mm into an oblong lamina, the acute apices tapered into slender, approximate tails ca. 3 mm long; petals dark purple, transversely oblong, 1.1 mm long, 4 mm wide, the upper lobe oblong with the apex rounded, the lower lobe falcate, acute; lip rose, the blades lunate, glabrous, 1.75 mm long, the connectives narrowly cuneate, connate to the under surface of the column, the appendix small, cylindrical, with an apical gland; column 1 mm long, the anther dorsal, the stigma ventral.

Etymology: Named for the similarity to the star of Frank King's *Gasoline Alley*.

Type: ECUADOR: PICHINCHA: epiphytic in cloud forest near Río Silante, Canchacato, alt. ca. 2000 m, 28 Oct. 1979, C. Luer, J. Luer & A. Hirtz 4411 (Holotype: SEL).

Among the members of the "effusae" group, this species is remarkable for the concave dorsal sepal with a short, hooked tail, and the proportionately long, oblong synsepal ending in short, adjacent tails. The lower lobe of the petals is falcate. The lip is glabrous and the small appendix is cylindrical.

Lepanthes schizura Luer, sp. nov.

Planta parva caespitosa, inflorescentia folio anguste ovato brevior, racemo congesto disticho, sepalis ovatis obtusis denticulatis, petalis grandibus transverse oblongis, labelli laminae carnosae lunatis contiguis, appendice late fissa.

Plant small, epiphytic, caespitose; roots slender. Secondary stems slender, erect, 2.5-5.5 cm long, enclosed by 5-7 close, minutely ciliate lepanthiform sheaths. Leaf erect, coriaceous, narrowly ovate, acute, 3-5.5 cm long, 0.8-1.4 cm wide, the base cuneate into the petiole ca. 1 mm long. Inflorescence a congested, distichous raceme of successive flowers, up to 6 mm long, borne by a filiform peduncle 8-11 mm long behind the leaf; floral bract 1.5 mm long, minutely spiculate; pedicel 1.5 mm long; ovary 2 mm long, sparsely papillose; sepals orange-brown with light green margins, ovate, obtuse, serrulate, carinate-ciliate externally along the veins, the dorsal sepal 3 mm long, 2.66 mm wide, the lateral sepals 3 mm long, connate 1.5 mm, 4 mm wide together; petals orange, suffused with brown, transversely oblong, 1.2 mm long, 3 mm wide, the apices rounded, the upper lobe slightly larger than the lower lobe; lip brown, the blades lunate, thick, convex, 1.3 mm long, in apposition over the column, the connectives stout, erect, elevating the blades, the base of the body connate to the under surface of the column above the base, the appendix more or less rounded, broadly cleft centrally, ciliate; column 1 mm long, stout, the anther subapical, the stigma ventral.

Etyymology: From the Greek *schiz-*, "cleft," and *ura*, "tail," in reference to the broadly split appendix of the lip.

Type: *ECUADOR*: MORONA-SANTIAGO: epiphytic in forest north of Gualaquiza near Rio Calagras, alt. 1650 m, 4 Nov. 1982, C. Luer, R. Escobar & D. D'Alessandro 8278 (Holotype: SEL).

This small species with a congested raceme shorter than the narrowly ovate leaf may be identified by the denticulate, obtuse sepals; large, transversely oblong petals; and a lip with fleshy blades in apposition over the column, the appendix broadly cleft into a pair of obtuse, ciliate halves.

Lepanthes scolops Luer & Vásquez, sp. nov.

Planta parva vel mediocris, racemo laxo fractiflexo folio elliptico subaequilongo, sepalis libris attenuatis spiculatis, petalis transverse oblongis, labelli laminae ovatis, sinu connectivorum protuberanti rotundo, appendice parva pubescenti.

Plant small to medium in size, epiphytic, caespitose; roots slender. Secondary stems slender, erect, 3-10 cm long, enclosed by 6-8 ciliate lepanthiform sheaths with markedly dilated ostia. Leaf erect, coriaceous, suffused with purple beneath, elliptical-ovate, acute, 21-35 mm long including the petiole 2-3 mm long, 9-13 mm wide, the base cuneate into the petiole. Inflorescence a loose, fractiflex, successively flowered raceme up to 35 mm long including the filiform peduncle ca. 10 mm long, approaching the leaf in length; floral bract 1.5 mm long, spiculate; pedicel 1.5-2 mm long; ovary 1.75 mm long, papillose; sepals light green suffused with red, or brown, widely spread, free to near the base, carinate-spiculate externally, the dorsal sepal ovate, concave, acute, acuminate, 7.5 mm long, 3 mm wide, the lateral sepals narrowly triangular, concave with narrowly involute margins, acute, acuminate, 8 mm long, 1.5 mm wide, 1-veined; petals yellow to brown, transversely oblong, 1 mm long, 4 mm wide, the lobes narrowly obtuse, slightly curved; lip yellow, suffused with red, cellular-pubescent, the blades ovate, 1.3 mm long, shortly obtuse at the apex, rounded at the base, the connectives broad, curved forward with a protuberant, rounded sinus, cleft centrally, with the appendix a minute, pubescent lobule at the apex, connate to the column above the base; column 2.75 mm long, the clavate apex protruding beyond the lip, the anther and stigma apical.

Etyymology: From the Greek *scolops*, "a thorn, or anything pointed," referring to the long, pointed spiculate sepals.

Type: *BOLIVIA*: COCHABAMBA: Prov. of Chapare: epiphytic in cloud forest between Cochabamba and Villa Tunari, alt. 2650 m, 9 Feb. 1980, C. Luer, J. Luer & R. Vásquez 5187 (Holotype: SEL); *LA PAZ*: Prov. of Sud Yungas: epiphytic in cloud forest along the Rio Unduavi, alt. 2450 m, 6 Feb. 1980, C. Luer, J. Luer, R. Vásquez & M. Manon 5141 (SEL).

The flowers of this species are similar to those of *L. falcata*, but the laminae of the lip of *L. scolops* are well-developed and ovate; the connectives are also well-developed with a prominent, protruding sinus with a minute, pubescent appendix.

Lepanthes serriola Luer & Vásquez, sp. nov.

Planta mediocris, racemo subdense flexuoso folio elliptico plus minusve aequilongo, sepalis ovatis denticulatis breviter caudatis, petalis transverse oblongis, labelli laminae ellipticis, appendice parva ligulata pubescenti.

Plant medium in size, epiphytic, caespitose; roots slender. Secondary stems slender, erect, 5-9 cm long, enclosed by 7-9 minutely ciliate lepanthiform sheaths. Leaf erect, coriaceous, suffused with purple beneath, ovate, elliptical, acute, 2.5-3 cm long, 1-1.4 cm wide, the base cuneate into a petiole 2 mm long. Inflorescence a subdense, flexuous, successively several-flowered raceme up to 30 mm long including the filiform peduncle 3-5 mm long; floral bract and pedicel each 1 mm long; ovary 1 mm long, sparsely papillose; sepals light red-purple, edged in yellow, denticulate, carinate-spiculate, ovate, acuminate, shortly caudate, the dorsal sepal concave, 5.2 mm long, 2.6 mm wide, connate 1 mm to the lateral sepals, the lateral sepals oblique, 5 mm long, 1.75 mm wide, connate 1 mm; petals orange, edged in red, minutely pubescent, transversely oblong, 1.25 mm long, 2.75 mm wide, the ends rounded, the lower lobe smaller; lip red, glabrous, at most microscopically cellular-pubescent, the blades elliptical, 2 mm long, the apices narrowly obtuse, the bases rounded, the connectives cuneate, connected to the column above the base, the sinus cleft with a minute, pubescent, ligulate appendix; column 1.5 mm long, the anther dorsal, the stigma ventral.

Etymology: From the Latin *serriolus*, "with little serrations," referring to the denticulate sepals.

Type: BOLIVIA: COCHABAMBA: Prov. of Chapare: epiphytic in cloud forest between Cochabamba and Villa Tunari, alt. 2650 m, 9 Feb. 1980, C. Luer, J. Luer & R. Vásquez 5186 (Holotype: SEL).

This species may be distinguished by the flexuous raceme approaching the elliptical leaf in length; the denticulate, ovate, shortly caudate sepals; and the elliptical blades of the lip with a minute, ligulate appendix.

Lepanthes stupenda Luer, sp. nov.

Planta mediocris caespitosa, inflorescentia folio elliptico acuminato brevior, racemo congesto, flore maximo, sepalis lateralibus papillois, petalis nanis transverse ellipticis, labelli laminae oblongis glabris, appendice membranacea obtusa ciliata.

Plant medium (to large?) in size, epiphytic, caespitose; roots thick, coarse. Secondary stems slender, erect, 5-8 cm long, enclosed by 8-9 lepanthiform sheaths with microscopically ciliate stomal margins. Leaf erect, thinly coriaceous, reticulated, elliptical-ovate, acute, acuminate, 5-8 cm long, 2-2.7 cm wide, the broadly cuneate to rounded base contracted into a petiole 4 mm long. Inflorescence a congested, successively flowered raceme up to 10 mm long, borne by a filiform peduncle 15-22 mm long behind the leaf; floral bract 2 mm long; pedicel 1 mm long; ovary 2 mm long, narrowly winged; sepals yellow, the dorsal sepal glabrous, ovate, acute, acuminate, 16 mm long, 8 mm wide, connate basally to the lateral sepals for 2.5 mm, the lateral sepals papillose centrally, ovate, oblique, acute, acuminate, connate 6 mm, 16 mm long, 10 mm wide together; petals yellow, edged in purple, transversely elliptical, 1.66 mm long, 3.2 mm wide, the lobes triangular-ovate, obtuse, the lower lobe shorter; lip purple, the blades oblong, obtuse, glabrous, 2.5 mm long, the connectives broadly cuneate, connate to the base of the column, the appendix membranous, broadly obtuse, ciliate, spanning the broad sinus; column 2 mm long, the anther dorsal, the stigma ventral.

Etymology: From the Latin *stupendus*, "stupendous," referring to the size of the flower.

Type: ECUADOR: IMBABURA: epiphytic in cloud forest, Selva Alegre west of Otavalo, alt. 2730 m, 1 May 1981, C. Luer, J. Luer, A. Hirtz et al. 6042 (Holotype: SEL).

The plant described is probably a small specimen. The unusually large flower is borne on a short, congested raceme; the petals are proportionately small; the blades of the lip are elliptical and glabrous; and the appendix is an obtuse, ciliate membrane across the broad, deep sinus.

Lepanthes systole Luer, sp. nov.

Planta parva, racemo flexuoso subdensifloro foliis angustissime ovatis brevioribus, sepalis ovatis, petalis pubescentibus perparvis transversis obtusis, labello pubescenti columna minore laminis ovoideis appendice obtusa.

Plant small, epiphytic, caespitose; roots slender. Secondary stems slender, erect, 3-4 cm long, enclosed by 6-8 minutely ciliate lepanthiform sheaths. Leaf erect, coriaceous, very narrowly ovate, acute, 15-31 mm long, 5-6 mm wide, the base cuneate into a petiole 2 mm long. Inflorescence a subdense, flexuous, successively several-flowered raceme up to 10 mm long, borne behind the leaf by a filiform peduncle 3-5 mm long; floral bract 1 mm long, echinate; pedicel 0.75 mm long; ovary 0.75 mm long; flowers small, dark rose; sepals glabrous, ovate, acute, the dorsal sepal concave, 3.25 mm long, 2.2 mm wide expanded, connate to the lateral sepals for 0.75 mm, the lateral sepals oblique, connate 1 mm, 2.75 mm long, 3 mm wide together; petals shortly pubescent, transversely oblong, 0.5 mm long, 1 mm wide, the upper lobe broadly triangular, obtuse, the lower lobe shorter, rounded; lip minutely pubescent, the blades ovoid, 0.5 mm long, the apex subacute, the base rounded, the connectives broadly oblong, carrying the blades parallel to the column, connate to the base of the column, the sinus protruding with an obtuse, ligulate, pubescent appendix; column larger than the lip, 0.66 mm long, the anther apical, the stigma ventral.

Etymology: From the Greek *systole*, "a contraction," in allusion to the minute lip.

Type: GUATEMALA: ALTA VERAPAZ: epiphytic in wet forest above Senahu, alt. 1140 m, 28 Feb. 1981, C. Luer, J. Luer, M. Dix & M. Dix 5933 (Holotype: SEL).

Vegetatively this species resembles *L. stenophylla* Schltr., but the flowers of *L. systole* with the minute petals and an even smaller lip, smaller than the column, easily distinguish it.

Lepanthes teres Luer, sp. nov.

Planta parva caespitosa, foliis anguste teretibus racemo congestissimo multolongioribus, sepalis dorsalibus elliptico acuto lateralibus ovatis ciliatis, petalis magnis transverse bilobatis dolabriformibus, labelli laminis oblongis apice ciliatis, appendice globuliformi bilobata.

Plant small, epiphytic, caespitose; roots very slender. Secondary stems slender, erect, 2-4 cm long, enclosed by 4-5 close lepanthiform sheaths, microscopically scabrous along the ribs and margins of the ostia. Leaf red-purple, erect, fleshy, narrowly ovoid, terete, 25-35 mm long, 3-5.5 mm wide and deep, gradually narrowed from above the base to the acute apex, the base cuneate into the 1-1.5 mm long petiole. Inflorescence an extremely congested, successively flowered raceme up to 8 mm long, borne by a filiform peduncle up to 5 mm long along the under surface of the leaf; floral bract 0.5 mm long; pedicel 0.5 mm long; ovary 1.3 mm long; sepals yellow-white with bright red margins, the dorsal sepal oblong, acute, glabrous, 2.8 mm long, 1.5 mm wide, connate to the lateral sepals for 0.5 mm, the lateral sepals ovate, obtuse, coarsely ciliate, 2.5 mm long, 1.25 mm wide, connate for 0.5 mm; petals large, light yellow with red margins, transversely bilobed, dolabriform, 1.3 mm long, 3.66 mm wide, the margins acutely angled at the midvein below the middle, the upper lobe oblong with the apex rounded, the lower lobe considerably smaller, narrowly triangular, obtuse; lip yellow with red margins, the blades of the lateral lobes oblong, 2 mm long, the apex rounded, ciliate, the base rounded, the connectives short, cuneate, connate to the under surface of the column, the appendix a subspherical, bilobed body accommodated in a cavity in the sinus; column 1 mm long, the anther dorsal, the stigma ventral.

Etymology: From the Latin *teres*, "cylindrical, round in cross section," referring to the leaf.

Type: ECUADOR: LOJA: epiphytic in cloud forest south of Yangana, alt. 2250 m, 11 May 1981, C. Luer, J. Luer D. D'Alessandro et al. 6144 (Holotype: SEL).

This species with terete leaves grows very near the locality where the only other species of *Lepanthes* with similar leaves is known to occur. In *L. teres* the dorsal sepal is glabrous while the laterals are minutely fringed, the petals are proportionately large, and the globular appendix is set in a cavity in the sinus between the connectives.

Lepanthes transparens Luer, sp. nov.

Planta mediocris caespitosa, inflorescentia folio ovato acuminato brevior, racemo congesto, sepalis acutis serrulatis, petalis transverse oblongis, labeli lamina lunatis diaphanis, connectivis angustis, corpore rotundata longi-unguiculata, appendice oblonga pubescenti.

Plant medium in size, epiphytic, caespitose; roots slender. Secondary stems suberect, slender, 5-12 cm long, enclosed by 9-11 close, ciliate lepanthiform sheaths with markedly dilated ostia. Leaf suberect, thinly coriaceous, ovate, acuminate, acute, 3.5-5 cm long, 1.8-2.5 cm wide, the rounded base abruptly contracted into a petiole 2-3 mm long. Inflorescence a congested, successively flowered raceme up to 5 mm long, borne by a filiform peduncle up to 12 mm long along the back of the leaf; floral bract 1.5 mm long; pedicel 1 mm long; ovary 2.5 mm long; sepals light greenish tan, carinate, serrulate, the dorsal sepal triangular, 6 mm long, 4.5 mm wide, connate to the lateral sepals for 1.5 mm, the acute apex shortly acuminate, the lateral sepals connate 2 mm into an ovate, acute, bifid lamina, the shortly acuminate apices approximate; petals yellow, suffused with purple, microscopically pubescent, transversely oblong, 1.2 mm long, 4.25 mm wide, the upper lobe oblong, truncate, the lower lobe smaller, narrowly falcate, acute; lip brown, the blades lunate, thin, membranous, transparent, minutely ciliate, 2 mm long, 0.75 mm wide, the connectives narrow, erect, elevating the blades over the column, the body more or less rounded, with a slender, basal claw adnate to the column, the appendix oblong, shortly pubescent, associated with an appendage from the stigma; column slender, clavate, 2 mm long, the anther dorsal, the stigma ventral.

Etymology: From the Latin *transparens*, "transparent," referring to the thin, membranous blades of the lip.

Type: *ECUADOR*: CARCHI: epiphytic in cloud forest above El Carmelo, alt. 3200 m, 17 May 1981, C. Luer, J. Luer A. Hirtz et al. 6260 (Holotype: SEL); *COLOMBIA*: CAUCA: epiphytic in cloud forest, Paramo de Barbillas, alt. 3150 m, 13 Nov. 1982, C. Luer & R. Escobar 8381 (SEL).

This species is most remarkable for the transparent, lunate blades of the lip held above the column by narrow connectives. The body of the connectives is adnate to the base of the column by a long, slender claw. The appendix makes contact with an appendage from the stigmatic cavity.

Lepanthes trimerinx Luer, sp. nov.

Planta minuta caespitosa, caulibus secundariis brevissimis, pedunculo filiformi folio elliptico paulo longiore, sepalis ovatis ciliatis longicaudatis, petalis transverse bilobatis, labello plano quadrilobato lobis posticis columnam amplectentibus.

Plant minute, epiphytic, caespitose; roots proportionately fleshy. Secondary stems 1-2 mm long, enclosed by 2 imbricating sheaths with sparsely ciliate ribs and margins. Leaf erect, coriaceous, elliptical, obtuse, 6-8 mm long, 4 mm wide, the base cuneate into a petiole 1 mm long. Inflorescence a congested, few-flowered raceme borne by a filiform peduncle up to 10 mm long; floral bract 0.5 mm long; pedicel 2 mm long; ovary 0.75 mm long, ribbed; sepals yellow, ovate, 2 mm long, 1.5 mm wide, connate basally, the margins serrulate-ciliate, the acute apices contracted into slender tails 1.5-5 mm long; petals yellow, suffused with red, minutely pubescent, transversely bilobed, 0.5 mm long, 1.75 mm wide, the upper lobe narrowly triangular, obtuse, the lower lobes smaller, triangular, acute; lip red with yellow margins, minutely pubescent, 4-lobed, ("H-shaped"), 1.5 mm long, 1.5 mm wide, the halves transversely oblong or bilobed, with rounded anterior and posterior lobes, the posterior lobes embracing the column, the base between them connate to the under surface of the column near the middle, with a minute apiculum in the sinus between the anterior lobes; column 0.75 mm long, the anther and stigma apical.

Etymology: From the Greek *tri*, "three-" and *merinx*, "a bristle," referring to the three slender tails of the flower.

Type: *ECUADOR*: PASTAZA: epiphytic in trees along the Rio Napo between Banos and Puyo, alt. ca. 1500 m, collected March 1976, flowered in cultivation at SEL 12 July 1976, C. Luer 1019 (Holotype: SEL); *PICHINCHA*: near Tandapi, alt. 1500 m, 13 March 1976, C. Luer, J. Luer & P. Taylor 850 (SEL).

This minute species is remarkable for its small size and the long tails of the sepals. The two posterior lobes of the flat, four-lobed lip embrace the column. A specimen in flower resembles a *Platystele*.

Lepanthes usitata Luer & Vásquez, sp. nov.

Planta parva, racemo densifloro foliis ovatis brevioribus, sepalis ovatis acutis lateralibus pubescentibus, petalis inaequaliter bilobis, lobo superiore majore, labelli lamina ovatis, appendice minima ligulata.

Plant small, epiphytic, caespitose; roots slender. Secondary stems slender, erect, 25-35 mm long, enclosed by 4-5 shortly ciliate-scabrous lepanthiform sheaths. Leaf erect, coriaceous, ovate, subacute, 15-17 mm long, 8 mm wide, the rounded base contracted into a petiole 1.5 mm long. Inflorescence a dense, distichous, successively flowered raceme up to 5 mm long, borne behind the leaf by a filiform peduncle 3-4 mm long, floral bract 1 mm long; pedicel 0.75 mm long, ovary 1 mm long; flowers small, dull purple; dorsal sepal glabrous, broadly ovate-triangular, concave, acute, acuminate, 4.25 mm long, 2.75 mm wide, connate to the lateral sepals for 1 mm; lateral sepals minutely pubescent within, ovate, acute, acuminate, connate 1 mm, 4.25 mm long, 3 mm wide together, each 1-veined; petals minutely pubescent, transversely bilobed, 0.75 mm long, 2 mm wide, the upper lobe broadly oblong, rounded, the lower lobe narrowly oblong, obtuse; lip purple, the blades minutely pubescent, ovate, 1.25 mm long, the apices narrowly obtuse, the bases rounded, the connectives oblong, connate to the column above the middle, the sinus cleft with a small, ligulate, decurved, glabrous appendix; column 1.25 mm long, the anther dorsal, the stigma ventral.

Etymology: From the Latin *usitatus*, "usual, familiar," referring to the lack of any unusual floral or vegetative character.

Type: BOLIVIA: SANTA CRUZ: epiphytic in cloud forest near Siberia, alt. 2500 m, 1 Dec. 1978, C. Luer, F. Fuchs et al. 3595 (Holotype: SEL).

This little species possesses no single, distinctive feature, but it is the combination of all the seemingly usual, non-outstanding, morphological characters that distinguish *L. usitata*: small habit, ovate leaves, short inflorescence, ovate sepals, the dorsal concave, the laterals minutely pubescent, inequally bilobed petals, and the "standard" lip with a minute, glabrous appendix.

Lepanthes vasquezii Luer, sp. nov.

Planta mediocris, racemo laxo paucifloro foliis ellipticis multilongiore, sepalo dorsali ovato concavo longiacuminato, synsepalo triangulari angustiore, lobis petalorum inaequalibus lobo superiore late ovato majore, labelli lamina ellipticis obtusis pubescentibus, appendice anguste sigmoidea.

Plant medium in size, epiphytic, caespitose; roots slender. Secondary stems slender, erect, 5-9 cm long, enclosed by 5-7 close, glabrous to microscopically scabrous lepanthiform sheaths. Leaf erect, coriaceous, elliptical, subacute, 3.5-4 cm long including the 3-4 mm long petiole, 1.8-2.2 cm wide, lightly suffused with purple beneath, the base cuneate into the petiole. Inflorescence a weak, loose, secund, few-flowered raceme 13-18 cm long including the slender peduncle, 2-3 flowers open simultaneously; floral bract 2.5 mm long; pedicel 5-6 mm long; ovary 1.5 mm long, costate; sepals light green, suffused with brown centrally, glabrous, the dorsal sepal ovate, concave, acute, long-acuminate, 16 mm long, 6 mm wide, connate to the lateral sepals for 1.5 mm, the lateral sepals connate to about the middle into a narrowly triangular, acute lamina 19 mm long, 4 mm wide, the attenuate apices approximate; petals dark green, minutely pubescent, unequally bilobed, 1.75 mm long, 5 mm wide, the upper lobe broadly ovate, rounded, the lower lobe much smaller, narrowly oblong, obtuse; lip blue-green, minutely pubescent, the blades elliptical with rounded ends, 1.6 mm long, the inner margins ciliate, the connectives short, from the bases of the blades, connate to the column above the middle, the appendix pubescent, narrowly oblong-sigmoid; column 1.5 mm long, the anther dorsal, the stigma ventral.

Etymology: Names in honor of Roberto Vásquez Ch., investigator and artist of orchids of Bolivia.

Type: BOLIVIA: LA PAZ: Prov. of Inquisivi: epiphytic in cloud forest between Inquisivi and Circuata, alt. 2550 m, 27 Jan. 1981, C. Luer, J. Luer, R. Vásquez & E. Besse 5801 (Holotype: SEL).

The long, few-flowered raceme of widely gaping, narrow flowers of this species is reminiscent of the Colombian *L. ionoptera* Rchb. f. The dark green petals have a large, hairy, earlike upper lobe, and the blue-green blades of the lip obscure the sigmoid-shaped appendix.

Lepanthes vatrax Luer, sp. nov.

Planta parva caespitosa, inflorescentia subdensa flexuosa folio anguste ovato brevior, sepalis glabris acutis, petalis grandibus transverse bilobatis, labelli laminis ovatis, connectivis latissimis brevibus, appendice extus pedunculata bilobata.

Plant small, epiphytic, caespitose; roots slender. Secondary stems slender, erect, 2-4.5 cm long, enclosed by 4-5 close, microscopically scabrous lepanthiform sheaths. Leaf erect, coriaceous, narrowly ovate, acute, 27-43 mm long, 6-7 mm wide, the base narrowly cuneate into a petiole ca. 3 mm long. Inflorescence a subdense, subflexuous, successively flowered raceme up to 10 mm long, borne by a filiform peduncle 12-15 mm long up the back of the leaf; floral bract 1.25 mm long, ciliate; pedicel and ovary each 1 mm long; sepals glabrous, the dorsal sepal purple with the apex yellow, ovate, acute, 3 mm long, 2.5 mm wide, connate basally to the lateral sepals for 1 mm, the lateral sepals yellow, ovate, oblique, acute, connate 1.3 mm, 2.5 mm long, 2.5 mm wide together, each 1-veined; petals yellow, suffused with purple, transversely oblong-bilobed, 1 mm long, 2.66 mm wide, the upper lobe oblong with the apex rounded, the lower lobe narrower; lip orange, the blades ovate, 1.3 mm long with obtuse ends microscopically ciliate, the connectives short, very broadly cuneate, connate to the base of the column, the appendix a pendent, pedunculated, bilobed gland near the middle of the under surface of the body of the connectives; column 1 mm long, the anther and stigma apical.

Etymology: From the Latin *vatrax*, "a clubbed foot," in reference to the appearance of the appendix of the lip.

Type: *ECUADOR*: ZAMORA-CHINCHIPE: epiphytic in cloud forest, Quebrada Honda, alt. 1100 m, 18 Jan. 1982, *D. D'Alessandro 120* (Holotype: SEL), *C. Luer* illustr. 9077.

This species may be identified by the narrow leaf with a shorter, slightly flexuous raceme, the proportionately large petals, and the tiny pendent pedunculated appendix on the under surface of the lip.

Lepanthes vermicularis Luer, sp. nov.

Planta parvula caespitosa, racemo laxo fractiflexo folio obovato petiolato multilongiore, caudis sepalorum breviter setaceis, petalis transverse bilobatis auriculatis, labelli laminis oblongis, appendice glabra vermiculari.

Plant very small, epiphytic, caespitose; roots slender. Secondary stems slender, 10-15 mm long, enclosed by 3-4 close, minutely ciliate lepanthiform sheaths. Leaf suberect, thinly coriaceous, obovate, petiolate, obtuse, 10-13 mm long including the petiole 2-3 mm long, 5-6 mm wide, cuneate below into the petiole. Inflorescence a progressively lengthening, loose, fractiflex raceme up to 5 cm long including the filiform peduncle; floral bract 2 mm long; pedicel 1.5 mm long; ovary 1 mm long; sepals pale orange, carinate-serrulate, the dorsal sepal ovate, concave, 6 mm long, 2.5 mm wide, the subacute apex produced into a setaceous tail ca. 2 mm long, the lateral sepals ovate, oblique, connate 2 mm, 6.5 mm long, 3.75 mm wide together, the margins serrulate, the acute apices attenuated into tails ca. 2 mm long; petals red-orange, transversely oblong, bilobed, 0.8 mm long, 2.25 mm wide, the upper lobe elliptic with the apex rounded or earlike, the lower lobe shorter, narrowly oblong, obtuse; lip red-orange, the blades oblong, 1.25 mm long with rounded ends, minutely ciliate, the connectives short, narrowly cuneate, connate to the under surface of the column at the base, the appendix glabrous, cylindrical, incurved, acute; column 0.75 mm long, the anther apical, the stigma ventral.

Etymology: From the Latin *vermicularis*, "wormlike," in reference to the appendix of the lip.

Type: *ECUADOR*: ZAMORA-CHINCHIPE: epiphytic in cloud forest south of the pass south of Yangana, alt. 2600 m, 3 March 1982, *C. Luer, D. D'Alessandro & S. Dalström 7122* (Holotype: SEL).

This small species is characterized by the loose, flexible, flexuous raceme of short-tailed flowers. The upper lobes of the petals are earlike and the wormlike appendix of the lip is naked and incurved.

Lepanthes vespa Luer & Vásquez, sp. nov.

Planta parva, racemo laxo paucifloro folio late elliptico multilongiore, sepalis acuminatis lateralibus ciliatis, petalis transverse acuminatis, labelli laminis oblongis, appendice ligulata pubescenti, columna gracillima.

Plant small, epiphytic, caespitose; roots slender. Secondary stems slender, erect, 2-3.5 cm long, enclosed by 4-7 close, minutely ciliate lepanthiform sheaths. Leaf erect, coriaceous, broadly elliptical, obtuse, 12-14 mm long including the 1.5 mm long petiole, 6-8 mm wide, the base broadly cuneate into the petiole. Inflorescence a weak, loose, lightly flexuous, successively several-flowered raceme up to 5 cm long; floral bract 1 mm long; pedicel 0.75 mm long; ovary 1 mm long; sepals translucent pale rose, the dorsal sepal ovate, acute, acuminate, 6.5 mm long, 3.25 mm wide, the margins slightly irregular, connate to the lateral sepals for 1 mm, the lateral sepals ovate, acute, acuminate, connate 3 mm, 6 mm long, 4.25 mm wide together, the margins ciliate; petals rose, suffused with tan, microscopically pubescent, transversely oblong, 1 mm long, 5.25 mm wide, the upper lobe triangular-subfalcate, acute, the lower lobe triangular-acute, acuminate; lip rose, suffused with tan, microscopically pubescent, the blades oblong with obtuse ends, 1.3 mm long, the connectives short, cuneate, connate to the column below the stigma, the appendix narrowly ligulate, pubescent; column 2 mm long, the apical half dilated with a large dorsal anther and ventral stigma, the lower half extremely slender.

Eymology: From the Latin *vespa*, "a wasp," referring to the wasplike shaft of the column.

Type: BOLIVIA: SANTA CRUZ: epiphytic in cloud forest near Siberia, alt. 2500 m, 1 Dec. 1978, C. Luer, F. Fuchs et al. 3591 (Holotype: SEL).

This species is most remarkable for the extremely slender shaft of the column which supports not only the seemingly oversized anther and stigma, but also the lip surrounding the anther and stigma. It is reminiscent of the waist of a wasp.

Lepanthes ximena Luer, sp. nov.

Planta mediocris caespitosa, inflorescentia folio elliptico acuto brevior, racemo congesto disticho, floribus parvis aurantiacis, sepalis glabris acutis, petalis transverse bilobatis, labelli laminis ovatis glabris appendice minuta pubescenti.

Plant medium in size, epiphytic, caespitose; roots slender. Secondary stems slender, erect, 5-9 cm long, enclosed by 8-12 ciliate lepanthiform sheaths. Leaf erect, coriaceous, elliptical, acute, lightly acuminate, 4-6 cm long, 1-1.8 cm wide, cuneate below into a petiole ca. 3 mm long. Inflorescence a congested, distichous, successively flowered raceme up to 20 mm long, borne by a filiform peduncle 10-20 mm long up the back of the leaf; floral bract 1.3 mm long, ciliate; pedicel 2 mm long; ovary 1.5 mm long, with lightly irregular, narrow wings; sepals orange, glabrous, the dorsal sepal triangular, acute, 3.5 mm long, 3.1 mm wide, connate basally for 1 mm to the lateral sepals, the lateral sepals ovate, oblique, acute, 3.5 mm long, 1.75 mm wide, connate 1 mm; petals orange with red margins, transversely oblong-bilobed, 1.3 mm long, 3 mm wide, the upper lobe elliptical with the apex rounded, the lower lobe smaller, subfalcate, obtuse; lip red, the blades glabrous, ovate, 1.5 mm long, the apices acute, the bases rounded, the connectives broadly cuneate, connate to the column above the base, the appendix minute, triangular, pubescent; column 1.25 mm long, the anther and stigma apical.

Eymology: Named in honor of Ximena Leon de Hirtz of Quito, Ecuador, who participated in collecting numerous specimens in this remote region of Ecuador.

Type: ECUADOR: NAPO: epiphytic in wet forest near Rio Jatunyacu west of Tena, alt. 600 m, 21 Feb. 1982, C. Luer & A. Hirtz 6915 (Holotype: SEL).

This species is distinguished not by a single, unique character, but by the combination of the characters described above. The appendix is reduced to a tiny, triangular, pubescent body at the sinus. The apical stigma is one of those that resembles the snout of a pig.

Lepanthes zongoensis Luer & Vásquez, sp. nov.

Species haec *L. longipedicellatae* C. Schweinf. similis, sed racemis folio brevioribus et pedicelis brevibus differt.

Plant small to medium in size, epiphytic, caespitose; roots relatively coarse. Secondary stems stout, erect, 5-7.5 cm long, enclosed by 5-7 ciliate lepanthiform sheaths with markedly dilated ostia. Leaf erect, coriaceous, suffused with purple beneath, elliptical, obtuse, 25-27 mm long including the petiole 2-3 mm long, 14-17 mm wide, cuneate below into the petiole. Inflorescence a subdense, distichous, successively flowered raceme up to 10 mm long, borne behind the leaf by a filiform peduncle up to 5 mm long; floral bract 1.5 mm long, spiculate; pedicel 1.5 mm long; ovary 1.25 mm long; sepals brown, spiculate externally along the thickened veins, shortly pubescent within, the dorsal sepal ovate, concave, the acute apex attenuate, 5.25 mm long, 2.25 mm wide unexpanded, connate 0.5 mm to the lateral sepals, the lateral sepal narrowly ovate, attenuate, 6 mm long, 1.5 mm wide, concave with involute margins, connate 0.5 mm; petals purple-brown, transversely oblong with obtuse apices, 0.5 mm long, 3 mm wide, microscopically pubescent; lip purple-brown, microscopically pubescent, the blades narrowly oblong, 1.5 mm long, the apices acute, incurved beneath the apex of the column, the connectives broadly cuneate, the lip 2 mm wide expanded, connate to the base of the column, the appendix a minute lobule in the acute sinus, with a microscopic tuft of hairs immediately above and below the lobule; column 1.5 mm long, the anther and stigma apical.

Etymology: Named for the vicinity of Rio Zongo where this species was discovered.

Type: BOLIVIA: LA PAZ: Prov. of La Paz: epiphytic in cloud forest along the Rio Zongo, alt. 2600 m, 27 Jan. 1980, C. Luer, J. Luer, R. Vásquez & R. Lara 4972 (Holotype: SEL).

Although the specific epithet of the related Peruvian species implies long pedicels, Schweinfurth failed to include the measurement in his description, but states that the pedicels are "much surpassing the subtending bract." The pedicels of *L. zongoensis* are only 1.5 mm long, as long as the subtending bract. Other minor differences will be noted in the above description.

Lepanthes zygon Luer, sp. nov.

Planta parva caespitosa, inflorescentia folio ovato acuminato sub-vel aequilongo, racemo congesto disticho, sepalis breviter acuminatis lateralibus serrulatis, petalis transverse oblongis, labelli laminis subfalcatis columnam amplexentibus, appendice cylindrica pubescenti.

Plant small, epiphytic, caespitose; roots slender. Secondary stems slender, suberect, 3.5-6.5 cm long, enclosed by 7-10 close, microscopically ciliate lepanthiform sheaths. Leaf suberect, thinly coriaceous, ovate, acuminate, acute, 18-28 mm long, 9-11 mm wide, the obtuse base contracted into a 2 mm long petiole. Inflorescence a congested, distichous, successively flowered raceme up to 15 mm long, borne by a filiform peduncle up to 20 mm long; floral bract 0.75 mm long; pedicel 2-3 mm long; ovary 1.25 mm long, winged; sepals yellow, suffused with red-brown centrally, carinate, the dorsal sepal triangular, acute, shortly acuminate, 3.5 mm long, 2.25 mm wide, connate 0.6 mm to the lateral sepals, the lateral sepals ovate, oblique, 3.6 mm long, 1.5 mm wide, connate for 0.6 mm, the acute apices acuminate, the margins minutely ciliate; petals orange, transversely oblong, 0.5 mm long, 3 mm wide, the upper lobe oblong, obtusely angled on the inner margin near the apex, the lower lobe shorter, narrowly oblong, obtuse; lip orange, the blades oblong-subfalcate, 1 mm long, glabrous, obliquely clasping the column near the middle, the connectives short, broad, connate to the under surface of the column near the base, the appendix small, oblong, pubescent, continuous from the under surface of the sinus; column 1 mm long, the anther and stigma apical.

Etymology: From the Greek *zygon*, "a little yoke," referring to the blades of the lip surrounding the column.

Type: ECUADOR: PICHINCHA: epiphytic in cloud forest above Mindo, alt. 2000 m, 11 Nov. 1979, C. Luer & A. Hirtz 4731 (Holotype: SEL); same area, 15 Oct. 1979, A. Hirtz s.n. (SEL).

The inflorescence of this little species may equal the leaf in length as the congested, distichous, long-pedicelled raceme elongates. The subfalcate lobes of the lip clasp the column near the middle like a yoke around the neck of a pig.