

MISCELLANEOUS NEW SPECIES AND COMBINATIONS  
IN THE PLEUROTHALLIDINAE (ORCHIDACEAE)

Carlyle A. Luer\*

*Dryadella marsupiata* Luer, sp. nov.

Figure 19, p. 101

Inter species generis *Dryadellae* Luer species haec habitu floribusque mediocribus et lamina labelli oblonga supra medium argute reflexa, parte distali infrafacies adpressa distinguitur.

Plant medium in size for the genus, epiphytic, densely caespitose; roots slender, fasciculate. Secondary stems 6-10 mm long, unifoliate, enclosed by 2-3 thin, white, ribbed sheaths. Leaf light green, coriaceous, narrowly linear-oblong, 2.5-4 cm long, 0.5 cm wide, the apex obtuse, gradually narrowed below to the base. Inflorescence a short, congested, 3- to 6-flowered raceme of successive flowers, the peduncle ca. 1 mm long; pedicels 3-4 mm long; floral bract thin, ribbed, 3 mm long; ovary green, tripartite; dorsal sepal yellow-green, mottled and suffused with rose especially along the 3 veins, elliptical, lightly acuminate to the acute apex, 6 mm long, 3.5 mm wide; lateral sepals free, bright yellow, mottled with rose at the base, ovate, oblique, acute, 4 mm long, 2.33 mm wide, acutely reflexed below a transverse carina across the lower quarter; petals translucent yellow-white, marked with purple, quintangular-dolabriform, 1.75 mm long, 2 mm wide, the apex obtusely rounded, with a narrowly obtuse lobe on the lower margin above marginal thickening; lip dark purple, spatulate, 2.5 mm long unexpanded, 1 mm wide unexpanded, the blade oblong with revolute margins, 180° acutely reflexed above the middle, the distal third and rounded apex closely appressed to the under surface of the blade, the claw narrow, 1 mm long, bilobulate at the base; column green marked with rose, semiterete, 1 mm long, broadly winged above the middle, the clinandrium denticulate, the foot 1.5 mm long, channeled.

E

**Etymology:** From the Latin *marsupiatum*, "made into a bag or purse," in allusion to the configuration of the blade of the lip.

**TYPE:** PERU: JUNIN: Chanchamayo near La Merced, alt. 1800 m, Jan. 1981, M. Arias, s.n., cultivated at Spielberg, Germany, *B. Wuerstle 44*, (HOLOTYPE: SEL), C. Luer, illustr. 6468.

**Distribution:** Peru.

Superficially this species appears much like many of the others of the genus. The bright yellow lateral sepals contrast with the rose of the dorsal sepal. Most unusual, however, is the lip. The oblong blade is acutely reflexed above the middle so that the distal third is appressed to the under surface of the blade, thereby forming a tightly closed purse-like structure.

*Lepanthopsis apoda* (Garay & Dunsterv.) Luer, comb. nov.

*Pleurothallis apoda* Garay & Dunsterv., Venez. Orchids Ill. 3: 246, 1965.

This unusual little species has closer affinities with *Lepanthopsis* than with *Pleurothallis*. It is widely distributed from Venezuela, through Colombia to southern Ecuador.

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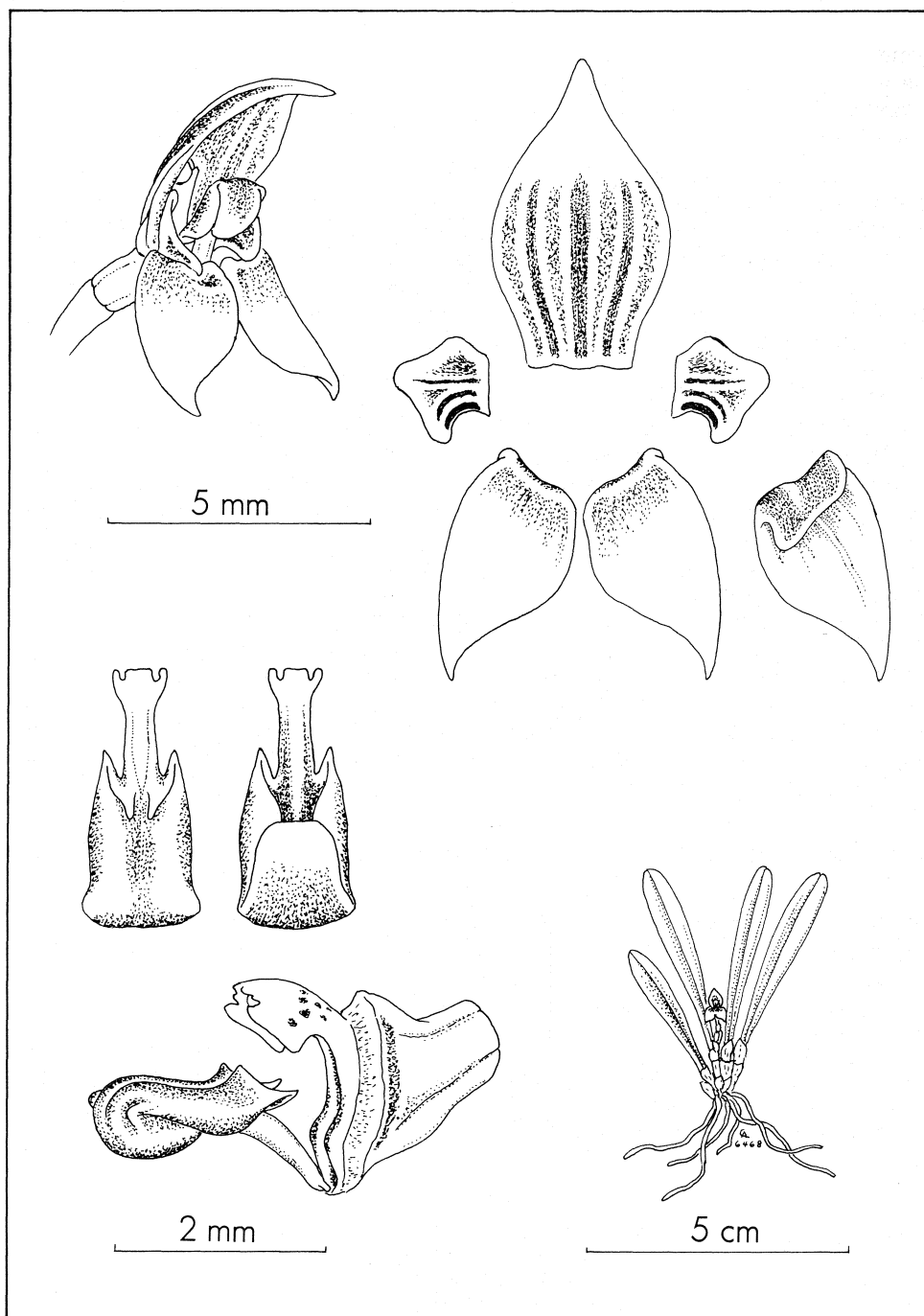


Figure 19. *DRYADELLA MARSUPIATA* Luer

*Masdevallia atahualpa* Luer, sp. nov.

Figure 20. p. 103

Planta grandis caespitosa, pedunculo unifloro foliis magnis crassis oblongis multibreviore, sepalis rigidis carnosiss in tubum cylindricum latum connatis intus fere glabris crassicaudatis, petalis cartilagineis obtuse angulatis, labello crasso obovato verrucoso apice rotundato denticulato disco late canaliculato.

Plant large, epiphytic, caespitose; roots coarse, flexuous. Secondary stems stout, unifoliate, 4-5 cm long, enclosed by 2-3 loose, imbricating sheaths. Leaf erect to suberect, thickly coriaceous, oblong, shortly petiolate, 15-22 cm long including the 2-3 cm long petiole, 3-3.7 cm wide, the midrib rounded dorsally, the apex obtuse, tridenticulate, the base cunate into the stout petiole. Inflorescence a large, solitary, rigidly fleshy flower borne by a stout peduncle 3-4.5 cm long, from a node low on the secondary stem, subtended by a thin bract; floral bract 2.6-2.8 cm long; pedicel 2.5-3 cm long; ovary green, 8 mm long; dorsal sepal green, lightly dotted with purple within on the free portion, obovate, 25 mm long (entire length 57 mm), 13 mm wide, connate to the lateral sepals for 13 mm to form a broad, cylindrical tube, the free portion triangular, the acute apex contracted into a thick, forwardly directed yellow tail ca. 3 cm long, the lateral sepals dark purple, microscopically subverrucose within, obliquely obovate, 52 mm long including the 2.5 cm long tail, connate 16 mm, 25 mm wide together expanded, the acute apices contracted into thick yellow-green tails; petals cream-colored with purple midvein, cartilaginous, oblong-rhomboid, obtuse, 12 mm long, 4.75 mm wide, obtusely angled on both thickened margins near the middle; lip thick, deep purple, obovate, 14 mm long, 6.5 mm wide, the rounded apex verrucose and denticulate, broadly sulcate centrally between oblique calli above the middle and between verrucose calli below the middle, the base subcordate, concave, presumably nectiferous, hinged beneath; column green with purple margins, semiterete, 10 mm long, the foot 7 mm long with an incurved extension.

**Etymology:** Named in honor of the Incan emperor Atahualpa who died at the hands of the conquistadors in what is now Cajamarca, Peru.

**Type:** PERU: AMAZONAS: collected by J. Meza T. near "La Providencia," 27 Aug. 1980, C. Luer, J. Luer, W. Königer & H. Königer 5429 (Holotype: SEL).

**Distribution:** Northern Peru.

This huge species is closely allied to many other species of the Section *Coriacea*, but it may be recognized by the short peduncle and nearly equally long pedicel, the rigid, virtually smooth sepals (only microscopically subverrucose within), and the distinctive, obovate, verrucose lip broadly sulcate down the center.

*Masdevallia aureodactyla* Luer, sp. nov.

Species haec *M. pachyurae* Rchb. f. persimilis, sed floribus paulo minoribus et caudis sepalorum brevibus crassis subclavatis laete aurantiacis differt.

Plant small to medium in size, epiphytic to terrestrial, caespitose; roots slender, flexuous. Secondary stems unifoliate, 1.5-3 cm long, enclosed by 2-3 loose, tubular sheaths. Leaf erect, coriaceous, elliptical, 6-12 cm long including a petiole 2-4 cm long, 1.2-2.3 cm wide, the apex obtuse to rounded, tri-

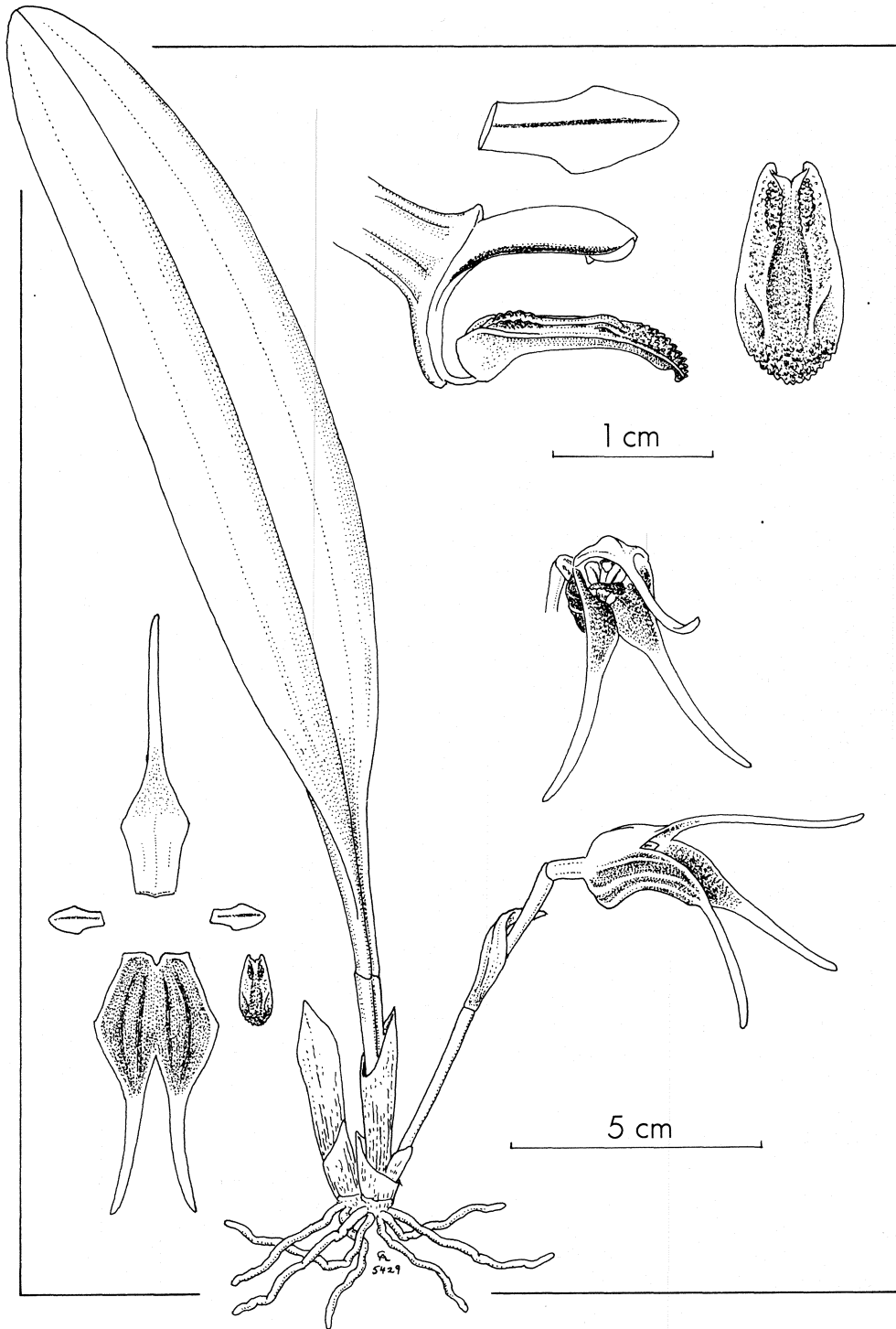


Figure 20. *MASDEVALLIA ATAHUALPA* Luer

denticulate, gradually narrowed below into the slender petiole. Inflorescence an erect, loosely 3- to 6-flowered raceme 8-16 cm long including the peduncle, with a bract below the middle, from a node low on the secondary stem; floral bract inflated, 5 mm long, 5 mm wide, enclosing the pedicel 2-3 mm long; ovary 2-3 mm long, with 3 pairs of undulating crests; sepals yellow to white with purple to purple-brown spots and bars, the dorsal sepal suborbicular, concave, carinate, 9-12 mm long, 8-11 mm wide expanded, connate 3.5-4 mm to the lateral sepals to form a shallow, gaping cup, the rounded apex contracted into a bright orange tail, 5-6 mm long, 1-1.5 mm thick, the lateral sepals shortly pubescent within, oblong, 8-11 mm long, 3.25-4 mm wide, connate 1.5-2 mm to form a rounded mentum below the column-foot, the subacute apices contracted into bright orange tails 5 mm long, 1 mm thick; petals white to rose, oblong, 5-6 mm long, 2 mm wide, the margins minutely denticulate above the middle, the truncate apex long-apiculate, with a low, longitudinal callus along the lower margin and a low, longitudinal callus along the upper half; lip tan, dotted with brown, oblong, 5.5-6.5 mm long, 2.5 mm wide, with obtuse marginal folds above the middle, the apex rounded, the truncate base cleft, extending forward as a shallow channel down the center; column white with purple margins, semiterete, 5 mm long, the foot 4 mm long with a short, incurved extension.

**Etymology:** From the Latin *aureus* "golden," and *dactylus* (Latin from the Greek) "finger," in allusion to the thick, orange, sepaline tails.

**TYPE:** *ECUADOR:* BOLIVAR: terrestrial on the road embankment in cloud forest west of Guaranda, alt. 1800 m, 10 March 1982, C. Luer & S. Dalström 7262 (HOLOTYPE: SEL); epiphytic in cloud forest between Guaranda and Balzapamba, alt. ca. 2600 m, August 1978, C. Luer, J. Luer, A. Hirtz & A. Andreetta, cult. by A. Andreetta in Cuenca, flowered in cult. 11 Feb. 1979, C. Luer 3971 (SEL).

11 Feb. 1979, C. Luer 3971 (SEL).

**Distribution:** Western Ecuador.

This species was previously thought to be merely a form of the variable *M. pachyura*. The two species maintain their identity even when they are growing intermixed on the same embankment where their differences are striking. No intermediate forms are seen. *Masdevallia aureodactyla* is easily recognized by the short, thick, more or less clavate, bright orange tails. A specimen with yellow tails has been seen. The flowers are smaller than those of *M. pachyura*, and the racemes are usually, but not always, shorter with fewer flowers. Otherwise, the shape of the bracts, ovaries, sepaline blades, petals and lip are inseparable.

**Masdevallia capillaris** Luer, sp. nov.

**Figure 21, p. 105**

Planta parvula caespitosa, pedunculo capillari debili successivi-paucifloro foliis anguste ellipticis multilongiore, ovario sexualato, sepalis purpureis anguste oblongis ecaudatis apicibus flavis infra medium in tubum cylindricum breve connatis, petalis subfalcatis infra medium dilatatis, labello obovato-oblongo arcuato obtuso.

Plant very small, epiphytic, caespitose; roots slender, flexuous. Secondary stems slender, blackish, 4-5 mm long, enclosed by 2 thin, ribbed sheaths, unifoliate. Leaf erect, coriaceous, narrowly elliptical, 18-30 mm long, 4-5 mm wide, the apex subacute, tridenticulate, gradually narrowed below into the

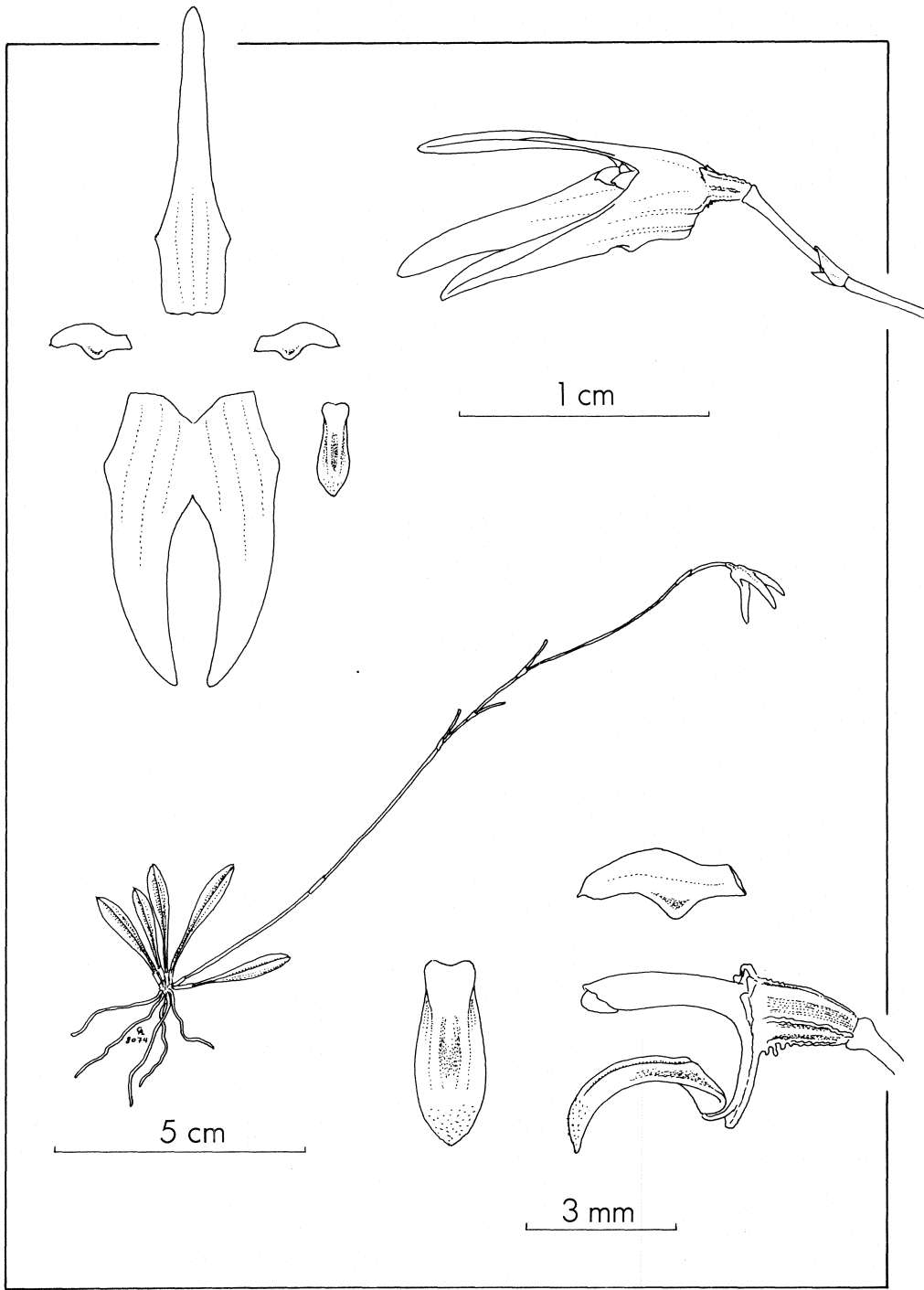


Figure 21. MASDEVALLIA CAPILLARIS Luer

slender petiole. Inflorescence a very slender, gradually elongating, reclining, successively flowered raceme up to 15 cm long including the rachis of up to 4 distant flowers, from a node low on the secondary stem; floral bract 1.5-3 mm long; pedicel 3-10 mm long; ovary 2 mm long, with 3 pairs of crests, the upper more or less overlapping the base of the dorsal sepal; sepals thickened, glabrous, delicately carinate, purple with yellow apices, connate to each other for 3 mm to form a short, cylindrical tube, the dorsal sepal oblong, the free portion antrorse, narrowly oblong, obtuse, the entire length 12.5 mm, the width 3 mm, the lateral sepals subfalcate, 12.5 mm long, 2.5 mm wide, the free portions similar to that of the dorsal sepal; petals yellow, subfalcate, 3.25 mm long, 1.5 mm wide, dilated on the lower margin between the middle and lower thirds, the subtruncate apex shortly apiculate; lip purple, obovate-oblong, arcuate, 3.75 mm long expanded, 1.3 mm wide, the apex obtuse, glandular-cellular, microscopically erose, thickened below the middle to the truncate base, hinged beneath, the disc with a pair of low, longitudinal calli; column yellow, semiterete, 3 mm long, the slender foot 2 mm long, with a thin, incurved extension.

**Etymology:** From the Latin *capillaris*, "hair-like," referring to the very thin, elongated peduncle.

**TYPE:** *ECUADOR*: ZAMORA-CHINCHIPE: epiphytic in cloud forest below Tapala, alt. 1400 m, near Valladolid, 20 Feb. 1982, *D. D'Alessandro 163* (HOLOTYPE: SEL), C. Luer illustr. 8074.

**Distribution:** Southern Ecuador.

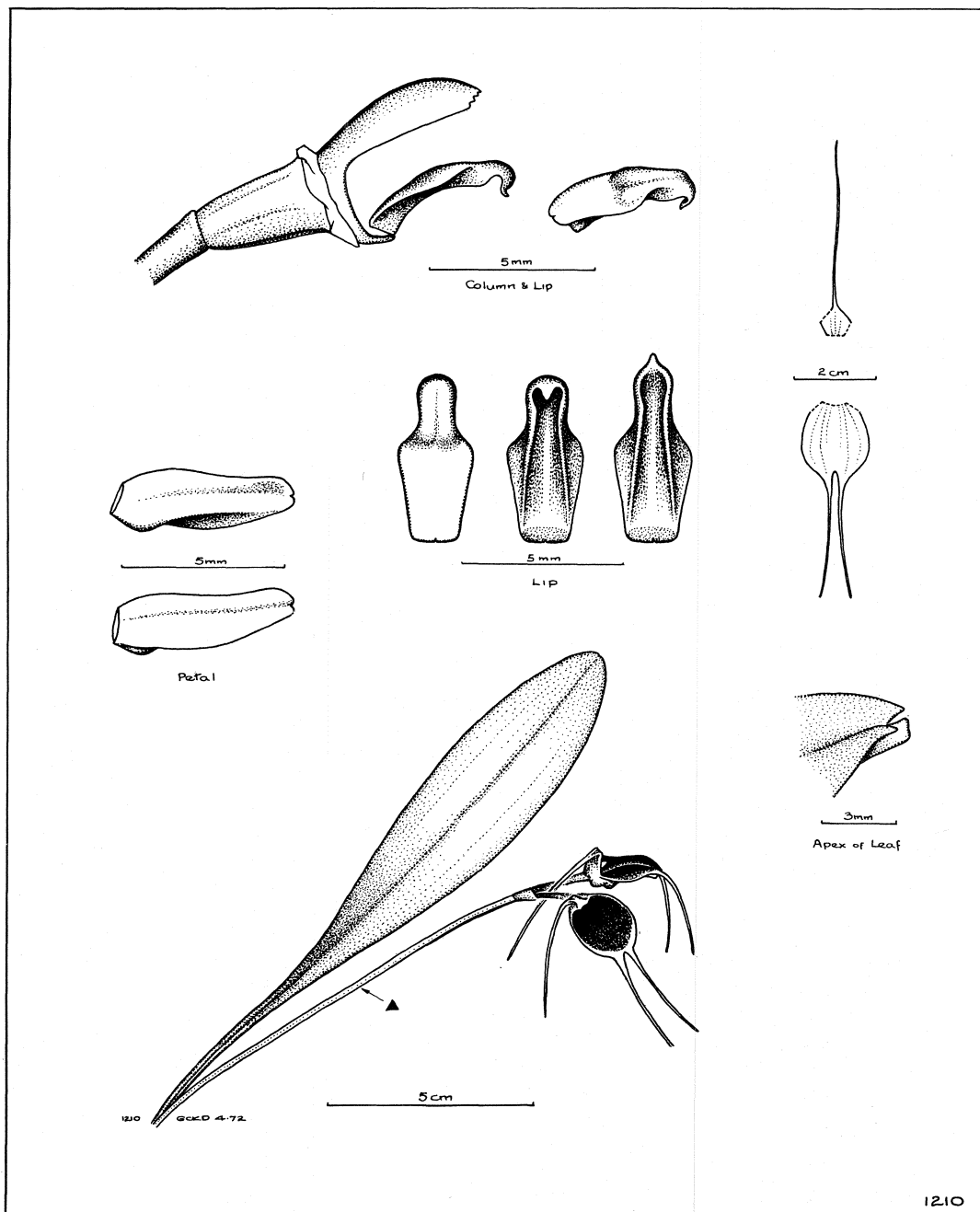
This unusual little species is characterized by the long, slender, creeping peduncle which produces in slow succession up to four distantly spaced flowers. The upper crests of the ovary overlap the base of the dorsal sepal. The narrow sepals are "tailless."

**Masdevallia dunstervillei** Luer, sp. nov.

p. 107

Planta mediocris caespitosa, pedunculo triquetro gracili simul bifloro folio paulo brevior, sepalo dorsali flavo cauda longa gracili argute reflexa, sepalis lateralibus purpureis flavo marginatis in laminam latam alte connatis caudis gracilibus approximatis, cupula brevi, petalis oblongis unicallosis, labello oblongo supra medium late plicato apice angusto revoluta.

Plant medium in size, epiphytic, caespitose; roots slender, flexuous. Secondary stems unifoliate, up to 3 cm long, enclosed by 2-3 tubular sheaths. Leaf erect, coriaceous, elliptical, petiolate, up to 15 cm long including the petiole 3-4 cm long, up to 2.8 cm wide, the apex obtuse, tridentate, narrowly cuneate below into the channeled petiole. Inflorescence a congested, simultaneously 2-flowered raceme borne by a slender, erect to suberect, triquetrous peduncle up to 12 cm long, with a bract at the base, from a node low on the secondary stem; floral bract ca. 7 mm long; pedicel ca. 10 mm long; ovary 3 mm long; dorsal sepal yellow, obovate, 10 mm long, 7 mm wide, connate to the lateral sepals for 3 mm to form a shallow, gaping cup, the free portion triangular, the obtuse apex contracted into a slender, acutely reflexed tail 4 cm long; lateral sepals dark purple with narrow yellow margins, verrucose within, connate 16 mm into an ovate lamina with a shallow mentum, 16 mm long, 16 mm wide, the apices approximate, abruptly acute, contracted into slender, yellow tails 3.5 cm long; petals white, oblong, 5.5 mm long, 1.8 mm wide, the obtuse apex bilobulate, with a longitudinal callus



MASDEVALLIA DUNSTERVILLEI Luer



along the lower margin ending in a low, rounded swelling above the base; lip dark purple, oblong-ovate, the margins broadly and obtusely plicate above the middle, 5 mm long, 2 mm wide near the middle, the apical portion 1 mm wide, rounded with the acute tip revolute, the truncate base hinged beneath; column yellow, semiterete, 4 mm long, the foot 2 mm long with an incurved extension.

**Etymology:** Named in honor of G. C. K. Dunsterville, renowned author and illustrator of numerous works on the orchids of Venezuela, who originally cultivated and illustrated this species.

**TYPE:** VENEZUELA: TACHIRA: epiphytic in cloud forest between Quenequea and Zumbador, alt. 2000 m, 1972, G. C. K. *Dunsterville*, N. *Dunster-ville* and R. *Mejia* 1210 (HOLOTYPE: SEL).

**Distribution.** Western Venezuela.

This species may be recognized by the slender, triquetrous peduncle, a little shorter than the leaves, that bears two, approximate, simultaneous flowers with a shallow, sepaline cup; the long, slender tail of the yellow dorsal sepal is sharply reflexed; and the lateral sepals are deeply connate into a broadly ovate, dark purple lamina with yellow margins.

**Masdevallia exaltata** Luer, sp. nov.

**Figure 23, p. 111**

Species speciosa haec *M. deformis* Krzl. affinis, sed habitu majore, pedunculo longiore ascendenti erectove, synsepalo majore, et labello glabro integro differt.

Plant medium in size, epiphytic, caespitose; roots slender, flexuous. Secondary stems black, erect, 2-4.5 cm long, unifoliate, enclosed by 2 loose basal bracts. Leaf erect, coriaceous, dark green above, mottled with black beneath, elliptical, petiolate, 5-10 cm long including the 2-4.5 cm long petiole, 1.5-2.4 cm wide, the apex subacute to obtuse, tridenticulate, cuneate below into the blackish petiole. Inflorescence a solitary, showy flower borne by an ascending to erect, slender peduncle 8-10 cm long, with a bract on the lower portion; floral bract 6-8 mm long; pedicel 8-11 mm long; ovary blackish, 5 mm long; sepals red-vermilion, glabrous, the dorsal sepal oblong, connate 6-8 mm into a narrow cylindrical tube with the lateral sepals, the free portion triangular, the apex acuminate into a slender tail, the entire length of the dorsal sepal 35-40 mm, the width 6 mm, the lateral sepals oblong-elliptical, connate 27-30 mm into a bifid lamina 35-40 mm long, 23-27 mm wide, the rounded apices abruptly contracted into tails 2.5 mm long; petals white with a purple midvein, oblong, 8 mm long, 2.75 mm wide, the apex truncate, the lower margin with a longitudinal carina dotted with purple and ending in an acute, retrorse tooth above the base; lip orange, glabrous, entire, narrowly ovate, 7 mm long, 1.5 mm wide, 1.5 mm thick at the subcordate base, the apex narrowly obtuse, the disc with a pair of longitudinal calli above the middle, shallowly sulcate between; column white with a purple margin, semiterete, 6 mm long, the thick foot 3 mm long with a short, incurved extension.

**Etymology:** From the Latin *exaltatus*, "exalted," referring to qualities of the plant.

**TYPE:** ECUADOR: ZAMORA-CHINCHIPE: epiphytic in cloud forest south of the pass south of Yangana, alt. 2600 m, 3 March 1982, C. Luer, A. *Andreotta*, D. *D'Alessandro* & S. *Dalström* 7135 (HOLOTYPE: SEL); LOJA:

cloud forest north of the pass south of Yangana, alt. 2400 m, 3 March 1982, C. Luer et al. 7103 (SEL).

**Distribution:** Southern Ecuador.

This extraordinary species is obviously related to *M. deformis*, but *M. exaltata* may be readily recognized by the larger habit, ascending to erect, longer peduncles, and a larger flower of the same brilliant red-vermilion color. The sepaline tube of *M. exaltata* is proportionately shorter, but the free portions of the larger lateral sepals are oblong-elliptical and do not flare backward from the sepaline junction. The lips are basically very similar, but the lip is glabrous and entire in the present species.

**Masdevallia garciae** Luer, sp. nov.

Planta parva caespitosa, foliis ellipticis pedunculo plerumque unifloro longioribus, sepalis flavo-virescentibus purpureo striatis in tubum connatis, caudis latis laminis sepalorum aequilongis, petalis oblongis subtridenticulatis, labello glabro oblongo lateribus leniter plicatis basi inciso.

Plant small to medium in size, epiphytic, caespitose; roots slender, flexuous. Secondary stems unifoliate, 1-1.8 cm long, enclosed by 2 loose, tubular sheaths. Leaf erect, coriaceous, elliptical, 6-9 cm long including the 1.5-2.5 cm long petiole, 2 cm wide, the apex rounded, tridenticulate, narrowly cuneate below into the petiole. Inflorescence a single-flowered (occasionally 2-flowered), slender, erect peduncle 4-5 cm long, with a bract near the base, from a node on the secondary stem; floral bract 7-8 mm long; pedicel 10 mm long, dotted with purple; ovary 6-carinate, 4 mm long; dorsal sepal yellow, veined in purple-brown, oblong, connate to the lateral sepals for 7-9 mm to form a cylindrical tube, the free portion triangular, contracted into a broad, antrorse tail, the entire length of the dorsal sepal 17-24 mm, the width 5-6 mm; lateral sepals yellow-green, suffused and veined in purple-brown, ovate, oblique, connate 6 mm, the apices contracted into tails similar to that of the dorsal sepal, the entire length of the lateral sepals 18-20 mm, the width together 10-15 mm expanded; petals white with a purple midvein, oblong, 5 mm long, 1.6-2 mm wide, the obtuse apex lightly tridenticulate, the lower margin thickened with an obscure tooth on the basal third; lip dull yellow, dotted with red-brown, oblong, 6.5-7 mm long, 2.75-3 mm wide, the disc smooth with a pair of shallow marginal folds above the middle, the apex acute, the base cleft, hinged beneath; column greenish white with purple margins, semiterete, 5.5 mm long, the foot 2 mm long with a short, incurved extension.

**Etymology:** Named in honor of Sr. Carlos Garcia of Caracas, Venezuela, who discovered this species.

**TYPE:** VENEZUELA: FALCON: epiphytic in rain forest, Sierra de San Luis near Curimagua, 1960, alt. ca. 1200 m, C. Garcia s.n., G. C. K. Dunsterville 555 (HOLOTYPE: SEL).

**Distribution:** Northwestern Venezuela.

This species was identified as *M. striatella* Rchb. f. in *Venezuelan Orchids Illustrated* 3: 172, 1965, and was pictured and illustrated in *Orchideeën* 42: 40, 1980, as an unidentified species.

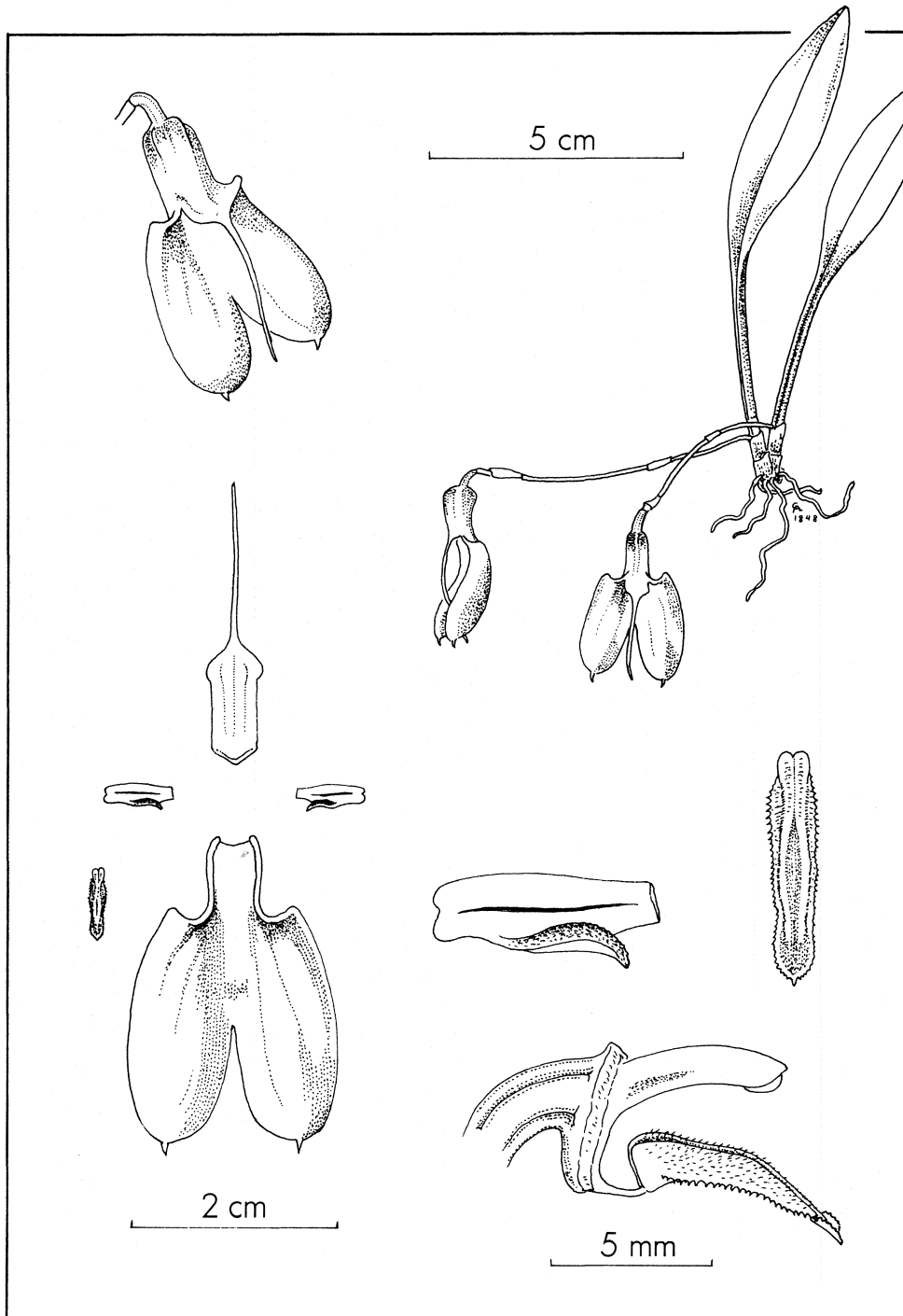


Figure 22. MASDEVALLIA DEFORMIS Krzl.

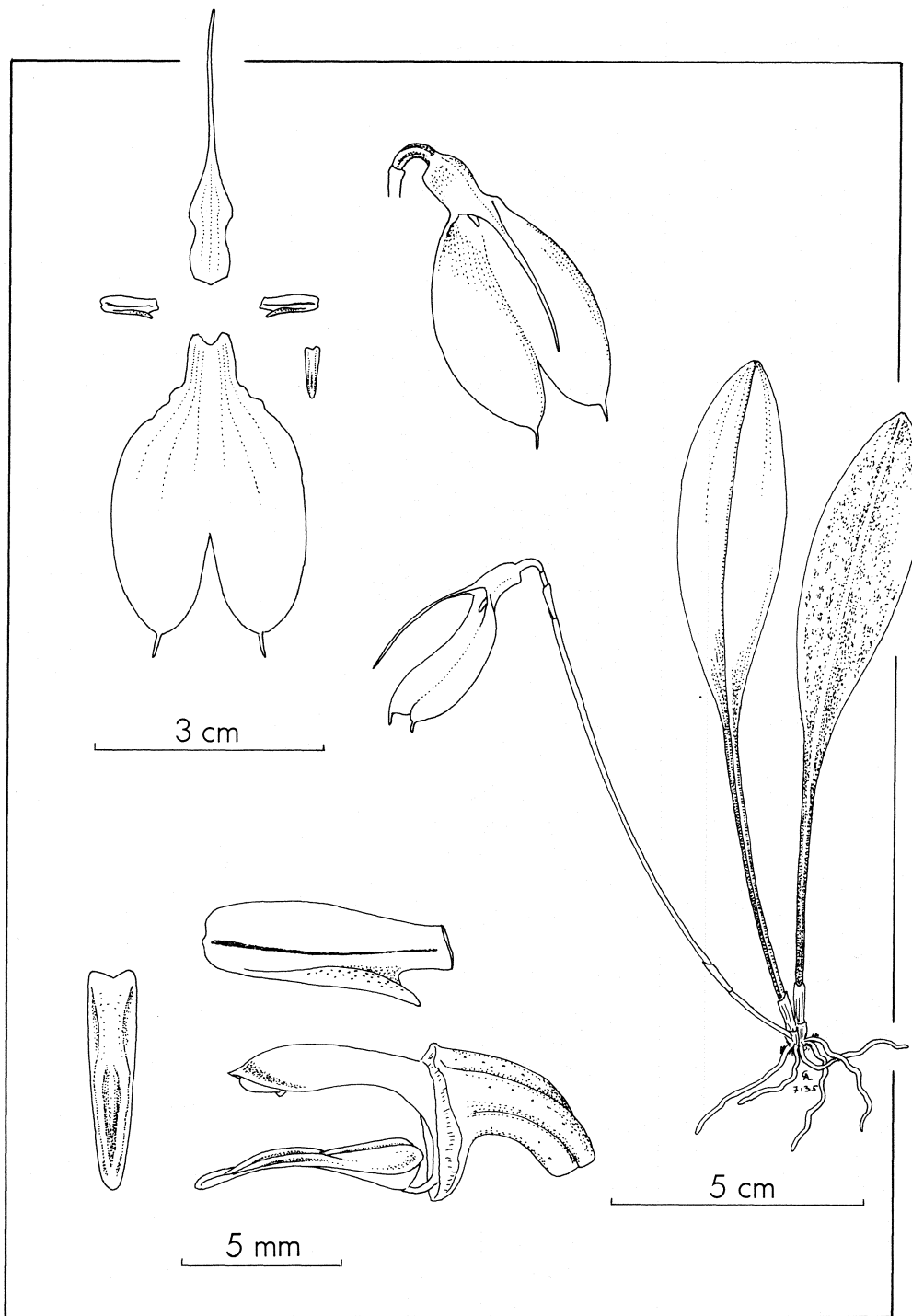


Figure 23. MASDEVALLIA EXALTATA Luer

**Masdevallia murex** Luer, sp. nov.

Figure 24, p. 113

Planta mediocris caespitosa, foliis crassis anguste ellipticis caulibus secundariis longioribus, pedunculo unifloro brevi, sepalis carnosus viridibus purpureo vittatis in tubum latum connatis breviter caudatis, petalis ellipticis obtusis marginibus ambabus calliferis, labello grandi elliptico apice crassissimo verrucosissimo.

Plant medium in size, epiphytic, caespitose; roots coarse, flexuous. Secondary stems stout, 2-3 cm long, unifoliate, enclosed by 2-3 loose, imbricating, tubular sheaths. Leaf erect, thickly coriaceous, narrowly elliptical, shortly petiolate, 9-15 cm long including the 1.5-2.5 cm long petiole, 2-2.8 cm wide, the rounded apex minutely notched, the base narrowly cuneate into the petiole. Inflorescence a solitary flower borne by a petiole 1.5-2 cm long, from a node low on the secondary stem; floral bract 12-16 mm long; pedicel green, suffused with purple, 25-32 mm long; ovary green, 5 mm long; sepals rigidly fleshy, green with 3 dark purple-brown veins on each, appearing glabrous but microscopically cellular-pubescent above the middle within, the dorsal sepal obovate, the total length 31 mm, 12 mm wide, connate to the lateral sepals for 10 mm to form a broad, cylindrical tube, the triangular free portion acuminate into the red-brown, forwardly directed tail, the lateral sepals obliquely ovate, each 28 mm long, 10 mm wide, connate 8 mm, the acute apices contracted into tails similar to that of the dorsal sepal; petals greenish white with a broad, dark purple, central stripe, cartilaginous, elliptical, obtuse, 9.5 mm long, 3.5 mm wide, dilated on both margins near the middle with low calli; lip thick, yellow-orange, marked with purple-brown, oblong-elliptical, 11.5 mm long, 6 mm wide, the narrowly obtuse apex deep purple-brown, markedly verrucose with deflexed margins, the truncate base hinged beneath; column greenish white with purple margins, semiterete, 8 mm long, the foot 5 mm long with an incurved extension.

**Etymology:** Named for the similarity of the extremely verrucose apex of the lip to the warty shell of some species of *Murex*, a genus of mollusks.

**TYPE:** *ECUADOR*: ZAMORA-CHINCHIPE: epiphytic in cloud forest above Valladolid, Río Blanco, alt. 1800 m, November 1979, Walter Teague s.n., cultivated in San Francisco, flowered in cult. 9 October 1981, *C. Luer 6528* (HOLOTYPE: SEL).

**Distribution:** Southern Ecuador.

This species, rather closely related to *M. fractiflexa* Lehm. & Krzl., may be recognized by the small, short-stemmed, green flowers with prominent, dark purple stripes along the veins. The large lip is markedly verrucose at the apex.

**Masdevallia navicularis** Garay & Dunsterv., *Venez. Orchids Ill.* 6: 232, 1976.

*Masdevallia scapha* Braas, *Die Orchidee* 33: 148, 1982.

In Fedde, *Repert. Spec. Nov. Regni Veg.* 17: 436, 1921, *Scaphosepalum naviculare* is described as *Scaphosepalum naviculare* Krzl., not as *Masdevallia navicularis* Krzl. Therefore, *M. navicularis* Garay & Dunsterv. is ~~not~~ legitimate.

**Masdevallia tentaculata** Luer, sp. nov.

Planta parva caespitosa, caulibus secundariis abbreviatis, foliis anguste obovatis pedunculo brevioribus, racemo laxo plurifloro, floribus coetaneis

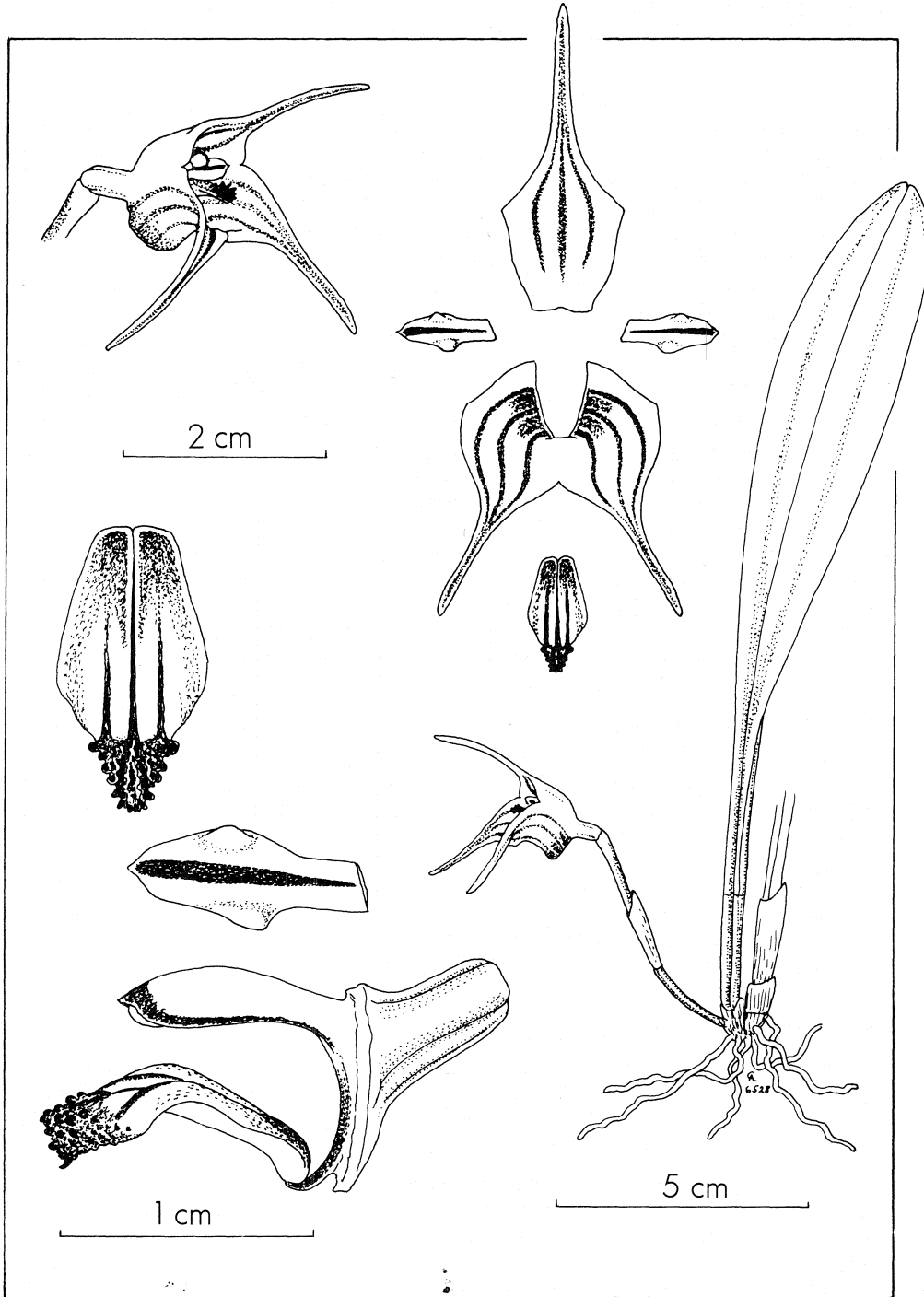


Figure 24. MASDEVALIA MUREX Luer

glabris flavis caudis brunneis plus minusve curvulatis, cupula subsphaerica, petalis oblongis apice tridentato margine inferiore carinato base unicalloso, labello oblongo lateribus plicatis apice fusco rotundato.

Plant small, epiphytic to terrestrial, shortly repent-ascending to caespitose; roots slender, flexuous. Secondary stems erect, unifoliate, 1-2 cm long, enclosed by 2 loose, imbricating, tubular sheaths. Leaf erect, coriaceous, narrowly obovate, 4-7.5 cm long including the 1.5-2.5 cm long petiole, 1.0-1.3 cm wide, the apex subacute to obtuse, tridenticulate, gradually narrowed below into the petiole. Inflorescence an erect, loosely 4- to 8-flowered, distichous raceme, 10-17 cm long including the slender peduncle 7-10 cm long, with a bract below the middle, from a node low on the secondary stem; floral bract inflated, oblique, 3-4 mm long; pedicel curved, 3-6 mm long; ovary green, dotted with purple, 2-3 mm long, with 3 undulate wings; sepals glabrous, yellow, often sparsely dotted with purple toward the base, the dorsal sepal suborbicular, deeply concave, 5-6 mm long, 5-6 mm wide expanded, connate to the lateral sepals for 3-3.5 mm to form a subspherical cup, the rounded apex abruptly contracted into a slender, more or less curved, brown tail 8-13 mm long, the lateral sepals oblong, oblique, 5-6 mm long, 2.5 mm wide, connate 2 mm, the acute apices contracted into tails similar to that of the dorsal sepal; petals translucent greenish white with purple dots, oblong, slightly curved, 2.25 mm long, 0.5 mm wide, the truncate apex tridenticulate, with a thin, longitudinal carina along the lower margin ending in a thick, rounded basal tooth; lip yellow, oblong, 2.75 mm long, 1.25 mm wide, with obtuse marginal folds in the distal third, superficially cleft centrally, the apex rounded, purple-brown; column greenish white, dotted with purple, semiterete, 2.5 mm long, the foot 2 mm long with a thick, incurved extension.

**Etymology:** From the Latin *tentaculatus*, "with tentacles," in allusion to the appearance of the sepaline tails.

**TYPE:** ECUADOR: BOLIVAR: terrestrial on the road embankment west of Guaranda, alt. 2800 m, 10 March 1982, C. Luer & S. Dalström 7263 (HOLOTYPE: SEL).

**Distribution:** Western Ecuador.

This species may be distinguished from the others of Section *Amanda* by the loose raceme of small, glabrous, yellow flowers with slender brown tails. The tails commonly curve inwards after arching outwards.

**Pleurothallis caniceps** Luer, sp. nov.

Species haec *P. crocodilicepi* Rchb. f. affinis sed habitu minore, foliis ellipticis non-cordatis et labello majore lobis basalibus subacutis erectis differt.

Plant small, epiphytic, caespitose; roots slender, fasciculate. Secondary stems slender, erect, unifoliate, 2.5-5.5 cm long, narrowly ancipitous above, 2 mm deep, with 2-3 close, tubular sheaths near the base. Leaf erect, coriaceous, elliptical, 4-6.5 cm long, 1.3-2 cm wide, the acute apex lightly acuminate, tridenticulate, the base cuneate, sessile. Inflorescence a succession of long-stemmed, suberect, solitary flowers from a 4 mm spathe at the base of the leaf; peduncle filiform, 20-23 mm long; pedicel also 20-23 mm long; floral bract 5-6 mm long; ovary 3 mm long, with 6 low carinae; sepals translucent rosy white with light rose spots, faintly and sparsely verrucose externally above the middle, the dorsal sepal ovate, concave, acute, 10 mm long, 3.5 mm wide, the lateral sepals connate into a synsepal similar to the dorsal

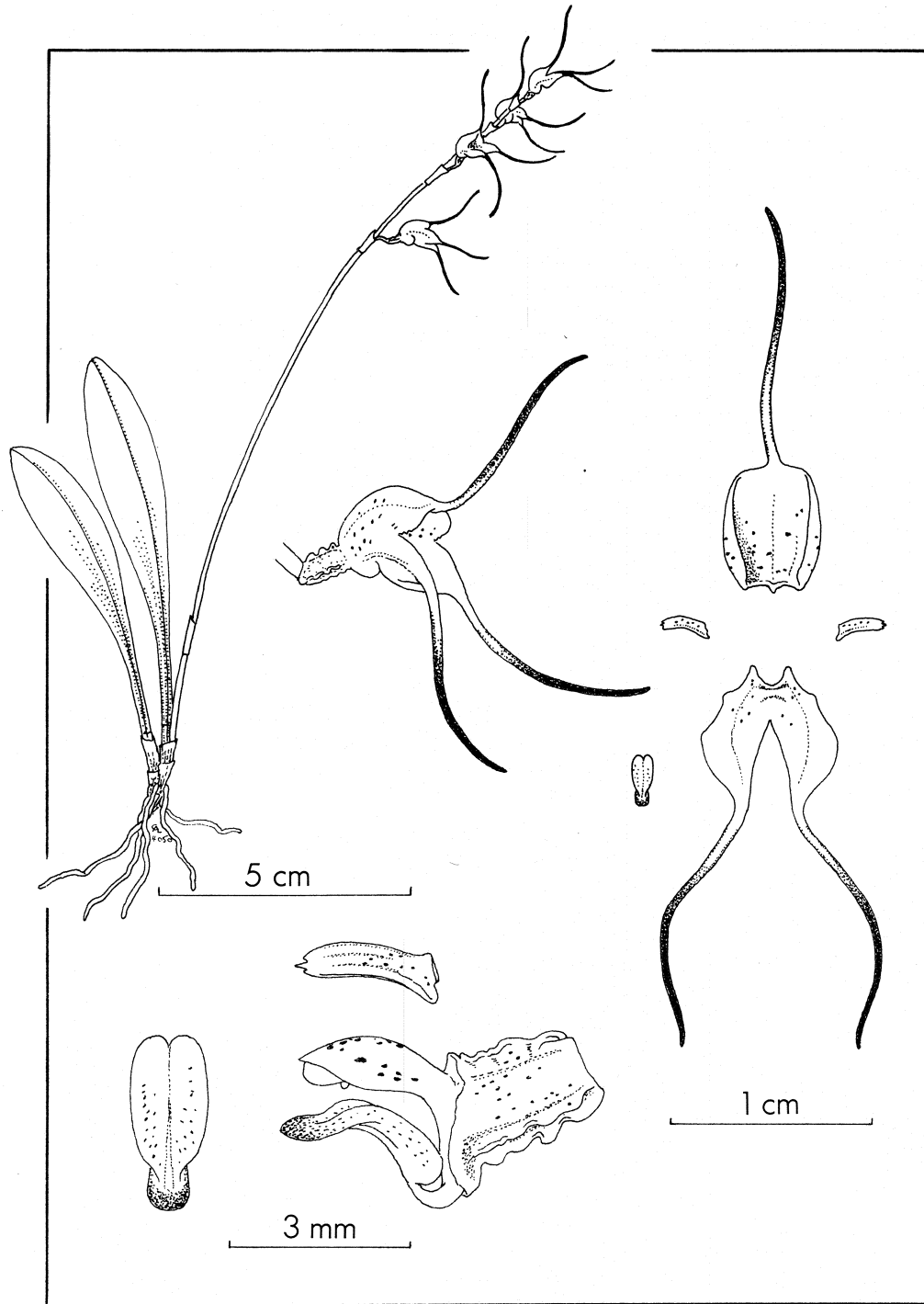


Figure 25. MASDEVALLIA TENTACULATA Luer



sepal, 9.5 mm long, 4.5 mm wide expanded; petals white, very narrowly ovate, lightly oblique, acute, thick, cellular-glandular, 8.5 mm long, 1.25 mm wide; lip rose, heavily suffused and dotted with red-purple, fleshy, pubescent, ovate, 3-lobed, 2.25 mm long, 1.5 mm wide unexpanded, the apex subacutely rounded, the disc thick, lightly cleft near the middle, the basal lobes triangular, subacute, erect, the truncate base flattened on the end above the membranous attachment to the base of the column; column semiterete, rose, 2 mm long, the anther apical with a protruding rostellum, the base pedestal-like, microscopically pubescent.

**Etymology:** From the Latin *canis*, "dog," and *-ceps*, "headed," in allusion to the appearance of the hairy lip with erect ears.

**TYPE:** COSTA RICA: ALAJUELA: epiphytic in felled trees below the Monteverde Preserve, alt. 1400 m, 24 June 1981, cultivated at SEL, flowered in cult. 28 January 1982, C. Luer & A. Luer 6811 (HOLOTYPE: SEL).

**Distribution:** Costa Rica.

Although this small species seems most similar to *P. eumecocaulon* Schltr., with which it is sympatric, it is more closely related to *P. crocodiliceps*. *Pleurothallis caniceps* is easily distinguished by the lip which strongly recalls that of *P. crocodiliceps*. The basal lobes are suberect instead of being slender and falcate. The pyramidal callus near the base of the column, behind which the lip of *P. crocodiliceps* is attached, is absent.

***Pleurothallis dalessandroi* Luer, sp. nov.**

Planta mediocris caespitosa, caulibus secundariis vaginis costatis folio elliptico paulo brevioribus, racemo abbreviato successivifloro, ovario trilobato, sepalis petalisque anguste ovatis acutis pubescentibus, labello oblongo obtuso basi bilobulato, lobis lateralibus infra medium angustissimis ciliatis erectis, callo supra basim pubescenti.

Plant medium in size, epiphytic, caespitose; roots slender, flexuous. Secondary stems erect, slender, unifoliate, 2-3 cm long, enclosed by 3 loose, imbricating, tubular, ribbed sheaths, the ostia neither dilated nor ciliate. Leaf erect, coriaceous, elliptical, 4-6 cm long including a 1-1.5 cm long petiole, 1.5-2 cm wide, the apex obtuse to rounded, tridenticulate, cuneate below into the petiole. Inflorescence a short, successively flowered raceme of up to 5 flowers, 10 mm long including the 3 mm long peduncle, produced successively from a node below the abscission layer; floral bract 2-3 mm long; pedicel 3-4 mm long; ovary 3-winged, 2 mm long, sepals cream-colored, lightly suffused with purple and shortly pubescent within, narrowly ovate, distinctly carinate, acute, the dorsal sepal 12.5 mm long, 3.75 mm wide, the laterals slightly oblique, 11.5 mm long, 3.25 mm wide, connate basally for 1.5 mm, petals purple, narrowly triangular, acute, 9 mm long, 1.75 mm wide, pubescent and long-ciliate; lip purple, oblong, arcuate, 3 mm long, 1.3 mm wide, the apex obtuse to rounded, the margins with an erect, narrowly linear-oblong, ciliated, lateral lobe ca. 1 mm long between the middle and lower thirds, the disc with a shortly pubescent, bifid callus above the base extending forward as a pair of low, longitudinal calli, the truncate base bilobulate, delicately hinged to the column-foot from between; column white, semiterete, 3 mm long, denticulate-winged above the middle, the foot thick, concave.

**Etymology:** Named in honor of Dennis D'Alessandro who discovered this species.

**TYPE:** *ECUADOR*: ZAMORA-CHINCHIPE: epiphytic in cloud forest along the river above Valladolid, alt. ca. 2000 m, 21 Feb. 1982, *D. D'Alessandro 168* (HOLOTYPE: SEL), C. Luer illustr. 8079.

**Distribution:** Southern Ecuador.

This unusual species seems to be a member of the lepanthiform-stemmed group as manifested by the basic pattern of the floral parts, but the ribbed, imbricating cauline sheaths are few in number and without dilated or ciliated ostia.

***Pleurothallis determannii*** Luer, sp. nov.

Planta parva repens, caulibus secundariis brevissimis, foliis late ovatis subprostratis, pedunculo brevissimo unifloro, sepalis virescentibus maculatis intus pubescentibus, dorsali angustissime ovato, synsepalo obovato abrupte breviter acuminato, petalis obovatis, labello obovato obtuso pubescenti callo basali pyramidalis.

Plant small, epiphytic, repent, the rhizome 1-2 mm long between secondary stems; roots slender, flexuous. Secondary stems unifoliate, 2-2.5 mm long, enclosed by a short, loose, ribbed, tubular sheath. Leaf more or less prostrate, coriaceous, broadly elliptical, 10-15 mm long, 7-8 mm wide, distinctly marginate, the apex obtuse, minutely tridenticulate, the base broadly cuneate into a petiole less than 1 mm long. Inflorescence a solitary, erect flower nearly as large as the leaf, borne from the base of the leaf at the apex of the secondary stem; peduncle 2-3 mm long; floral bract 2 mm long; pedicel 6 mm long; ovary 2.5 mm long; sepals translucent yellow with brownish maroon dots, pubescent within above the middle, the dorsal sepal narrowly ovate, acute, 10 mm long, 2 mm wide, the lateral sepals connate into an obovate lamina 11 mm long, 5 mm wide, the apex abruptly acuminate, acute, the sides below the middle incurved; petals translucent cream, obovate, 3.5 mm long, 1.3 mm wide, the rounded apex minutely apiculate. Lip yellow, obovate-pyriform, 4.25 mm long, 2.25 mm wide, the obtuse apex minutely crenulate, the disc pubescent, with a pyramidal callus at the base and a pair of low, longitudinal calli down the center; column yellow, suffused with maroon toward the base, slender, 4 mm long, the apex hooded, with a minute pair of fringed wings near the middle, the thick foot 2 mm long.

**Etymology:** Named in honor of Ronald O. Determann of the Marie Selby Botanical Gardens who introduced this species.

**TYPE:** *SURINAM*: epiphytic in scrubby trees of Coesewijne Savanne, alt. ca. 50 m, M. Sepp, s.n., cultivated at Lelydorp, flowered in cult. 24 April 1981, *R. Determann 166* (HOLOTYPE: SEL), C. Luer illustr. 6324; epiphytic in savannah forest, Brownsberg, alt. 300 m, 29 April 1981, *R. Determann 209* (SEL), cultivated at SEL 81-1781.

**Distribution:** Surinam.

This little species may be recognized by the creeping rhizome producing more or less overlapping, short-stemmed leaves and short-stemmed, solitary flowers nearly as large as the leaf. The translucent, dotted sepals are pubescent within, as well as the pyriform lip which is furnished with a pyramidal callus at the base.

**Pleurothallis hemileuca** Luer, sp. nov.

Planta mediocris caespitosa, caulibus secundariis gracilibus foliisque plus minusve horizontalibus et plus minusve aequilongis, foliis angustissime ovatis acutis basi cordatis sessilibus, floribus successivis, sepalo dorsali roseo late ovato 3-nervato, synsepalo albo ovato subaequantibus, petalis anguste falcatis serrulatis, labello atropurpureo suborbiculato.

Plant medium-sized, epiphytic, caespitose; roots slender, flexuous. Secondary stems slender, unifoliate, more or less horizontal, 5-10 cm long, with a tubular sheath below the middle and another at the base. Leaf horizontal, coriaceous, narrowly ovate, the sides convex, suffused with purple beneath, 8-13 cm long, 1.5-2.2 cm wide, the apex acuminate, acute, tridenticulate, the base rounded, shallowly cordate, sessile. Inflorescence fasciculate, the flowers produced singly and successively from a spathe 7-9 mm long, at the base of the leaf; peduncle 3 mm long; floral bract 3 mm long; pedicel 5 mm long; ovary 4 mm long; dorsal sepal rose, broadly ovate, obtuse, flat, 9 mm long, 6-8 mm wide, 3-veined, glandular-cellular within; lateral sepals connate into an ovate, subacute, flat lamina 8-10 mm long, 5-6 mm wide; petals rose, narrowly oblong-falcate, acute, serrulate, 4-4.5 mm long, 0.6 mm wide; lip maroon, suborbicular, 4-6 mm long, 3-4 mm wide, the apex rounded, the base shallowly concave, the margins minutely erose, the glenion well-developed, the disc flat, glandular-cellular; column stout, 1 mm long, 1.5 mm wide, the stout foot equally long.

**Etymology:** From the Greek *hemi-* (ἡμι-), "half-," and *leucon* (λευκογ), "white," referring to the "half-white" flowers.

**TYPE:** PANAMA: CHIRIQUI: epiphytic in cloud forest at the Fortuna dam site, alt. ca. 1000 m, August, 1976, R. L. Dressler s.n., cultivated at SEL, 114-76-11, flowered in cult. 23 December 1976, *C. Luer 1274* (HOLOTYPE: SEL).

**Distribution:** Western Panama.

The solitary flower borne at the base of the long, narrow, horizontal, satiny green leaf is most distinctive in the contrasting color of the rounded, deep purple lip lying upon the white synsepal.

**Pleurothallis megalops** Luer, sp. nov.

Planta parva caespitosa, caulibus secundariis abbreviatis foliis anguste obovatis multibrevioribus, racemo elongato debili flexuoso floribus successivis, sepalis libris caudatis guttulis, petalis attenuatis longiciliatis, labello magno purpureo obovato ciliato supra basin bilobulato.

Plant small, epiphytic, caespitose; roots slender, flexuous. Secondary stems unifoliate, abbreviated, 5-10 mm long, enclosed by 1-2 close, thin, tubular sheaths. Leaf erect, coriaceous, narrowly obovate, marginate, obtuse, 3-4.5 cm long including an ill-defined petiole 0.5-2 cm long, 0.7-0.9 cm wide. Inflorescence a slender, weak, drooping, fractiflex raceme, up to 18 cm long including the peduncle, of 6-9 successive, comparatively large flowers, occasionally 2 simultaneously; peduncle ca. 4 cm long, from a node on the secondary stem; floral bract 2 mm long; pedicel 5-7 mm long; ovary 3 mm long, purple; sepals free, narrowly oblong, 23 mm long, 3 mm wide, membranous, translucent green, spotted with purple, tricarinate, the carinae and margins sparsely ciliate, contracted above the middle into filiform tails; petals bronze-

green, narrowly ovate-attenuate, 14 mm long, 1 mm wide at the base, long-ciliate below the middle; lip dark purple, obovate, 13 mm long, 6 mm wide, with ciliated margins, the anterior surface cellular-glandular, the posterior surface pubescent, bilobed just above the base, the lobes erect, acute, retrorse, the base inflexibly adherent to the column-foot; column green, 3 mm long, bialate, the apex hooded, the foot pedestal-like with a large purple spot.

**Etymology:** From the Greek *megalo-* (μεγαλο-), "large" and *opsis* (οψις), "appearance," in reference to the huge lip.

**TYPE: ECUADOR:** AZUAY: epiphytic in forest of the western slopes of Azuay, cultivated by Benigno Malo at Tarqui, flowered in cult. 26 Feb. 1982, C. Luer 7025 (HOLOTYPE: SEL).

**Distribution:** Southern Ecuador.

This showy species is easily distinguished from its numerous relatives by the proportionately large, obovate, ciliated labellum.

**Pleurothallis muricaudata** Luer, sp. nov.

Planta perparva caespitosa, racemo flexuoso successivifloro foliis spathulatis duplolongiore, floribus rubrobrunneis pusillis pubescentibus, sepalis acutis lateralibus in laminam bifidam connatis, petalis longicaudatis caudis longipubescentibus, labello subpandurato obtuso ciliato basi bilobulato disco fisso supra basim callo bifurcato.

Plant very small, epiphytic, caespitose; roots comparatively stout, flexuous. Secondary stems unifoliate, 3-5 mm long, enclosed by 2 thin, ribbed, tubular sheaths. Leaf erect, coriaceous, spathulate, long-petiolate, marginate, 10-20 mm long including the 3-8 mm long petiole, 5-7 mm wide, the rounded apex notched and apiculate, cuneate below into the petiole. Inflorescence a fractiflex raceme of successive, small, red-brown flowers, borne by a capillary peduncle up to 5 cm long including the rachis, from a node on the secondary stem; floral bract 1-1.5 mm long; pedicel 1.5 mm long; ovary 0.75 mm long; sepals red-brown, white toward the base, shortly pubescent and ciliate, the dorsal sepal oblong, acute, 3.5 mm long, 1.75 mm wide, the laterals connate to near the apices into an ovate, bifid lamina, 3.75 mm long, 2.25 mm wide; petals red-brown with white margins, 3 mm long, 1 mm wide, the proximal blade oblong, 1.5 mm long, contracted into a filiform, long-pubescent, purple tail 1.5 mm long; lip red-purple, white toward the base, oblong to subpandurate, 1.75 mm long, 0.9 mm wide, the margins ciliate, the apex obtuse with revolute margins, the truncate base bilobulate, delicately hinged between, the disc with an erect, bifurcated callus at the base, the calli continuing forward as carinae on either side of a central cleft; column white, semiterete, 1.5 mm long, longitudinally winged, the apex denticulate.

**Etymology:** From the Latin *mus*, *muris*, "mouse," and *caudata*, "tailed," in allusion to the slender, hairy tails of the petals.

**TYPE: ECUADOR:** PICHINCHA: epiphytic in cloud forest above Chiriboga, alt. 2000 m, 7 March 1982, A. Hirtz & A. Leon s.n. (HOLOTYPE: SEL), C. Luer illustr. 7225.

**Distribution:** Western Ecuador.

This species is apparently most closely allied to the Central American *P. fractiflexa* Ames & Schweinf., but *P. muricaudata* may be distinguished by the much smaller flowers and by the slender caudae of the petals that are not clavate thickened.

**Pleurothallis ofella** Luer, sp. nov.

Planta perparva caespitosa, caulibus secundariis folio anguste elliptico brevioribus, racemo abbreviato paucifloro floribus flavis glabris, sepalo dorsali anguste ovato, synsepalo suborbiculato, petalis obovatis denticulatis, labello crasso elliptico marginibus et callis intramarginalibus denticulatis apice verrucoso.

Plant very small, epiphytic, caespitose; roots few, very long, slender. Secondary stems slender, 10-13 mm long, unifoliate, with 1-2 tubular sheaths below the middle. Leaf erect, coriaceous, narrowly elliptical, 25-30 mm long, 4-6 mm wide, the apex acute, tridenticulate, the base cuneate, sessile. Inflorescence a 2- to 3-flowered raceme 5-8 mm long including the peduncle, from a 3-5 mm long spathe at the base of the leaf; floral bract 1.5 mm long; pedicel 1 mm long; ovary 0.75-1 mm long; sepals glabrous, yellow, marked with purple, the dorsal sepal narrowly ovate, acute, 5 mm long, 1.5 mm wide, the distal third thickened, connate basally to the lateral sepals for 1 mm, the lateral sepals connate nearly to the apices into a suborbicular, concave lamina, 4 mm long, 3.5 mm wide, the distal thirds thickened, subverrucose; petals translucent yellow, obovate, 1.75 mm long, 0.75 mm wide, the apical half denticulate, acute; lip yellow, elliptical, 2.75 mm long, 1.25 mm wide, thick below the middle, with erect, obtuse, marginal angles between the middle and lower thirds, with intramarginal denticulate lamellae in the middle third, the margins of the lip denticulate, the obtuse apex verrucose, the disc with a thick, more or less V-shaped callus above the truncate base; column slender, semiterete, 2 mm long, obtusely winged, with a thick foot equally long.

**Etymology:** From the Latin *ofella*, "a little morsel," referring to the small stature of the plant.

**TYPE:** ECUADOR: ZAMORA-CHINCHIPE: epiphytic in cloud forest between Loja and Zamora, alt. ca. 1400 m, 19 Nov. 1981, *D. D'Alessandro 108* (HOLOTYPE: SEL), C. Luer illustr. 8081.

**Distribution:** Southeastern Ecuador.

This dwarf species is related to *P. lanceana* Lodd. and its numerous allies, but *P. ofella* is immediately recognized by its small size and short raceme of glabrous flowers.

**Pleurothallis otarion** Luer, sp. nov.

Planta mediocris caespitosa, caulibus secundariis lepanthiformibus folio anguste elliptico longioribus, racemo erecto longo congesto multifloro, floribus alboflavescentibus brevipedicellatis, sepalis libris angustissime ovatis acuminatis, petalis ovatis acutis, labello profunde trilobato, lobo antico anguste oblongo, lobis basalibus pubescentibus auriculatis.

Plant medium in size, epiphytic, caespitose; roots slender, flexuous. Secondary stems erect, slender, 3.5-12 cm long, enclosed by a series of 5-7 imbricating, close-fitting, dark brown, ribbed sheaths with oblique, dilated, hispidulous ostia, unifoliate. Leaf erect, coriaceous, elliptical, 2.5-5 cm long including a 3-7 mm long petiole, 6-10 mm wide, acute, tridenticulate, cuneate below into the petiole. Inflorescence a solitary (occasionally 2), erect, densely simultaneously many-flowered, second raceme 6-13 cm long including the slender peduncle, from a node below the abscission layer; flowers yellow-white, shortly pedicellate; floral bract 2 mm long; pedicel 0.75-1 mm long;

ovary 0.5 mm long; sepals free, glabrous, very narrowly ovate, acuminate to the acute apices, the laterals slightly oblique, 10 mm long, 1.5 mm wide; petals ovate, acute, 2.5 mm long, 1.25 mm wide; lip deeply 3-lobed, 1.75 mm long, 1.75 mm wide across the expanded basal lobes, shallowly concave just above the base, attached to the base of the column, the anterior lobe narrowly oblong, obtuse, 1.5 mm long, the basal lobes auriculate, pedunculate, 0.5 mm long and wide, pubescent, erect, flanking the column; column stout, 0.75 mm long, footless.

**Etymology:** From the Greek *otarion* (οταριον), "a little ear," referring to the earlike basal lobes of the lip.

**TYPE:** *ECUADOR:* LOJA: epiphytic in cloud forest east of Yangana, alt. 2650 m, 4 March 1982, C. Luer, A. Andreetta, D. D'Alessandro & S. Dalström 7142 (HOLOTYPE: SEL).

**Distribution:** Southern Ecuador.

Vegetatively this species is similar to *Pleurothallis dirhamphis* Luer with which it is sympatric, but the racemes of *P. otarion* are strict and more congested. The short-pedicellate flowers are yellow-white, the delicate sepals are long-attenuated, and the petals are ovate. The distinctive lip is deeply three-lobed, the rounded basal lobes earlike, pubescent and erect.

***Pleurothallis oxapampae* Luer, sp. nov.**

Planta parva caespitosa, caulibus secundariis gracilibus folio angustissime ovato-cordato longioribus, flore bilabiato atropurpureo successivo brevipedunculato, sepalo synsepaloque glabris ovatis acutis, petalis linearibus acutis serrulatis pubescentibus, labello erecto oblongo-sigmoideo lateribus revolutis apice apiculato incurvato.

Plant small, epiphytic, caespitose; roots slender, fasciculate. Secondary stems slender, suberect, unifoliate, 5-9 cm long, with a close, tubular sheath below the middle and another 1-2 sheaths at the base. Leaf suberect to spreading, coriaceous, narrowly elliptical-ovate, 3-6.5 cm long, 1-1.7 cm wide, the acute apex tridenticulate, the sessile base shallowly cordate. Inflorescence a succession of solitary, dark purple, bilabiate flowers borne from a 1 cm long reclining spathe at the base of the leaf; peduncle ca. 2 mm long; pedicel 10 mm long; floral bract thin, 8 mm long; ovary 3 mm long; dorsal sepal glabrous, ovate, acute, 7 mm long, 4.5 mm wide, 3-veined; lateral sepals glabrous, connate into an ovate, acute lamina 7 mm long, 5 mm wide; petals narrowly linear-ovate, subfalcate, acute, 5 mm long, 0.8 mm wide, minutely ciliate, the margins serrulate; lip erect, glabrous, oblong, more or less tubular with revolute margins, "S-shaped" in lateral view, 4 mm long, 2 mm wide at the base, 1 mm wide above the base unexpanded, the apex abruptly apiculate, the apiculum incurved with a conical callus beneath, the base concave on the end, with a small glenion; column stout, 1 mm long, 1.5 mm wide, the foot 1 mm long.

**Etymology:** Named for the community of Oxapampa near where the species was discovered.

**TYPE:** *PERU:* PASCO: epiphytic in forest south of Oxapampa, alt. 1800 m, 31 January 1979, C. Luer & J. Luer 3830 (HOLOTYPE: SEL).

**Distribution:** Central Peru.

This small species is distinguished from the others of the narrowly cordate-leaved group by the protruding, sigmoid lip with an upcurved apiculate apex.

**Pleurothallis sculptilis** Luer, sp. nov.

Planta mediocris caespitosa, foliis ovatis acutis patentibus caulibus secundariis gracilibus brevioribus, spatha brevi lata suberecta, floribus cremeis successivis singularibus, sepalo dorsali late ovato synsepalo profunde concavo et petalis ellipticis intus minute papillois, labello transverse ovato angulis rotundatis, superficiebus superiore et antico concavis.

Plant medium in size, caespitose, epiphytic. roots slender, fasciculate. Secondary stems suberect to erect, slender, unifoliolate, 6-12 cm long, with a close, tubular sheath below the middle and 1-2 other sheaths at the base. Leaf coriaceous, horizontal, ovate, 5-6 cm long, 1.7-2 cm wide, the acute apex tridenticulate, the sessile base rounded to shallowly cordate. Inflorescence a succession of solitary flowers from a broad, suberect spathe ca. 8 mm long at the base of the leaf; peduncle ca. 3 mm long; sepals and petals cream-colored, suffused with rose, glabrous externally, cellular-papillose within, the dorsal sepal broadly elliptical, obtuse, 6 mm long, 4.5 mm wide, 3-veined, the lateral sepals connate into a deeply concave obpyriform synsepal, 6 mm long, 5 mm wide unspread, narrowed above the middle to a rounded apex, the petals elliptical-oblong, acute, 4.5 mm long, 2 mm wide; lip yellow-white, thick, transversely ovate-triangular, 2.5 mm long, 3.5 mm wide, the rounded basal lobes to either side of the column and shallowly concave between to accommodate the column, the apical lobe rounded, the disc concave; column stout, 1.5 mm long, 2 mm wide, the thick foot 1 mm long.

**Etymology:** From the Latin *sculptilis*, "sculptured," in allusion to the concave surfaces of the labellum.

**TYPE:** *ECUADOR:* LOJA: epiphytic in cloud forest east of Yangana, alt. 2480 m, 4 March 1982, C. Luer, A. Andreetta, D. D'Alessandro & S. Dalström 7180 (HOLOTYPE: SEL).

**Distribution:** Southern Ecuador.

Except for the broad suberect spathe, this species is inseparable vegetatively from many of its relatives. The little yellow-white flowers are cellular-papillose within, and the transversely ovate lip is concave superiorly and anteriorly.

**Pleurothallis shuarii** Luer, sp. nov.

Planta mediocris crassa breviter repens, foliis ellipticis caulibus paulo longioribus, spatha conspicua, floribus rigidis crassis magnis atropurpureis nitidis singularibus successivis breviter pedunculatis, sepalis libris carinatis, petalis anguste triangularibus, labello trilobato, lobo antico ligulato verrucoso, lobis basalibus acutis antrorsis, columna viridi arcuata clavata.

Plant medium in size, epiphytic, shortly repent, the rhizome stout, 3-10 mm long between secondary stems; roots coarse, flexuous, produced along the rhizome. Secondary stems stout, erect, unifoliolate, 3-6 cm long, enclosed by 3-4 loose, brown, imbricating sheaths. Leaf erect, thickly coriaceous, rigid, dark green, elliptical, 6-9 cm long, 2-3.2 cm wide, the apex subacute to ob-

tuse, cuneate below into the subpetiolate base. Inflorescence a succession of solitary flowers produced from a prominent spathe 1-1.5 cm long at the base of the leaf; peduncle 2-5 mm long; pedicel green, 6 mm long; floral bract brown, 5 mm long; ovary shaggy-pilose, 3-4 mm long; sepals free, wide-spreading, fleshy, rigid, carinate, mostly shiny dark purple from confluent, large spots, minutely but sparsely pubescent externally, more or less fringed along the carinae, the dorsal sepal elliptical, subacute, 15 mm long, 6 mm wide, the lateral sepals oblong, acute, apiculate, 15 mm long, 4.5 mm wide; petals similar to the sepals in texture and color, glabrous, narrowly triangular, acute, 11 mm long, 2 mm wide; lip dark purple, oblong, trilobed, 11 mm long, 4 mm wide, the anterior lobe ligulate, denticulate, verrucose, the apex rounded, the lateral lobes basal, erect, acute, antrorse, ca. 2 mm long; column green, semiterete, arcuate, subclavate, 7 mm long, the foot dark purple, thick, 2 mm long; capsule echinate.

**Etymology:** Named for the Shuar (Jibaro) people who inhabit the area where this species occurs.

**TYPE:** *ECUADOR*: MORONA-SANTIAGO: epiphytic near Bomboiza, alt. 900 m, 4 March 1982, C. Luer & A. Andreetta 7070 (HOLOTYPE: SEL).

**Distribution:** Southeastern Ecuador.

This showy species grows epiphytically in scrub forest along seasonally dry ridges near Bomboiza. It is related to *Pleurothallis erinacea* Rchb. f., *P. lappago* Luer, etc., but may be readily distinguished by the single, shiny purple, successive flowers produced by abbreviated peduncles. The petals are devoid of auricles.

***Pleurothallis solium* Luer, sp. nov.**

Planta mediocris caespitosa, caulibus secundariis gracilibus ancipitiis folio ovato multilongioribus, floribus successivis longipedunculatis, sepalo dorsali synsepalo similibus ellipticis obtusis concavis, petalis spathulatis apice crassis subverrucosis, labello selliformi quadrilobato antice retuso.

Plant medium in size, epiphytic, caespitose, roots fine, densely fasciculate. Secondary stems erect, unifoliate, 7-14 cm long, sharply ancipitous above the middle, 2 mm deep, with a close, tubular sheath below the middle and another at the base. Leaf coriaceous, suberect to spreading, ovate, 3-4 cm long, 1.5-2 cm wide, the apex acute, tridenticulate, the base sessile, rounded to shallowly cordate. Inflorescence a solitary, long-pedunculated, deep purple to dull yellow flower suffused with rose, from a small, fugacious spathe at the base of the leaf; peduncle 10 mm long; floral bract 4 mm long; pedicel 7 mm long; ovary 3.5 mm long; dorsal sepal elliptical, obtuse, concave, glabrous, 6.5 mm long, 4 mm wide, 3-veined, the lateral sepals connate into a lamina similar to the dorsal sepal, 6.5 mm long, 4 mm wide, 4-veined; petals oblong-spathulate, 5.5 mm long, 2 mm wide below the acute apex, the apical portion thickened and lightly verrucose; lip subquadrate-4-lobed, 2.5 mm long, 2.1 mm wide, the apex broadly and obtusely bilobed with a shallow sinus, with a pair of erect, subacute lateral lobes near the middle, the disc thickened above the truncate base, concave centrally below the thickening of the apical lobes; column stout, semiterete, 2 mm long, with a thick, pedestal-like foot 0.5 mm long.

**Etymology:** From the Latin *solium*, "an armchair, a throne," in allusion to



the appearance of the lip.

**Type:** *ECUADOR*: MORONA-SANTIAGO: epiphytic in wet forest north of Gualaquiza, alt. 1200 m, 28 Feb. 1982, C. Luer & A. Andreetta 7064 (HOLOTYPE: SEL).

**Distribution:** Southeastern Ecuador.

This species is easily distinguished from the others characterized by an ancipital secondary stem by the four-lobed, subquadrate lip which looks very much like a minute armchair.

***Pleurothallis stalkyi* Luer, sp. nov.**

Planta mediocris caespitosa, caulibus secundariis gracilibus folio ovato longioribus, racemo gracili paucifloro suberecto folio plus minusve aequilongo vel duplolongiore, floribus longipedicellatis virescentibus rubro punctatis, sepalo dorsali synsepaloque ovatis concavis similibus, petalis falcatis, labello rigido trilobato, lobis lateralibus rotundis erectis, lobo antico acuto, disco cum callo conico.

Plant medium in size, epiphytic, caespitose; roots slender, flexuous. Secondary stems slender, ascending to erect, 9-14 cm long, with a tubular sheath below the middle and another 1-2 at the base. Leaf erect to suberect, coriaceous, ovate, more or less convex, 5.5-7 cm long, 4-5 cm wide, the subacute apex tridenticulate, the rounded base shallowly cordate, sessile. Inflorescence an ascending, loosely few-flowered raceme 7-10 cm long including the slender peduncle, from a 1-1.5 cm long reclining spathe at the base of the leaf; floral bract 2-4 cm long; pedicel 5-10 mm long; ovary 2-3 mm long; sepals and petals translucent light yellow-green, dotted with red-brown; dorsal sepal ovate, concave, 5 mm long, 4 mm wide, the apex shortly acuminate, acute; lateral sepals connate into an ovate, concave synsepal 5.5 mm long, 4 mm wide, the apex narrowly obtuse; petals oblong-falcate, 4.5 mm long, 1.25 mm wide, minutely denticulate above the middle, the apex acute; lip yellow-green, rigidly ovate-trilobed, 2 mm long, 1.5 mm wide unspread, the lateral lobes broadly rounded, erect, embracing the column, the apex acute, the disc with a conical callus beneath the column, the truncate base hinged to the short column-foot; column stout, 1.5 mm long, 1 mm wide.

**Etymology:** Named in honor of G. C. K. "Stalky" Dunsterville, author and illustrator of Venezuelan orchids, and co-discoverer of this species.

**TYPE:** *VENEZUELA*: FALCON: epiphytic in cloud forest, Sierra de San Luis, alt. 2000 m, 1967, G. C. K. Dunsterville et al. 39, cult. at El Hatillo, flowered in cult. 25 July 1982, C. Luer 8092 (HOLOTYPE: SEL).

**Distribution:** Northwestern Venezuela.

This species is similar to the larger, Central American *P. longipedicellata* Ames & Schweinf., but *P. stalkyi* may be distinguished by the rigid, three-lobed lip with a conical callus beneath the column. It is illustrated in *Venezuelan Orchids* 5: 241, 1972.

***Pleurothallis suspensa* Luer, sp. nov.**

Species haec *P. penduliflorae* Krzl. similis sed habitu minore et labello minore lobis lateralibus late rotundatis distinguitur.

Plant medium in size, epiphytic, densely caespitose; roots slender, nu-

merous, fasciculate. Secondary stems slender, erect to suberect, terete, 10-14 cm long, with a close, tubular sheath below the middle and another sheath at the base. Leaf suberect to horizontal, thinly coriaceous, elliptical, 6-8.5 cm long, 2.5-3.5 cm wide, the apex acuminate, acute, tridenticulate, the base cuneate, sessile. Inflorescence racemose, 1-2 weak, drooping, loosely many-flowered racemes 10-20 cm long including the 5 cm long peduncle; flowers purple, simultaneous, non-resupinate, wide-spread; dorsal sepal narrowly ovate, flat, acute, 8 mm long, 2.75 mm wide; lateral sepals connate into an ovate, concave synsepal 8 mm long, 4.5 mm wide expanded; petals linear, acute, 7.5 mm long, 0.75 mm wide, slightly thickened; lip broadly ovate, 2 mm long, 2 mm wide, curved with erect, broadly rounded, ill-defined lateral lobes, the midlobe thickened, lightly sulcate, rounded, minutely apiculate, the base hinged to the footless base of the column; column stout, purple, 1 mm long, 0.75 mm wide.

**Etymology:** From the Latin *suspensus* (part. of *suspendere*), "hanging," in allusion to the pendent racemes.

**Type:** SURINAM: epiphytic in cloud forest, Wilhelmina Gebergte, alt. 800 m, 9 July 1981, R. Determann 214, cultivated at SEL 81-2072, flowered in cult. 6 Jan. 1982, C. Luer 6792 (Holotype: SEL; Isotype: SBB).

**Distribution.** Eastern Venezuela to Surinam.

This species of low altitudes (up to 1000 m) of the Guiana highlands is similar to *P. penduliflora* Krzl. of high altitudes (2300-2800m) of the Andes of Ecuador and Peru. The former is readily distinguished by the small lip with broadly rounded, erect, ill-defined lateral lobes. The lip of the latter is considerably larger with a pair of acute, falcate, lateral lobes, compared by Kraenzlin to a forceps. *Pleurothallis suspensa* has been identified as *P. penduliflora* in Venezuelan Orchids Illustrated 4: 230.

***Pleurothallis troglodytes* Luer, sp. nov.**

Planta mediocris caespitosa, caulibus secundariis gracilibus foliis maturis deflexis profunde cordatis multilongioribus, floribus successivis nonresupinatis, sepalis petalisque rubrostriatis pubescentibusque, sepalo impari synsepaloque transverse ovatis, petalis spathulatis, labello rubro triangulati callo basali alte pyramidalis.

Plant medium in size, epiphytic, caespitose; roots slender, flexuous. Secondary stems slender, erect, unifoliate, with a close, tubular sheath below the middle and another near the base, mature stems 11-26 cm long, immature stems 2-4 cm long. Immature leaf erect, elliptical, acute, 8-10 cm long, 2.5-3.5 cm wide; mature leaf thinly coriaceous, acutely deflexed, ovate, 8-12 cm long, 2.5-6 cm wide, the base deeply cordate, the rounded lobes 2 cm deep, incurved in apposition to create a deep concavity; the apex acute, tridenticulate. Inflorescence a succession of large, solitary, non-resupinate flowers, from an erect spathe 8-10 mm long at the base of the leaf; floral bract thin, 5-6 mm long; pedicel 8-10 mm long; ovary 4 mm long; sepals and petals thin, translucent yellow-green, suffused and veined in red, pubescent near the margins; middle sepal transversely ovate, obtuse, 11 mm long, 12 mm wide; lateral sepals connate into a suborbicular lamina 12 mm long, 11 mm wide, with revolute sides; petals spathulate, obtuse, 8 mm long, 5.5 mm wide; lip red-purple, triangular, 2.5 mm long, 5 mm wide, the lateral lobes acute above the middle, the apex broadly rounded, minutely apiculate, the base thickened

into a tall, pyramidal callus, flattened posteriorly below the column; column 2 mm long, 2 mm wide, with transversely ovate stigmatic lobes, the foot 2 mm long with red hairs.

**Etymology:** From the Greek *troglydytes* (τρογλοδυτης), "a cave dweller," in allusion to the position of the flower.

**TYPE:** *ECUADOR:* PICHINCHA: epiphytic in wet forest above Puerto Quito, alt. 900 m, 13 March 1982, C. Luer, A. Hirtz & S. Dalström 7396 (HOLOTYPE: SEL).

**Distribution:** Western Ecuador.

This fascinating species is closely allied to the Panamanian *P. peculiaris* Luer and *P. perryi* Luer from southern Ecuador, differing in the triangular lip with a tall callus. The buds mature rapidly within the deep cavity at the base of the leaf produced by the inflexed basal lobes. The strange flower presents flush with the margins of the leaf as peeking cautiously from within a cave. Unfortunately, the translucent flower lasts but two days.

**Restrepia antennifera** Kunth, Nov. Gen Sp. 1: 367, t. 94, 1816.

*Restrepia guttulata* Lindl., Companion Bot. Mag. 2: 357, 1836.

*Restrepia maculata* Lindl., Orch. Lind. 4, 1846.

*Restrepia pardina* Lem., Ill. Hort. 16: t. 601, 1869.

*Restrepia ecuadorensis* Rolfe, Kew Bull. 138, 1892.

*Restrepia leopardina* Hort. ex Orch. Rev. 7: 94, 1899.

*Restrepia leopardina* var. *rosea* Hort. ex Orch. Rev. 12: 211, 1904.

*Restrepia hemsleyana* Schltr., Repert. Spec. Nov. Regni Veg. 15: 266, 1918.

*Restrepia caucana* Schltr., Repert. Spec. Nov. Regni Veg. Beih. 7: 199, 1920.

*Pleurothallis fimbriata* C. Schweinf., Bot. Mus. Leaflet. 16: 50, 1953.

*Pleurothallis ospinae* R. E. Schultes, Caldasia 7: 354, 1957.

*Restrepia robledorum* Braas & Braem, Die Orchidee 33: 155, 1982.

This species is variable in the size of the plant and in the size and color of the flowers. In some populations the synsepal of some individuals is diffusely dotted or spotted, in others the dots are aligned longitudinally, and in still others the dots are confluent into stripes. This species is common and widespread in the Andes.

**Restrepia apiculata** Luer, sp. nov.

Inter species *Restrepiae* Kunth species haec statura parva, petalis filiformibus et labello subpandurato apice truncato apiculato distinguitur.

Plant small, epiphytic, caespitose; roots slender, fasciculate. Secondary stems erect, slender, 4-6 cm long, enclosed by a series of 4-5 oblique, loose, imbricating, conduplicate, white sheaths speckled with black. Leaf erect, coriaceous, green, suffused with purple beneath, ovate, acute, 3.5-6 cm long, 2.3-2.8 cm wide, the rounded base contracted into a petiole 4-5 mm long. Inflorescence a succession of small, solitary flowers, the peduncles slender, 3-4 cm long, fasciculate, from near the apex of the secondary stem; floral bract 5 mm long, pedicel 3-4 mm long; ovary 2 mm long; dorsal sepal translucent white, veined in dark purple, narrowly ovate in the lower half, the apex attenuated, filiform, clavate, 25 mm long, 2.5 mm wide at the base; lateral sepals rosy yellow, dotted with dark red-purple, connate into an obovate lamina 23 mm long, 9 mm wide, the apex rounded; petals dark purple,

linear-filiform, 14 mm long, barely 1 mm wide, the apex minimally thickened; lip dull red, dotted with purple, oblong-subpandurate, 7.5 mm long, 2.5 mm wide below the middle, the margins serrulate, the apex truncate, apiculate, the surface verrucose, the base concave, smooth, with a pair of antrorse, hairlike, marginal appendages; column rose, slender, subclavate, 3 mm long, the foot pedestal-like.

**Etymology:** From the Latin *apiculatus*, "apiculate," referring to the apex of the lip.

**TYPE:** *ECUADOR*: without locality, collected by W. Teague and D. Welisch, July 1975, cultivated at La Estrella by O. J. Arango, flowered in cult. 3 Oct 1977, *R. Escobar 1653* (HOLOTYPE: SEL), C. Luer illustr. 1898.

**Distribution:** Ecuador.

This species is distinguished by the small habit, the reddish synsepal dotted with purple, the filiform petals, and the subpandurate lip with a truncate, apiculate apex.

***Restrepia flosculata* Luer, sp. nov.**

Inter species generis *Restrepiae* Kunth species haec grandis flore parvo flavo brevipedunculato ad folium adpresso, synsepalo obovato obtuso et labello late elliptico notabilis.

Plant large, epiphytic, caespitose; roots slender, flexuous. Secondary stems erect, 15-20 cm long, enclosed by a series of 6-8 compressed sheaths, the upper sheaths loose, oblique, the lower sheaths close, dotted with brown. Leaf erect, coriaceous, ovate, 9-10 cm long, 4-4.5 cm wide, the apex acute, tridenticulate, the rounded base contracted into a petiole ca. 1 cm long. Inflorescence a succession of solitary, small, clear yellow, short-pedunculate flowers borne behind and appressed to the blade of the leaf; peduncles erect, slender, fasciculate, from near the apex of the secondary stem a short distance below the abscission layer; floral bract 4 mm long; pedicel 2-3 mm long; ovary ca. 4 mm long; dorsal sepal erect, very narrowly ovate, the apex attenuated into a clavate tip, 13.5 mm long, 1.75 mm wide; lateral sepals connate into an obovate, obtuse lamina 12.5 mm long, 7 mm wide; petals very narrowly ovate, attenuated into a filiform, clavate apex, 10 mm long, 1 mm wide; lip elliptical-oblong, 6.5 mm long, 3.5 mm wide, the apex truncate, lightly retuse, the rounded base concave with a pair of marginal hairlike appendages, connected to the column-foot by a stout claw; column slender, clavate, 6 mm long, the foot thick, pedestal-like.

**Etymology:** From the Latin *flosculatus*, "small-flowered," in reference to the comparatively small flower for the large plant.

**TYPE:** *ECUADOR*: *IMBABURA*: epiphytic in cloud forest above Rio Blanco between Ibarra and San Lorenzo, alt. 1400-1500 m, 14 Dec. 1961, *C. H. Dodson & L. B. Thien 1600* (HOLOTYPE: SEL; ISOTYPE: MO), C. Luer illustr. 070.

**Distribution:** Western Ecuador.

Among the species of *Restrepia*, this large member is notable in the comparatively small, clear yellow flower appressed to the back side of the leaf. The above description was made from dried material and a boiled flower.

**Restrepiopsis monetalis** (Luer) Luer, comb. nov.

*Octomeria monetalis* Luer, Phytologia 46: 353, 1980.

This species was described in the genus *Octomeria* because of the eight pollinia, but there were four large and four small pollinia, not eight pollinia of equal size as found in the other species of *Octomeria*. Another living plant of this species, this time from a Venezuelan collection by R. Determann, has been observed in cultivation at SEL. Most anthers produce only four pollinia of equal size, but occasionally two or four extra small pollen masses develop. Therefore, this species belongs in *Restrepiopsis*, which is very closely allied to *Octomeria*. Plants of the two genera are similar vegetatively and florally. *Restrepiopsis* is not closely related to either *Pleurothallis* or the monotypic *Restrepiella*.

**Restrepiopsis ujarensis** (Rchb. f.) Luer, Selbyana 2: 200, 1978.

*Restrepia ujarensis* Rchb. f., Bonplandia 3: 225, 1855.

*Pleurothallis ujarensis* (Rchb. f.) Lindl., Folia Orchid. Pleuroth. 19, 1859.

*Humboldtia ujarensis* (Rchb. f.) Kuntze, Rev. Gen. Pl. 2: 668, 1891.

*Restrepiella ujarensis* (Rchb. f.) Garay & Dunsterv., Venez. Orchids Ill. 4: 266, 1966.

*Restrepiella lenkenhoffii* Braas & Mohr, Die Orchidee 33: 154, 1982.

This very small species is widely distributed in Central America from Guatemala to Panama.

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