

MISCELLANEOUS NEW SPECIES  
IN THE PLEUROTHALLIDINAE (ORCHIDACEAE)

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Dracula hirsuta Luer & Andreetta, sp. nov.

Inter species generis Draculae Luer species haec foliis angustis, flore mediocri cupula non profunda, sepalis atropurpureis dense hirsutis, petalis bivalvatis et hypochilio labelli ovato obtuso concavo multilamellato distinguitur.

Plant medium in size to large, epiphytic, caespitose; roots coarse, flexuous. Secondary stems erect, channeled, unifoliate, 4-5.5 cm long, enclosed by 2-3 thin, imbricating sheaths. Leaf erect to slightly arching, thinly coriaceous, carinate dorsally, very narrowly obovate, 16-28 cm long, 1.5-1.8 cm wide, the apex subacute, tridenticulate, gradually narrowed below into the conduplicate base. Inflorescence a few-flowered, congested raceme of successive flowers borne by a red, descending peduncle 5-9 cm long, with a few, distant bracts, from a node low on the secondary stem; floral bract 15 mm long; pedicel 10 mm long; ovary 4 mm long; sepals glabrous and reddish purple externally, dark purple with a dense, purple pubescence within, the dorsal sepal broadly ovate, 12 mm long, 12 mm wide, connate to the lateral sepals for 5 mm to form a broad, shallow sepaline cup, the apex obtuse, with a few white hairs near the margin, contracted into a slender, maroon tail ca. 6.5 cm long, the lateral sepals white along the inferior margin with white hairs, ovate, oblique, 18 mm long, 11 mm wide, connate 13 mm to form an obtuse, shallow mentum, the subacute apices contracted into tails similar to that of the dorsal sepal; petals yellow, marked with purple, oblong, 3 mm long, 2 mm wide, the apex bivalvate, verrucose between the laminae, the internal lamina denticulate, the outer rounded and recurved; lip white, spatulate, 10 mm long, 6 mm wide, the hypochile obovate, 4 mm long, 3.5 mm wide, with erect, obtuse marginal angles, cleft centrally, the concave base hinged to the column-foot, the epichile ovate, 6 mm long, 6 mm wide, concave with erect, denticulate margins, the apex rounded, the concavity filled with 3 (sometimes 5) tall, radiating, undulating lamellae plus shorter, incomplete segments; column yellow, semiterete, 3 mm long, with a short, thick foot.

ETYMOLOGY: From the Latin hirsutus, "covered with erect hairs," in reference to the hirsute sepals.

TYPE: ECUADOR: MORONA-SANTIAGO: epiphytic in wet forest near Rio Calagras, alt. 1600 m, April 1979, A. Andreetta & M. Portilla, cultivated in Cuenca, flowered in cult. 29 Sept. 1980, C. Luer 5591 (HOLOTYPE: SEL); same locality, 19 Sept. 1980, C. Luer et al. 5506A (SEL).

DISTRIBUTION: Southeastern Ecuador.

Although similar to many species with narrow leaves and medium-sized flowers, this species may be distinguished by the dark purple, densely hirsute flowers, and a white lip with a relatively small, concave, multilamellate epichile.

Dracula hubeinii Luer, sp. nov.

Inter species generis Draculæ Luer species hæc foliis parvis angustissimis pedunculo descendenti longioribus, flore parvo cupula profunda intus brunneo verrucosissimis et epichilio labelli concavo trilamellato hypochilio minore dignoscenda.

Plant small, epiphytic, caespitose; roots slender, flexuous. Secondary stems channeled, unifoliate, 2-3.5 cm long, enclosed by a close, thin, tubular sheath. Leaf erect, thinly coriaceous, carinate dorsally, very narrowly elliptical, 12-17 cm long, 0.7-1.0 cm wide, the apex acute, tridenticulate, gradually narrowed below the middle to the conduplicate base. Inflorescence a 1-flowered (always ?), more or less horizontal peduncle 4-10 cm long, with a few bracts, from a node low on the secondary stem; floral bract 8 mm long; pedicel 13 mm long; ovary brown, 4 mm long; sepals glabrous and buff-colored externally, yellow-white and covered with brown, tuberculated warts within, the dorsal sepal suborbicular, 9.5 mm long, 11.5 mm wide, connate to the lateral sepals for 6 mm to form a deep sepaline cup, the rounded, free portion abruptly contracted into a slender, maroon tail 22 mm long, the lateral sepals connate 9 mm into a broadly concave lamina 11 mm long, 17 mm wide, the obtuse apices contracted into tails similar to that of the dorsal sepal; petals white, marked with brown, oblong, 3.25 mm long, 1.1 mm wide, the apex subacute, bivalvate, tuberculate between the valves; lip pale pink, pandurate, 5 mm long, 2.5 mm wide, the hypochile oblong, 3 mm long, 2.25 mm wide, with erect, narrowly rounded marginal angles, cleft centrally, the concave base hinged to the column-foot, the epichile ovate, 2.25 mm long, 2.5 mm wide, obtuse with smooth margins, concave with 3 undulating lamellæ; column yellow, semiterete, 4 mm long, with a stout foot 2 mm long.

ETYMOLOGY: Named in honor of Herr Hubein of Berlin, Germany, who discovered this species.

TYPE: COLOMBIA: CUNDINAMARCA ?: without locality, collected near Bogota by Hubein, cultivated by B. Würstle at Spielberg, West Germany, flowered in cultivation 19 May 1980, C. Luer 5247

(HOLOTYPE: SEL).

DISTRIBUTION: Colombia.

This small species may be distinguished by the very narrow leaves and a single, little, deeply cupped flower intensely warty inside. The epichile of the lip is smaller than the hypochile.

Dracula portillae Luer & Andreetta, sp. nov.

Inter species generis Draculae Luer species haec habitu longirepenti, pedunculo gracili erecto foliis angustissime ellipticis subaequilongo, flore parvo brevicaudato, petalis bivalvatis et labello obovato epichilio indistincto rotundato plano distinguitur.

Plant medium in size, epiphytic, repent, the rhizome more or less ascending, 10-20 cm or more long, 1-3 cm long between secondary stems, enclosed by tubular sheaths; roots coarse, flexuous, from nodes along the rhizome. Secondary stems ascending, slender, channeled, unifoliate, 3-4.5 cm long, enclosed by 2 loose, tubular, imbricating sheaths. Leaf erect, thinly coriaceous, sharply low-carinate along the midrib dorsally, very narrowly elliptical, 13-18 cm long, 1.5-1.6 cm wide, the apex acute, tridenticulate, gradually narrowed below into the conduplicate base. Inflorescence a congested, few-flowered raceme of small, successive flowers borne by a slender, erect peduncle 14-17 cm long, with 2-3 thin, widely spaced bracts, from a node about midway on the secondary stem; floral bract 7-8 mm long; pedicel 6-7 mm long; ovary 4 mm long; sepals glabrous, ovate, ca. 10 mm long, 5 mm wide, connate basally into a shallow cup, the apices contracted into tails ca. 10 mm long; petals oblong, 3 mm long, 1 mm wide, the apex bivalvate, verrucose between the valves; lip obovate-pyriform, 4 mm long, 2.5 mm wide, the hypochile indistinct, with erect, obtuse, marginal angles, cleft centrally, the concave base hinged to the column-foot, the epichile rounded and flat; column semiterete, 3 mm long.

ETYMOLOGY: Named in honor of Mario Portilla of Cuenca, Ecuador, who discovered this species.

TYPE: ECUADOR: MORONA-SANTIAGO: epiphytic in wet forest east of the pass between Gualaceo and Limon, alt. 2000 m, 19 Sept. 1980, C. Luer, J. Luer, A. Andreetta, M. Portilla et al. 5477 (HOLOTYPE: SEL).

DISTRIBUTION: Eastern Ecuador.

This species is closely related to D. quilichaoensis (Lehm. & Krzl.) Luer, but D. portillae may be distinguished immediately by the long-repent habit.

Dracula ubangina Luer & Andreetta, sp. nov.

Species haec D. vampirae (Luer) Luer similis sed statura floribusque minoribus, sepalis atris glabris lateralibus prope marginem inferiorem exceptis differt.

Plant medium in size, epiphytic, caespitose; roots coarse, flexuous. Secondary stems erect, channeled, unifoliate, 2-4 cm long, enclosed by 2-3 loose, imbricating sheaths. Leaf erect, thinly coriaceous, narrowly obovate, 10-15 cm long, 2-3.5 cm wide, the apex acute, tridenticulate, cuneate below into an ill-defined, conduplicate petiole. Inflorescence a few-flowered, congested raceme of successive, black flowers borne by a horizontal to descending peduncle 10-15 cm long, with a few, distant bracts, from a node low on the secondary stem; floral bracts 10-13 mm long; pedicel 15-18 mm long; ovary subverrucose, 8 mm long; dorsal sepal black with radiating black veins on green at the base, glabrous, ovate, 24-26 mm long, 22-26 mm wide, connate to the lateral sepals for 9 mm to form a flat flower, the subacute apex contracted into a slender, black tail 5-6 cm long; lateral sepals glabrous except for a sparse, short pubescence on the lower, inner portions, black except occasionally for a few, scattered, colorless spots, mostly on the lower, inner portions, ovate, oblique, 27-30 mm long, 21-25 mm wide, connate 15 mm to form a shallow mentum behind the lip, the subacute apices contracted into tails similar to that of the dorsal sepal; petals white, marked with purplish black, oblong, 6.5 mm long, 2 mm wide, the apex bivalvate, verrucose between the valves, the inner denticulate, the outer rounded; lip white, spatulate, 18 mm long, 11 mm wide, the hypochile ovate, 6 mm long, 5 mm wide, with obtuse, erect, marginal angles, cleft centrally, the concave base hinged to the column-foot, the epichile oblong-rounded, 13 mm long, 10-11 mm wide, concave, the concavity filled with 3 major carinae and multiple, lesser carinae radiating to the denticulate margin; column white, semiterete, 6.5 mm long, the foot 3 mm long.

ETYMOLOGY: Named for the fancied resemblance of the black flower with a large, round lip to a Ubangi tribesman.

TYPE: ECUADOR: PICHINCHA: epiphytic in cloud forest near Mindo, alt. 1800 m, Jan. 1975, A. Andreetta & A. Hirtz 038, cultivated by Andreetta in Cuenca, flowered in cultivation 6 Feb. 1978, C. Luer 2470 (HOLOTYPE: SEL).

DISTRIBUTION: Western Ecuador.

I had considered this species to be a small, particularly dark form of D. vampira, with which it is sympatric, but after seeing additional living material, Padre Andreetta has convinced me that specific differences exist. The plants of D. ubangina are medium in size with the leaves considerably smaller and narrower than those of D. vampira. The flowers are also consistently smaller and

solid black except for the radiating veins above the column in the center of the flower. Occasionally a few colorless flecks occur, usually on the lower inner portions of the lateral sepals where there is a short, sparse pubescence. The sepals of *D. vampira* are striped, the stripes visible even in darker forms, and they are totally glabrous.

Masdevallia bottae Luer & Andreetta, sp. nov.

Planta parva caespitosa, foliis ellipticis petiolatis apice rotundatis, pedunculo gracili suberecto unifloro, sepalis pallide flavis glabris lateribus cum macula parva basali apicibus rotundatis abrupte longicaudatis, petalis magnicarinatis cum dente prominenti retrorso, labello oblongo albo apice atropurpureo lobulato.

Plant small, epiphytic, caespitose; roots slender, flexuous. Secondary stems slender, blackish, unifoliate, 3-7 mm long, with 1-2 loose, tubular sheaths. Leaf erect, coriaceous, elliptical, petiolate, 4-8 cm long including the 1.5-3 cm long petiole, the apex obtuse to rounded, minutely notched, the base cuneate into the slender, blackish petiole. Inflorescence a solitary flower borne by a slender, suberect peduncle 4-5.5 cm long, with a bract near the base, from a node on the secondary stem; floral bract tubular, 8-9 mm long; pedicel 9-10 mm long; ovary light green, 5 mm long; sepals pale yellow, glabrous, the dorsal sepal broadly ovate, cucullate, 13 mm long, 11 mm wide, connate 4 mm to the lateral sepals to form a short, wide-spread cup, the free portion rounded, concave, translucent white near the lateral angles, abruptly contracted into a slender, yellow-green erect tail ca. 3.5 cm long, the lateral sepals broadly ovate, oblique, 10 mm long, 9 mm wide, connate 2-3 mm over a transverse fold below the column-foot, with a small, dark purple spot at the base, the free portions with more or less reflexed margins, the apices obtuse to rounded, abruptly contracted into deflexed tails similar to that of the dorsal sepal; petals white, erect, oblong-cuneate, 5-6.5 mm long, 2-3 mm wide, the truncate apex tridentate, the labellar margin with a thick, incurved carina ending in a prominent, retrorse, rounded tooth; lip white, dotted with dark purple, erect, oblong, 4.5 mm long, 3.5 mm wide, the truncate apex dark purple with a deflexed, midline lobe, the truncate base hinged beneath, the disc with a pair of low, longitudinal elevations; column white with a pair of dark purple, apical teeth, semiterete, 5 mm long, the slender foot 2.5 mm long with a short, incurved extension.

ETYMOLOGY: Named in honor of Padre Angel Botta, Salesian missionary, co-discoverer of this species.

TYPE: ECUADOR: MORONA-SANTIAGO: epiphytic in rain forest near Rio

Calagras, alt. 1600 m, 19 Sept. 1980, C. Luer, J. Luer, A. Andre-  
etta et al. 5502 (HOLOTYPE: SEL); same locality, Jan. 1978, A. Andre-  
etta, M. Portilla & A. Botta s.n. (SEL); ZAMORA-CHINCHIPE:  
between Loja and Zamora, B. Malo, cult. at Tarqui, flowered in  
cult. 27 Sept. 1980, C. Luer 5560 (SEL).

DISTRIBUTION: Southeastern Ecuador.

This species is closely related to the Colombian M. xanthina Rchb. f., but the former may be distinguished by the glabrous, pale yellow flowers. It is also closely related to M. pallida (Woolward) Luer, but M. bottae may be distinguished by the smaller, pale yellow flowers with rounded sepals.

Masdevallia grossa Luer, sp. nov.

Species haec M. ophioglossae Rchb. f. persimilis sed habitu floribusque majoribus et caudis sepalorum grossis differt.

Plant small, epiphytic, densely caespitose; roots slender, flexuous. Secondary stems slender, 4-10 mm long, unifoliate, enclosed by 2 thin, imbricating, tubular sheaths. Leaf erect, coriaceous, narrowly obovate, petiolate, 3-7 cm long including the 1.5-3 cm long petiole, 7-10 mm wide, the apex subacute to rounded, tridentate, gradually narrowed below into the slender petiole. Inflorescence a solitary flower borne by a slender, erect peduncle 3.5-7 cm long, with a bract below the middle, from a node on the secondary stem; floral bract 5-7 mm long; pedicel 3 mm long; ovary green, tricarinate, 2.5 mm long; sepals glabrous, white, 15 mm long including the green tails, the dorsal sepal oblong, concave, curved, carinate, 7-8 mm long, 3-5 mm wide spread out, connate to the lateral sepals for 6-7 mm to form an arched, constricted, sepaline tube, the free portion immediately occupied by a 2-2.5 mm thick, terete tail 7-10 mm long, the lateral sepals connate ca. 6 mm, more or less globose-dilated at the base, narrowed and cylindrical above, the free apices similarly occupied by thick, diverging tails 8-9 mm long; petals white, triangular, 2.5-3 mm long, 1.25-1.5 mm wide, the narrowed apex obtuse, microscopically erose, the labellar margin with a carina forming a broad-based acute lobe, the base unguiculate, inserted onto the side of the base of the column; lip pale yellow, narrowly ovate, the apical third narrowed, terete, verrucose, yellow, the disc thickened and cleft centrally, 4.5 mm long, 1.5 mm wide; column white, terete, 2.5-3 mm long, the curved foot equally long, with a slender, curved extension.

ETYMOLOGY: From the Latin grossus, "thickened, enlarged," referring to the thick, terete tails.

TYPE: ECUADOR: AZUAY: epiphytic on the western slopes of Azuay, 1972, B. Malo, cultivated near Cuenca, flowered in cultivation 14 July 1977, C. Luer 1696 (HOLOTYPE: SEL).

DISTRIBUTION: Western Ecuador.

This species is very closely allied to M. ophioglossa from the western slopes of Pichincha, about 250 Km to the north. No intermediate populations are known. Masdevallia grossa may be distinguished by the considerably larger habit and larger flowers. The orifice of the sepaline tube is constricted and the free portions of the sepals are immediately thickened into spreading, terete tails. Except for the anterior third of the lip being coarsely verrucose, the petals and lip of the two species are extremely similar.

Masdevallia porphyrea Luer, sp. nov.

Inter species sectionis Polystictarum Krzl. planta mediocris porphyrea, foliis longipetiolatis purpureo suffusis maculatisque, floribus glabris purpureo guttatis transverse compressis, sepalo dorsali orbiculari infra medium saccato, sepalis lateralibus parvis, petalis nanis retusis, labello grandibilamellato trilobato obtuso, lobis lateralibus latis obliquis erectis distinguitur.

Plant medium in size, epiphytic, densely caespitose to shortly ascending; roots slender, flexuous. Secondary stems slender, 2-3.5 cm long, mottled with rose, unifoliate, with 2 close, tubular sheaths at the base. Leaf erect, coriaceous, dull pinkish tan, suffused and mottled with purple, narrowly elliptical, long-petiole, 7-13 cm long including the slender, red-spotted petiole 3-4.5 cm long, 1.5-2.2 cm wide, the apex subacute, tridenticulate, the base narrowly cuneate into the petiole. Inflorescence a raceme 3-5 cm long of 4-6 simultaneous flowers, the peduncle erect, slender, 14-17 cm long including the rachis, with a bract near the middle and another near the base, from a node on the secondary stem; floral bract inflated, oblique, 4-5 mm long; pedicel green, spotted with purple, 2-3 mm long; ovary green, spotted with purple, 2 mm long, with 3 double crests; sepals glabrous, light dull green, with minute, transverse bars of purple, with minutely serrulate margins; dorsal sepal suborbicular, deeply concave, more or less saccate below the middle, 8 mm long, 9 mm wide, connate to the lateral sepals for 5 mm to form a gaping, more or less transversely compressed sepaline cup, the rounded apex abruptly contracted into an erect, green tail 7 mm long; lateral sepals ovate, 9 mm long, 5 mm wide, connate 2 mm over a transverse fold in front of the column-foot, the acute apices contracted into tails similar to that of the dorsal sepal; petals translucent green, marked with purple, oblong, 1.75 mm long, 0.75 mm wide, the apex retuse, slightly thickened toward the base on the labellar half; lip light purple-brown, broadly ovate-trilobed, 3.75 mm long, 3.5 mm wide across the lateral lobes, 2.5 mm wide across the middle lobe, the lateral lobes erect, oblique, broadly ovate, obtuse, the middle lobe with 3 elevated veins, obtuse to rounded, with undulate margins, the disc

with a pair of oblique lamellae near the middle, the broadly rounded base hinged to the column-foot; column dull green, mottled with red, semiterete with broad wings, 3.5 mm long, with a thick, spotted foot equally long.

ETYMOLOGY: From the Latin porphyreus, "purple" (Greek porphyra), referring to the purplish leaves and flowers.

TYPE: ECUADOR: AZUAY: epiphytic in Valle de Yunguilla, alt. 1900-2000 m, western slopes of Azuay, B. Malo, cultivated by him near Cuenca, flowered in cultivation 26 Sept. 1980, C. Luer 5566 (HOLOTYPE: SEL).

DISTRIBUTION: Western Ecuador.

This species may be distinguished by the pinkish tan leaves mottled with purple, but this condition might not always be present. The glabrous, transversely flattened flowers are distinctive in the saccate bulge of the dorsal sepal below the middle, minute retuse petals, and a comparatively large, three-lobed lip with broad, erect, lateral lobes.

Masdedevallia pulcherrima Luer & Andreetta, sp. nov.

Inter species sectionis Polystictarum Krzl. species haec statura mediocris, foliis longipetiolatis, floribus glabris albis sparsim purpureo maculatis, petalis apiculatis serrulatis, labello late oblongo distinguitur.

Plant medium in size, epiphytic, caespitose to shortly ascending; roots slender, flexuous. Secondary stems slender, unifoliate, 2-4 cm long, enclosed by 2-3 close, imbricating sheaths. Leaf erect, coriaceous, elliptical, petiolate, 11-14 cm long including the 2.5-3 cm long petiole, 2.3-2.7 cm wide, the apex subacute, tridenticulate, narrowly cuneate below into the petiole. Inflorescence an arching, simultaneously several-flowered raceme 12-15 cm long including the 6-7 cm long rachis, the peduncle slender, erect to suberect, with bracts below the middle and near the base, from a node on the secondary stem; floral bract thin, oblique, 3-5 mm long; pedicel 5-6 mm long; ovary green with purple dots, 3 mm long, irregularly crested; sepals white with a few large, irregular, purple spots and orange tails, glabrous, the free margins minutely erose; dorsal sepal ovate, cucullate, 10 mm long, 9 mm wide unspread, connate 4 mm to the lateral sepals to form a gaping cup, the rounded apex abruptly contracted into an erect tail 12 mm long; lateral sepals oblong, 10 mm long, 5 mm wide, connate ca. 1 mm to form a short mentum beneath the column-foot, the obtuse apices contracted into deflexed, 12 mm long tails; petals yellow-white, marked with purple, orange at the apex, oblong, 5 mm long, 2 mm wide, the margins minutely serrulate, with a carina from the base extending along and above the lower margin, the apex truncate with



an acute, apical tooth; lip yellow-white, orange at the apex, oblong, 4.5 mm long, 2.75 mm wide, with broad, obtuse, marginal folds in the distal third, the apex convex, obtuse to rounded, the disc sulcate centrally, the truncate base hinged to the column-foot; column yellow-white, semiterete, 4.5 mm long, the foot equally long including a short, incurved extension.

ETYMOLOGY: From the Latin pulcherrimus, the superlative of pulcher, "pretty," referring to the beauty of the flowers.

TYPE: ECUADOR: BOLIVAR: epiphytic in cloud forest below Guaranda, alt. ca. 2000 m, Aug. 1978, C. Luer, J. Luer, A. Andreetta & A. Hirtz, cultivated by Andreetta in Cuenca, flowered in cultivation 26 Sept. 1980, C. Luer 5558 (HOLOTYPE: SEL).

DISTRIBUTION: Western Ecuador.

This species is closely allied to the variable M. polysticta Rchb. f., but M. pulcherrima is readily identified by the white, glabrous flowers with a few large, purple spots and orange tails.

Masdevallia roseola Luer, sp. nov.

Species haec M. pumilae Poepp. & Endl. similis sed foliis latioribus, floribus majoribus, sepalis albis roseolo suffusis latioribusque et petalis sine dente acuto basali differt.

Plant small, epiphytic, caespitose; roots slender, fasciculate. Secondary stems slender, blackish, unifoliate, 2-3.5 cm long, provided with 2 close, tubular sheaths. Leaf erect, coriaceous, narrowly elliptical, 6-8 cm long, 1.1-1.2 cm wide, gradually narrowed below into an ill-defined petiole. Inflorescence a solitary flower borne by an erect to suberect, filiform peduncle 3.5-4 cm long, from a node low on the secondary stem; floral bract tubular, 7-9 mm long; pedicel 7-9 mm long; ovary olive-green, pitted, 4 mm long; sepals white, suffused with rose, glabrous, the dorsal sepal ovate, ca. 13 mm long, 7 mm wide, connate to the lateral sepals for 8 mm into a cylindrical tube, the triangular free portion subacute, contracted into a slender, white tail ca. 23 mm long, the lateral sepals oblong, oblique, ca. 20 mm long, 6 mm wide, the apices gradually tapered into slender, ascending, white tails ca. 18 mm long, the total length 38 mm; petals white, oblong, 5 mm long, 1.75 mm wide, the apex rounded, the lower margin thickened, terminating in an obtuse angle above the unguiculate base; lip white, suffused with rose, thick, obovate, 5 mm long, 2.25 mm wide, the apex rounded, the base subcordate, hinged beneath; column white with purple margins, semiterete, 4.5 mm long, the short foot with an incurved extension.

ETYMOLOGY: From the Latin roseolus, the diminutive of roseus, "rosy," referring to the color of the flowers.

TYPE: ECUADOR: ZAMORA-CHINCHIPE: epiphytic in cloud forest between Loja and Zamora, alt. ca. 1500 m, R. Hawley, cultivated in Mill Valley, California, flowered in cultivation 15 Dec. 1978, C. Luer 3643 (HOLOTYPE: SEL).

DISTRIBUTION: Southeastern Ecuador.

Although very closely allied to M. pumila, M. roseola may be recognized by the larger flowers generously suffused with rose, the sepals about twice as wide tapered into slender, up-curved tails.

Masdevallia sanchezii Luer & Andreetta, sp. nov.

Planta pumila caespitosa foliis fusiformibus acutis petiolatis, pedunculo unifloro gracili plus minusve decumbenti, sepalis tricarinate atropurpureo striatis anguste caudatis, petalis ovatis apice setiformibus, labello elliptico acuto quinquistriato.

Plant small, epiphytic, caespitose; roots slender, flexuous. Secondary stems slender, blackish, 2-5 mm long, unifoliate, enclosed by 1-2 close, tubular sheaths. Leaf erect, coriaceous, fusiform, petiolate, 2-4.3 cm long including the 0.8-1.5 cm long petiole, 5-9 mm wide, the apex acute, tridenticulate, narrowly cuneate below into the blackish petiole. Inflorescence a single flower borne by a more or less transverse, slender peduncle 3-3.5 cm long, with a bract near the base, from a node low on the secondary stem; floral bract 4 mm long; pedicel 5-6 mm long; ovary green, 3 mm long, subverrucose; sepals dull green, tricarinate along the veins, the carinae dark purple, the dorsal sepal ovate, 25 mm long including the tail, 5 mm wide, connate to the lateral sepals for 3.5 mm to form a short sepaline tube, the free portion triangular, the acute apex attenuated into a slender, antrorse tail, brown, becoming yellow toward the apex, the lateral sepals ovate, 25 mm long including the tails, each 5 mm wide, connate 5 mm to form an elongated, shallow mentum suffused with rose, the apices gradually narrowed into slender, yellowish tails; petals translucent greenish white, marked with purple along the midvein, ovate, 7.5 mm long, 1.5 mm wide, slightly thickened along the labellar margin, both margins cellular-erose, the apex yellow, acuminate, acute, 3 mm long; lip light green, marked with 5 longitudinal stripes of dark purple, elliptical, acute, 7.5 mm long, 2.5 mm wide, the disc with a pair of low, longitudinal carinae, the base cordate, hinged beneath to the column-foot; column green, semiterete, 2.5 mm long, minutely winged at either side of the apex, the foot 2 mm long with a very short, incurved extension.

ETYMOLOGY: Named in honor of Eduardo Sanchez of Cuenca, Ecuador, co-discoverer of this species.

TYPE: ECUADOR: MORONA-SANTIAGO: epiphytic in rain forest near Rio

Calagras, alt. 1600 m, 19 Sept. 1980, C. Luer, J. Luer, A. Andre-  
etta et al., 5506 (HOLOTYPE: SEL); same locality, Oct. 1977, A.  
Andreetta, M. Portilla & E. Sanchez s.n. (SEL).

DISTRIBUTION: Southeastern Ecuador.

This little species is most remarkable for the long-acuminate apices of the petals, and the elliptical lip with an acute apex. In some plants the apex of the lip is more acuminate and elongated than in others.

Masdevallia sanguinea Luer & Andreetta, sp. nov.

Inter species sectionis Alaticaulium Krzl. species haec pedunculo crasso, floribus successivis grandibus rubiginosis, cauda sepali dorsalis caudis sepalorum lateralium multilongiore, petalis tridentatis, labello sanguineo magno oblongo infra medium plicato dignoscenda.

Plant medium in size, epiphytic, caespitose; roots coarse, flexuous. Secondary stems stout, 1-1.5 cm long, unifoliate, enclosed by 1-2 loose, tubular sheaths. Leaf erect, coriaceous, elliptical, 6-9 cm long, 1.5-1.9 cm wide, the apex acute, tridenticulate, cuneate below into a short petiole 1-1.5 cm long. Inflorescence a congested raceme of single, successive, comparatively large, red flowers borne by a stout, triquetrous peduncle 9-10 cm long, with a bract at the base, from a node low on the secondary stem; floral bracts papery, imbricating, 12 mm long; pedicel 8-9 mm long; ovary 5-6 mm long; sepals glabrous externally, microscopically verrucose within, the dorsal sepal obovate, 15-18 mm long, 10 mm wide, connate to the lateral sepals for 10-13 mm to form a cylindrical sepaline tube, the free portion triangular, the subacute apex contracted into a thick, terete, antrorse tail ca. 3 cm long, red above, yellow below, the lateral sepals connate 27-29 mm into a broad, bifid lamina, the acute apices close, contracted into 1 cm long terete tails, 46 mm long including the tails, 25 mm wide; petals white, suffused with purple, oblong, 11 mm long, 3.5 mm wide, the apex tridenticulate, with a longitudinal callus above the labellar margin, terminating in a rounded callus above the base; lip dark red, oblong, 16 mm long, 6.5 mm wide, the apex obtuse with serrulate margins and a midline callus, the base subcordate, hinged beneath, the disc with a pair of low carinae extending forward from a pair of marginal folds below the middle; column red, semiterete, 10 mm long, with a foot 5 mm long and a short incurved extension.

ETYMOLOGY: From the Latin sanguineus, "blood-red," in reference to the color of the lip and column.

TYPE: ECUADOR: MORONA-SANTIAGO: epiphytic in rain forest near Rio Calagras, alt. 1600 m, A. Andreetta, M. Portilla 1750, cultivated in Cuenca, flowered in cultivation 27 Sept. 1980, C. Luer 5451

(HOLOTYPE: SEL).

DISTRIBUTION: Southeastern Ecuador.

This member of the Alaticaulus section may be recognized by the stout, relatively short peduncle bearing successive, large, reddish flowers characterized by a cylindrical sepaline tube, tridentate petals, and a large, red, oblong lip.

Masdevallia theleura Luer, sp. nov.

Inter species sectionis Alaticaulium Krzl. species haec pedunculo gracili foliis longiore, floribus successivis brevipedicellatis, cupula sepalorum brevi cylindrica, parte libera sepali dorsalis late triangulari cum cauda gracili erecta, sepalis lateralibus profunde connatis late expansis apicibus obtusis approximatis brevissime caudatis distinguitur.

Plant medium in size, epiphytic, caespitose; roots coarse, flexuous. Secondary stems stout, 1.5-2.5 cm long, unifoliate, enclosed by 2 close, imbricating sheaths. Leaf erect, thickly coriaceous, glossy dark green, narrowly obovate, 8-14 cm long, 1.6-2.1 cm wide, the subacute apex tridenticulate, the base gradually narrowed to the channeled, subpetiolate base. Inflorescence a congested, successively several-flowered raceme 2-4 cm long, borne by a slender, triquetrous peduncle 13-23 cm long, with a basal bract, from a node near the base of a secondary stem; floral bracts conduplicate, obtuse, imbricating, 7-10 mm long; pedicel 5 mm long; ovary 4 mm long; dorsal sepal yellow-green, obovate, connate to the lateral sepals for 6 mm to form a short, cylindrical tube, the free portion broadly triangular, 6 mm wide, the obtuse apex contracted into a slender, green, erect tail 15-18 mm long, the total length of the dorsal sepal 22-25 mm; lateral sepals glabrous externally, red-purple and shortly pubescent within, connate 15 mm into an ovate, broadly expanded lamina 17-19 mm long, 16 mm wide, the apices close, obtuse, each contracted into a 2 mm long, green tail; petals ivory, marked with red-purple, oblong, 6 mm long, 2 mm wide, the subtruncate apex apiculate, with a low, longitudinal callus on the lower half ending in a low, rounded callus near the base; lip yellow, flecked with red-brown, oblong, 7 mm long, 2.5 mm wide, with marginal folds near the middle, the apex obtuse, shortly acuminate, apiculate, the base subcordate, hinged to the column-foot; column red, semiterete, 4 mm long, the foot 2 mm long with a short, incurved extension.

ETYMOLOGY: From the Greek thele, "a nipple," and oura, "a tail," in allusion to the short, nipple-like tails of the lateral sepals.

TYPE: ECUADOR: ZAMORA-CHINCHIPE: epiphytic in cloud forest between Loja and Zamora, alt. ca. 1500 m, Janet Kuhn s.n., cultivated in

Easton, Ct., J & L Orchids, flowered in cultivation 8 Nov. 1977, C. Luer 2129 (HOLOTYPE: SEL).

DISTRIBUTION: Southeastern Ecuador.

This species is easily distinguished from the others in the Alaticaulis section by the long, slender peduncle and short-pedicelate flowers with a broadly expanded, deeply connate synsepal terminated by a close pair of minute, nipple-like tails.

Masdevallia virens Luer & Andreetta, sp. nov.

Planta mediocris caespitosa, pedunculo gracili triquetro foliis ellipticis brevipetiolatis subduplongiore, racemo paucifloro congesto, floribus successivis pallido viridibus, cupula sepalorum compressa, caudis latis crassissimis antrorsis, petalis oblongis acutis callo basali rotundati humili, labello oblongo obtuso lateribus plicatis.

Plant medium in size, epiphytic, caespitose; roots slender, flexuous. Secondary stems stout, unifoliate, 1-1.5 cm long, enclosed by 2 loose, imbricating sheaths. Leaf erect, coriaceous, elliptical, shortly petiolate, 6-9 cm long including the 1.5-2 cm long petiole, 1.3-1.9 cm wide, the subacute apex tridenticulate, the base narrowly cuneate into the channeled petiole. Inflorescence a succession of single flowers in a congested, few-flowered raceme borne by a slender, erect, triquetrous peduncle 12-14 cm long, with a bract near the base, from a node low on the secondary stem; floral bract white, thin, papery, oblique, imbricating, apiculate, 9-10 mm long; pedicel 9-10 mm long; ovary green, 5 mm long; sepals light green, glabrous externally, microscopically glandular-pubescent within, lightly suffused with pale brown toward the center; dorsal sepal obovate, 25 mm long, 7 mm wide, connate to the lateral sepals for 5 mm to form a laterally compressed sepaline tube, the obtuse, free portion contracted into a thick, semiterete, antrorse tail 15 mm long, 2 mm wide, the lateral sepals ovate, oblique, 24 mm long, 8 mm wide, connate 8 mm, the broad apices prolonged into thick, antrorse tails 15 mm long, 3-5 mm wide; petals yellow-white, oblong, 6.5 mm long, 2 mm wide, the apex acute with thickened margins, the labellar margin with a low, longitudinal carina ending in a low, rounded callus above the base; lip light yellow, oblong, 6.5 mm long, 2.25 mm wide, the apex obtuse with a low, midline callus, the margins with low, lateral folds near the middle, the disc shallowly sulcate, the base subcordate, hinged beneath; column yellow, suffused with red-purple below the middle, more or less clavate, 5.5 mm long, the foot purple, 2 mm long, with a short, incurved extension.

ETYMOLOGY: From the Latin virens, "green," in reference to the color of the flower.

TYPE: ECUADOR: ZAMORA-CHINCHIPE: Valle del Zamora, El Pangui, alt. 1200 m, Nov. 1978, A. Andreetta, A. Botta & M. Portilla 1749, cultivated in Cuenca, flowered in cultivation 27 Sept. 1980, C. Luer 5450 (HOLOTYPE: SEL).

DISTRIBUTION: Eastern Ecuador.

This light green-flowered species seems most closely related to M. breneri Luer, but M. virens may be distinguished by the longer peduncle, laterally instead of transversely compressed flowers, and long, broad, thick sepaline tails.

Pleurothallis abortiva Luer, sp. nov.

Herba parva dense caespitosa, foliis erectis anguste lineari-ovatis caulibus secundariis gracilibus aequilongis, flore virescenti solitario successivo fasciculato, sepalo dorsali synsepaloque anguste ovatis cymbiformibus intus infra medium pubescentibus, petalis attenuatis, labello obovato minimo columna cylindrica grandi apoda appresso.

Plant small, epiphytic, densely caespitose; roots numerous, fine, fasciculate. Secondary stems slender, erect, unifoliate, 7-11 cm long, with a close, tubular sheath below the middle and another sheath at the base. Leaf erect, coriaceous, narrowly linear-ovate, 7-9 cm long, 0.7-1.0 cm wide, the apex acuminate, acute, tridentulate, the base cuneate, sessile. Inflorescence a dense fascicle of single, successive flowers from a spathe 3 mm long at the base of the leaf; peduncles 4-5 mm long; floral bracts 2.5 mm long; pedicel and ovary each 2 mm long; flowers widespread, yellow-green, lightly suffused with purple; dorsal sepal cymbiform, narrowly triangular, concave, acute, subcarinate, 6 mm long, 1.5 mm wide unspread, shortly pubescent within below the middle; lateral sepals connate into a narrowly ovate, acute synsepal 6 mm long, 2.25 mm wide unspread, convex and pubescent below the middle, concave above; petals thick, narrowly linear-ovate, attenuate, 6 mm long, 0.6 mm wide; lip obovate, subacute, membranous, 1.6 mm long, 0.5 mm wide, appressed to the under surface of the column; column cylindrical, 2.5 mm long, swollen at the apex with a terminal anther and stigma, the base footless.

ETYMOLOGY: From the Latin abortivus, "abortive," in allusion to the vestigial lip.

TYPE: COLOMBIA: NARINO: epiphytic in cloud forest, La Planada above Ricaurte, alt. 1950 m, 2 Nov. 1979, C. Luer, J. Luer, A. Hirtz & K. Walter 4547 (HOLOTYPE: SEL).

DISTRIBUTION: Southern Colombia.

This little species, characterized by narrow leaves borne by equally long, wire-like stems, is most remarkable for the minute, obovate lip that rests along the under surface of a much larger, cylindrical column.

Pleurothallis amplexans Luer, sp. nov.

Planta mediocris, caulibus secundariis gracilibus proliferantibus, foliis ellipticis acuminatis acutis, spatha mediocri, floribus solitariis flavis fasciculatis nutantibus, sepalo dorsali synsepaloque ovatis acutis concavis, petalis anguste linearibus, labello trilobato, lobis lateralibus obtusis columnam amplectentibus antice obtusangulatis, lobo mediano acute reflexo rotundato apice serrulato.

Plant medium in size, epiphytic to terrestrial, caespitose; roots slender, fasciculate from the bases of secondary stems. Secondary stems slender, erect, proliferating, up to 15 cm long below to 2 cm long above, with a tubular sheath below the middle and another at the base. Leaf erect, coriaceous, narrowly ovate, petiolate, 6-9 cm long including the slender petiole 1-1.5 cm long, 1.2-2.0 cm wide, the apex acuminate, acute, tridenticulate, the base cuneate into the petiole. Inflorescence a few-flowered fascicle of solitary, light yellow, gaping, bilabiate flowers from a spathe 8-27 mm long at the base of the leaf-petiole; peduncles 16-20 mm long; floral bract 4-5 mm long; pedicel 5-6 mm long; ovary 4-6 mm long; dorsal sepal narrowly ovate, acute, 13 mm long, 4.25 mm wide, 3-veined; lateral sepals connate into an ovate, concave, acute synsepal 11.5 mm long, 8 mm wide spread out; petals linear-oblong, acute, 10 mm long, 1 mm wide, slightly thickened, 3-veined; lip yellow, 3-lobed, 3.75 mm long, 4 mm wide unspread, the lateral lobes broadly oblong, obtusely angled anteriorly, erect and embracing the column below, the anterior lobe recurved acutely, rounded, apiculate, the margins serrulate, the base decurved to the short, claw-like attachment to the column, the disc thickened between looped lateral veins; column stout, 2 mm long, the base pedestal-like without a foot.

ETYMOLOGY: From the Latin amplexans, "clasping," referring to the lobes of the lip embracing the column.

TYPE: ECUADOR: MORONA-SANTIAGO: terrestrial on the road embankment, alt. 2900 m, east of the pass between Gualaceo and Limon, 17 Sept. 1980, C. Luer & J. Luer 5458 (HOLOTYPE: SEL).

DISTRIBUTION: Eastern Ecuador.

This species of the "secunda" complex is characterized by proliferating secondary stems and single, drooping, yellow flowers from a rather conspicuous spathe. The comparatively large lip is

composed of broad, erect lateral lobes embracing the column, and an acutely recurved, rounded middle lobe.

Pleurothallis arachnion Luer, sp. nov.

Herba parva subtilis caespitosa, caulibus secundariis gracilibus folio elliptico acuminato longioribus, flore solitario successivo grandi patenti flavo, sepalo dorsali synsepaloque similibus anguste ovatis longissimis attenuatissimis, petalis falcatis ciliatis attenuatissimis, labello crasso triangularem eroso apice acuto compresso, lobis basalibus subacutis columnam amplectentibus.

Plant small, delicate, epiphytic, caespitose; roots fine, flexuous. Secondary stems slender, erect to horizontal, unifoliate, 5-8.5 cm long, with a thin, tubular sheath below the middle and another sheath at the base. Leaf suberect to spreading, coriaceous, elliptical, 5-7 cm long, 1.5-2.3 cm wide, the apex acuminate, acute, tridentate, the sessile base rounded to cuneate. Inflorescence a solitary, large flower borne successively in a fascicle from a 3 mm long spathe at the base of the leaf; flowers yellow, widespread, resting upon the blade of the leaf; peduncles weak, 15 mm long; floral bract 5 mm long; pedicel 4 mm long; ovary 3.5 mm long; dorsal sepal ovate, concave, acute, the apex extremely long-attenuate, 52 mm long, 6 mm wide spread out; lateral sepals connate into an ovate, acute, similarly long-attenuate synsepal 50 mm long, 6 mm wide; petals elliptical-falcate, acute, with minutely ciliated margins, the apex extremely long-attenuate, 45 mm long, 3 mm wide, 3-veined; lip thick, triangular, 3.5 mm long, 2.5 mm wide, the apex acute, laterally compressed, the margins erose, the basal angles subacute, retrorse, embracing the column, the base deflexed beneath the column; column stout, 1 mm long, with a thick, rounded foot.

ETYMOLOGY: From the Greek arachnion, "a cobweb," in allusion to the extremely long, hair-like apices of the sepals and petals.

TYPE: COLOMBIA: NARINO: epiphytic in cloud forest north of Ricaurte, alt. ca. 1600 m, 3 Nov. 1979, C. Luer, J. Luer, A. Hirtz & K. Walter 4606 (HOLOTYPE: SEL).

DISTRIBUTION: Southern Colombia.

This delicate little species grows in the deep mossy blankets that engulf branches of large trees in the cloud forest. The comparatively large flowers lie upon the leaf with their long, frail, gossamer-like sepals and petals more or less entangled in the surrounding vegetation.



Pleurothallis chlorina Luer, sp. nov.

Herba parva caespitosa, caulibus secundariis gracilibus folio crasso ovato obtuso petiolato longioribus, petiolo torto, flore solitario grandi non-resupinato pallide chloroso, sepalo impari oblongo obtuso, synsepalo oblongo apice rotundato, petalis obovatis subacutis, labello ovato bicarinato serrulato longi-unguiculato.

Plant small, epiphytic, caespitose; roots fine, fasciculate. Secondary stems slender, suberect, unifoliate, 2.5-4.5 cm long, with a close, tubular sheath below the middle and another sheath at the base. Leaf erect, thickly coriaceous, distinctly petiolate, the petiole 4-8 mm long, twisted, the blade ovate, 20-28 mm long, 13-17 mm wide, the obtuse apex notched with an apiculum in the sinus, the base rounded above the petiole. Inflorescence a fascicle of successive, solitary, non-resupinate, large, crystalline yellow-green flowers, from a 3-4 mm long spathe from the apex of a secondary stem; peduncles 8-10 mm long; floral bracts oblique, apiculate, 4 mm long; pedicels curved, 3-4 mm long; ovary pyramidal, 2 mm long; middle sepal oblong, obtuse, 16 mm long, 6.5 mm wide; lateral sepals connate into an oblong synsepal 14 mm long, 8 mm wide, the apex rounded, shortly notched, the base inflated on both sides above the union with the long column-foot and forming a distinct, narrow mentum, the inner veins lightly marked with purple; petals translucent yellow-green, obovate, slightly oblique, subacute, 9.5 mm long, 3.5 mm wide, the 3 veins close and elevated externally; lip yellow-white, ovate, 7 mm long, 2.5 mm wide, the apex narrowly rounded, the base narrowed into a claw 2.75 mm long, the margins of the blade denticulate, the disc with a pair of low, smooth carinae; column greenish white, semiterete 3.5 mm long, broadly longitudinally winged, the anther cellular, the foot 5 mm long.

ETYMOLOGY: From the Latin chlorinus, "green" (from the Greek chloros), referring to the color of the flowers.

TYPE: ECUADOR: LOJA: epiphytic in scrub forest northwest of El Cisne, alt. 2300 m, 24 Sept. 1980, C. Luer et al. 5582 (HOLOTYPE: SEL).

DISTRIBUTION: Southwestern Ecuador.

The slender secondary stems of P. chlorina bear paddle-shaped leaves with a distinct, twisted petiole which causes the large, solitary flower to appear from the back surface. The pedicel and ovary arch backward to bear the crystalline light green flowers with the prominent mentum of the synsepal uppermost. The serrated blade of the lip is supported by a long claw.

Pleurothallis hirtzii Luer, sp. nov.

Species haec P. praegrandis Ames affinis sed statura majore, floribus triplo majoribus et labello peltato acuto lobis basalibus conduplicatis columnam amplectentibus distinguitur.

Plant gigantic, terrestrial, caespitose; roots coarse, flexuous. Secondary stems stout, to over 1 meter tall, unifoliate, with a loose, tubular sheath near the middle and 1-2 other sheaths near the base. Leaf suberect to spreading, coriaceous, broadly ovate, 36-40 cm long, 25-29 cm wide, the apex acuminate, acute, tridenticulate, the base deeply cordate, sessile. Inflorescence racemose, up to 10 subdensely many-flowered racemes 30-38 cm long including a 6-7 cm long peduncle, from a foliaceous spathe 3-4.5 cm long in the axil of the leaf; floral bract 3-4 mm long; pedicel 4-7 mm long; ovary 2.5 mm long; flowers medium in size, glabrous, dull white, spotted with purple, not widespreading; dorsal sepal elliptical, acute, 8 mm long, 4 mm wide, 3-veined; lateral sepals connate into an ovate, concave, subacute synsepal 8 mm long, 5 mm wide unspread; petals cream-colored, clavate-spatulate, 3 mm long, 1.5 mm wide, the apex markedly thickened with rounded margins; lip cream-colored, peltate, ovate-trilobed, 3 mm long, 2.25 mm wide, the apex broadly acuminate, acute, the basal lobes conduplicate, acute, embracing the column, reflexed from a pair of obtuse, conical calli near the base, the base deflexed, hinged to the base of the column; column stout, terete, 1.5 mm long, footless.

ETYMOLOGY: Named in honor of Alexander C. Hirtz of Quito, Ecuador, who discovered this species.

TYPE: COLOMBIA: NARINO: terrestrial in shaded humus of cloud forest north of Ricaurte, alt. ca. 1600 m, 3 Nov. 1979, C. Luer, J. Luer, A. Hirtz & K. Walter 4618 (HOLOTYPE: SEL).

DISTRIBUTION: Southern Colombia.

This immense species, vegetatively the largest pleurothallid known at this time, is closely allied to the small-flowered P. praegrandis. Some of the plants of P. hirtzii stand one and a half meters tall. The thrice larger flowers also differ from those of P. praegrandis in the shape of the lip which is shield-shaped in P. hirtzii instead of transversely elliptical.

Pleurothallis index Luer, sp. nov.

Planta mediocris caespitosa, caulibus secundariis gracilibus folio profunde cordato multilongioribus, spatha magna uberecta, flore solitario longipedicellato atropurpureo, sepalo dorsali synsepaloque anguste ovatis acutis, petalis attenuatis serrulatis, labello triangulari acuto minute papilloso.

Plant medium in size, epiphytic, caespitose; roots numerous, slender, fasciculate. Secondary stems slender, suberect, unifoliate, 8-16 cm long, with a close, tubular sheath below the middle and another 1-2 sheaths at the base. Leaf suberect to spreading, coriaceous, ovate, 5.5-7.5 cm long, 3-3.8 cm wide, the apex acuminate, acute, tridenticulate, the base sessile, deeply cordate, the basal lobes overlapping, ca. 1 cm beyond the junction with the secondary stem. Inflorescence a dense fascicle of single, successive, long-pedicellate, dark purple, widespread, flat flowers, from a suberect spathe 12-18 mm long, 5 mm wide, at the base of the leaf; peduncles 5-8 mm long, and floral bracts 4-5 mm long, enclosed within the spathe; pedicel 20 mm long; ovary 4 mm long; dorsal sepal narrowly ovate, acuminate, acute, 16 mm long, 4 mm wide; lateral sepals connate into a narrowly ovate, acute synsepal 16 mm long, 5.5 mm wide; petals narrowly ovate, oblique, attenuate, acute, 15 mm long, 2.2 mm wide, the margins minutely serrulate; lip ovate-triangular, acute, 4.5 mm long, 2 mm wide, the glenion well-developed, the surface cellular-papillose, the margins serrulate; column stout, 1 mm long, 2 mm wide.

ETYMOLOGY: From the Latin index, "a pointer, a sign," in allusion to the appearance of the flower.

TYPE: COLOMBIA: NARINO: epiphytic in cloud forest, La Planada above Ricaurte, alt. 1950 m, 2 Nov. 1979, C. Luer, J. Luer, A. Hirtz & K. Walter 4582 (HOLOTYPE: SEL).

DISTRIBUTION: Southern Colombia.

This species may be distinguished from its numerous cordate-leaved relatives by the medium-sized, broadly acuminate leaves, the large, suberect spathe, and the widely spread, dark purple, long-pedicellate flowers with narrow floral parts.

Pleurothallis membracidoides Luer, sp. nov.

Planta mediocris caespitosa, caulibus secundariis ancipitiis foliis ovatis longioribus, flore solitario successivo fasciculato flavescenti, sepalo dorsali synsepaloque ovatis anguste obtusis ringentibus, petalis subfalcatis crassis subscabris, labello parvo subquadrato anguloso apice truncato deflexo extus bidentato, lobis lateralibus anguste rotundatis erectis.

Plant medium in size, epiphytic, caespitose; roots numerous, fine, flexuous. Secondary stems slender, terete below, sharply laterally compressed above, unifoliate, 6-12 cm long, with a loose tubular sheath above the base, subtended by a shorter one. Leaf erect, coriaceous, ovate, 4.5-6.5 cm long, 2-3 cm wide, the apex acuminate, acute, tridenticulate, the base cuneate to rounded, shortly decurrent on the secondary stem. Inflorescence a succession of solitary, long-stemmed, gaping, glabrous flowers, yellow,

suffused with brown, borne in a fascicle from a 5 mm long spathe, at the apex of the secondary stem, 5-8 mm above the basal margin of the leaf; peduncles 15 mm long; floral bract 5 mm long; pedicels 12-17 mm long; ovary 2.5-3 mm long; dorsal sepal ovate, narrowly obtuse, 9 mm long, 3.5 mm wide; lateral sepals connate into an ovate, narrowly obtuse synsepal 9 mm long, 4 mm wide; petals thick, yellow, brownish below the middle, elliptical-subfalcate, acute, 7 mm long, 1.5 mm wide, the margins lightly scabrous; lip yellow-white above the middle, dark purple-brown below the middle, thick, subquadrate, 1.3 mm long, 1.25 mm wide, the anterior margin truncate with a deflexed, obtuse apex, with a pair of short, pointed, lateral teeth externally, the lateral margins erect with membranous, narrowly rounded lobes above the middle, the disc with a pair of low, rounded calli above the middle, the base transversely concave to accommodate the column-foot; column yellow-white, semiterete, 2.25 mm long, with a short, rounded foot.

ETYMOLOGY: Named for the resemblance of the lip to a treehopper, from the insect family Membracidae, Order Homoptera.

TYPE: COLOMBIA: NARINO: epiphytic in cloud forest north of Ricaurte, alt. ca. 1600 m, 3 Nov. 1979, C. Luer, J. Luer, A. Hirtz & K. Walter 4580 (HOLOTYPE: SEL).

DISTRIBUTION: Southern Columbia.

This ancipital-stemmed species is noteworthy for the peculiar shape of the minute lip. Tall, erect, lateral lobes flank the thick, subquadrate blade with a deflexed apex, and a pair of short, pointed teeth project externally to either side. The lip resembles some species of treehoppers.

Pleurothallis penicillata Luer, sp. nov.

Species haec habitu P. scoparum Rchb. f. similis, sed floribus minoribus flavis, synsepalo cum mento profunde inflato, petalis late ovatis et labello triangularem apiculato, lobis basalibus obliquis erosis acutis differt.

Plant medium in size, epiphytic, caespitose; roots numerous, fine, fasciculate. Secondary stems slender, erect, 10-19 cm long below the leaf, with a close, tubular sheath below the middle and another sheath at the base. Leaf erect, thinly coriaceous, elliptical, long-decurrent on the secondary stem, 7.5-12 cm long including the 0.5-1 cm long apical portion above the apex of the incorporated stem, 2-3 cm wide, the apex acuminate, acute, tridenticulate, the base cuneate on the secondary stem. Inflorescence a small, yellow, solitary flower produced successively in a dense fascicle 0.5-1 cm from the apex of the leaf, the spathe ca. 5 mm long, fugacious; peduncles 7-8 mm long, occasionally producing a second flower; floral bract 3-4 mm long; pedicel 11-12 mm long;

ovary 2 mm long; sepals glabrous, not widespreading, the dorsal sepal ovate, concave, subacute, 3 mm long, 2.25 mm wide, the lateral sepals connate into an ovate, obtuse synsepal 3.5 mm long, 2.5 mm wide unspread, deeply concave below the middle producing an inflated mentum; petals broadly ovate, subcarinate externally, narrowed in the distal third to an oblique, subacute apex, 3.5 mm long, 2 mm wide; lip trilobed-triangular, 1.3 mm long, 1.1 mm wide, the middle lobe thickened and shallowly cleft, shortly acuminate, acute, the basal lobes oblique, incurved, erose, acute, the base concave, hinged to the base of the column; column stout, terete, 1 mm long, footless.

**ETYMOLOGY:** From the Latin penicillus, "a painter's brush," in allusion to the appearance of the fascicle of peduncles at the apex of the leaf. Penicillatus, "like a painter's brush."

**TYPE:** COLOMBIA: NARINO: epiphytic in cloud forest north of Ricaurte, alt. 1600 m, 3 Nov. 1979, C. Luer, J. Luer, A. Hirtz & K. Walter 4610 (HOLOTYPE: SEL).

**DISTRIBUTION:** Southern Colombia.

Similar in habit to P. scoparum, the dense tuft of peduncles, like a brush, is borne near the apex of the leaf, most of which is long-decurrent on the secondary stem. The small, yellow flower has a deep, inflated mentum, broad petals, and a triangular lip with oblique, acute, basal lobes.

Pleurothallis ruscaria Luer, sp. nov.

Species haec habitu P. scoparum Rchb. f. similis, sed floribus minoribus purpureis, petalis obovatis abrupte acutis et labello integro anguste obovato cymbiformi differt.

Plant medium in size, epiphytic, caespitose; roots fine, flexuous, fasciculate. Secondary stems slender, 10-16 cm long below the leaf, with a close, tubular sheath below the middle and another sheath at the base. Leaf erect, thinly coriaceous, narrowly elliptical, long-decurrent on the secondary stem, 8-9.5 cm long including the 2-2.5 cm long apical portion above the apex of the incorporated stem, 1.2-1.5 cm wide, the apex acuminate, acute, tridenticulate, the base cuneate on the secondary stem. Inflorescence a small, purple, solitary flower produced successively in a dense fascicle 2-2.5 cm from the apex of the leaf, from a fugacious spathe ca. 5 mm long; peduncles 2-2.5 mm long; floral bract 3-4 mm long; pedicel 5-7 mm long; ovary 1.5 mm long; sepals glabrous, not widely spread, the dorsal sepal broadly ovate, concave, obtuse, 3.5 mm long, 3.5 mm wide spread out, the lateral sepals connate into a broadly ovate, concave, obtuse synsepal 3.5 mm long, 2.75 mm wide; petals oblong-obovate, curved, 3.75 mm long, 1.5 mm wide, abruptly acuminate, acute in the distal third; lip entire, narrowly obovate,

acute, lightly incurved, cymbiform, 2.25 mm long, 0.75 mm wide, the truncate base hinged to the base of the column; column stout, terete, 1 mm long, footless.

ETYMOLOGY: From the Latin ruscarius, "like a broom" (ruscum, a shrub from which brushes were made) in allusion to the tufted inflorescences.

TYPE: COLOMBIA: NARINO: epiphytic in cloud forest above Ricaurte, alt. ca. 1600 m, 3 Nov. 1979, C. Luer, J. Luer, A. Hirtz & K. Walter 4611 (HOLOTYPE: SEL).

DISTRIBUTION: Southern Colombia.

This species is similar in habit to P. scoparum and its relatives, but the tuft of peduncles is produced a little farther from the apex of a narrower leaf, most of which is decurrent on the secondary stem. The lip of the small, purple flower is entire, narrowly obovate and boat-shaped.

Pleurothallis taurus Luer, sp. nov.

Planta mediocris scandens caulibus secundariis proliferantibus, racemo multifloro folio elliptico acuminato duplongiore, floribus illis P. brachiatae Luer similis sed majoribus et lobis basalibus labelli anguste longissimis incurvatis.

Plant medium in size, epiphytic, scandent, 20-50 cm or more tall; roots slender, flexuous, from the bases of superposed stems. Secondary stems terete, unifoliate, proliferating, 4-13 cm long or longer, with a tubular sheath below the middle and another sheath at the base. Leaf erect, coriaceous, narrowly elliptical, 5-8 cm long, 1.5-3 cm wide, the apex acuminate, acute, tridenticulate, connate below into the sessile base. Inflorescence a single (always?), erect, densely many-flowered raceme 10-16 cm long including the peduncle ca. 3 cm long, from a spathe 1.5 cm long at the base of the leaf; floral bract 5 mm long; pedicel 3-4 mm long; ovary 3 mm long; flowers widespread, glabrous, yellow-green, with or without red dots; dorsal sepal ovate, acuminate, acute, 9 mm long, 3.75 mm wide; lateral sepals connate into a concave, ovate, acuminate, acute synsepal 9.5 mm long, 5 mm wide unspread; petals narrowly linear acute, thickened, 8 mm long, 0.4 mm wide lip 3-lobed, the blade ovate to suborbicular, 2 mm long, 1.8 mm wide, the apex rounded, shortly apiculate, the basal lobes incurved, each 3 mm long, 0.5 mm wide, the base deflexed, fixed to the base of the column-foot; column stout, 1 mm long, the foot obsolescent.

ETYMOLOGY: From the Latin taurus, "a bull," in allusion to the appearance of the long-horned lip.

TYPE: COLOMBIA: PUTUMAYO: epiphytic in cloud forest between La Cocha and Sibundoy, alt. ca. 2700 m, 29 July 1978, C. Luer, J. Luer, J. Kuhn, R. Escobar et al. 3077 (HOLOTYPE: SEL); CAUCA: Paramo de Barbillas, alt. 3070 m, 27 July 1978, C. Luer, J. Luer, J. Kuhn, R. Escobar et al. 3043 (SEL).

DISTRIBUTION: Southern Colombia.

The large flowers of this species, with the long, incurved, basal lobes of the lip, are most similar to those of P. brachiata, but the scandent habit of P. taurus immediately separates it.

Porroglossum portillae Luer & Andreetta, sp. nov.

Inter species generis Porroglossi Schltr. planta mediocris foliis ellipticis longipetiolatis reticulatis, pedunculo erecto gracili glabro, floribus successivis non-resupinatis dense purpureo guttatis, caudis crassis deflexis, petalis angustis apice dilatatis margine inferiore unidentato, labello cuneato truncato trilobato ciliato callo basali breviter pubescenti distinguitur.

Plant medium in size, epiphytic, caespitose; roots slender, flexuous. Secondary stems slender, black, unifoliate, 10-15 mm long, with 1-2 loose, tubular sheaths. Leaf erect, coriaceous, light green, reticulated in dark green, lightly verrucose, elliptical, long-petiolate, 4.5-6 cm long including the slender, blackish petiol 1-2 cm long, 1.2-1.5 cm wide, the apex obtuse, tridentate, cuneate below into the petiole. Inflorescence a congested raceme of 3-4 successive, non-resupinate flowers borne by an erect, slender, glabrous peduncle 8-11 cm long, with 3 widely spaced bracts, from a node low on the secondary stem; floral bracts thin, imbricating, 4-5 mm long; pedicel 5-6 mm long; ovary dark green subverrucose, pitted, 5 mm long; sepals yellow, diffusely spotted with purple-brown, suffused with rose centrally, the veins prominent externally, the middle sepal obovate, 7 mm long, 6 mm wide, connate to the lateral sepals for 4 mm to form a gaping sepaline cup, the rounded free portion contracted into a thick, spotted tail 5 mm long, the lateral sepals oblique, transversely ovate, 6 mm long, 8 mm wide, connate for 3 mm behind the column-foot, the obtuse apices contracted into thick, decurved tails 7 mm long; petals translucent light green with a purple midvein and spots, narrowly oblong, curved, 5 mm long, 1.25 mm wide, the apex dilated, rounded, the labellar margin with an acute tooth below the middle (a similar tooth is sometimes present on the opposite margin); lip yellow, lightly spotted with purple, the blade cuneate, shortly pubescent beneath, glabrous above, the truncate apex 3-lobed with ciliate margins, the midlobe concave and pubescent, the base with a shortly pubescent, cuneate callus above the curved, strap-like claw flexed around the apex of the column-foot, the blade 5 mm long, 4.5 mm wide, the claw 1.5 mm long; column green, marked with purple, broadly longitudinally winged, semiterete, 2.5 mm long, the stigma

with a short tooth on each side, the foot 5 mm long.

ETYMOLOGY: Named in honor of Mario Portilla of Cuenca, Ecuador, co-discoverer of this species.

TYPE: ECUADOR: MORONA-SANTIAGO: epiphytic in wet forest near Rio Calagras, alt. 1500 m, April 1979, A. Andreetta & M. Portilla 3401, cultivated in Cuenca, flowered in cultivation 29 Sept. 1980 C. Luer 5447 (HOLOTYPE: SEL).

DISTRIBUTION: Southeastern Ecuador.

Porroglossum portillae is characterized by the reticulated, long-petiolate leaves and an erect inflorescence of non-resupinate, successive flowers. The sepals are yellowish, flushed with rose, and diffusely spotted with purple-brown. The tails of all three sepals are thick and turned downward, so that when the flower is viewed from the accustomed position, the tails of the lateral sepals seem abruptly upturned.

Trisetella abbreviata Luer, sp. nov.

Planta pusilla pro genere pedunculo gracili minute subscabroso foliis brevibus anguste linearibus semiteretibus caespitosis duplongiore, sepalo dorsali ovatis longicaudatis, synsepalo oblongo plano caudis supra apicem brevibus, petalis labelloque perparvulis.

Plant very small, epiphytic, caespitose; roots fine, fasciculate. Secondary stems abbreviated, 1-2 mm long, unifoliolate, enclosed by 1-2 thin, tubular sheaths. Leaf erect to suberect, narrowly linear, semiterete, acute, 10-20 mm long, 1.5-2 mm wide, green, mottled with purple beneath. Inflorescence a solitary (always ?) flower borne by an erect, filiform, lightly scabrous peduncle 3-4 cm long, with a close bract below the middle, from a node on the secondary stem; floral bract 2-3 mm long; pedicel 5-6 mm long; ovary 1.5 mm long, scabrous; dorsal sepal yellow with 3 thin, red veins, the dorsal vein verrucose externally, transversely ovate, 4 mm long, 5 mm wide, connate to the lateral sepals for 2 mm, the obtuse, free portion conduplicate into an erect, slender, yellow tail 12 mm long, slightly thickened toward the apex; lateral sepals purple, connate to the rounded apex into an oblong lamina 16 mm long, 4 mm wide, more or less flat without forming a chin or ventral dilatation, the slender tails purple, 4 mm long, from the lateral margins 3 mm below the apex; petals translucent yellow, marked with purple, oblong, 2 mm long, 0.6 mm wide, the truncate apex with an abrupt, central tooth; lip red, ovate, 2 mm long, 1 mm wide, the apex obtuse to rounded, the deeply cordate base hinged to the column-foot; column yellow, suffused with red, semiterete, 2 mm long, the foot 1 mm long.



ETYMOLOGY: From the Latin abbreviatus, "shortened," referring to the short vegetative and floral parts.

TYPE: ECUADOR: ZAMORA-CHINCHIPE: epiphytic in cloud forest between Loja and Zamora, alt. ca. 1500 m, J. Kuhn, cultivated at J & L Orchids, Easton, Ct., flowered in cultivation 16 Nov. 1977, C. Luer 2209 (HOLOTYPE: SEL).

DISTRIBUTION: Southeastern Ecuador.

This species is notable for the very small, narrowly terete leaves; a twice taller, subscabrous peduncle; a short dorsal sepal with an erect tail; a flat, non-gibbous, non-ventricose synsepal with short tails above the apex; and minute petals and lip.

Trisetella scobina Luer, sp. nov.

Inter species Trisetellae Luer planta mediocris foliis semiteretibus maculatis, pedunculo longissimo verrucosissimo, flore grandi, petalis serrulatis et labello quadricarinato distinguitur.

Plant medium in size, epiphytic, caespitose; roots fine, fasciculate. Secondary stems 3-4 mm long, unifoliolate, enclosed by 1-2 thin, tubular sheaths. Leaf erect to suberect, thick, narrowly linear, semiterete, acute, 2-4 cm long, 2.5-3 mm wide, dark green, spotted with purple. Inflorescence a succession of comparatively large flowers borne in a congested raceme by an ascending, blackish, slender, densely scabrous peduncle 9-13 cm long, with a bract below the middle, from a node on the secondary stem; floral bract thin, imbricating, 5 mm long; pedicel 5-7 mm long; ovary verrucose, 3.5 mm long; dorsal sepal brown with yellow, entire margins, ovate, 5 mm long, 4 mm wide, connate to the lateral sepals for 1 mm, subverrucose externally, the subacute apex contracted into an erect, slender tail 25 mm long; lateral sepals purple-brown with yellow margins, minutely pubescent within, connate into an oblong lamina 24 mm long, 8 mm wide, shallowly gibbous at the base, the slender, yellow tails 12 mm long, from the margins 4 mm below the obtusely bilobed apex; petals translucent yellow-white, oblong, 4 mm long, 1.5 mm wide, the subacute apex minutely serrulate; lip purple, ovate, obtuse, 4.5 mm long, 1.5 mm wide, the disc with a pair of longitudinal carinae plus a second shorter pair in the middle above the base, the deeply cordate base hinged to the column-foot; column light green, semiterete, 3.75 mm long, the foot 1.5 mm long.

ETYMOLOGY: From the Latin scobina, "a file, or rasp," referring to the file-like peduncle.

TYPE: ECUADOR: MORONA-SANTIAGO: epiphytic in cloud forest east of Paute, alt. ca. 2000 m, B. Malo, cultivated near Cuenca, flowered in cult. 27 Sept. 1980, C. Luer 5569 (HOLOTYPE: SEL).

DISTRIBUTION: Eastern Ecuador.

This species may be recognized by the narrow, semiterete, purple-spotted leaves; a very long, markedly scabrous peduncle, and large flowers with serrulate petals and a lip with two pairs of longitudinal carinae.