

MISCELLANEOUS NEW SPECIES IN THE PLEUROTHALLIDINAE (ORCHIDACEAE)

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ABSTRACT. New species in the following Pleurothallidinae genera or infrageneric taxa (not yet treated in *Icones Pleurothallidinae*) are described and illustrated: *Dryadella*, non-Ecuadorian *Lepanthes*, *Masdevallia* subgen. *Meleagris*, *Masdevallia* subsect. *Caudatae*, *Masdevallia* subsect. *Oscillantes*, *Octomeria*, *Pleurothallis* subgen. *Acianthera*, and *Stelis*. The 19 taxa are *Dryadella weneri* (Ecuador), *Lepanthes cyrillicola* (Cuba), *L. decoris* (Cuba), *L. echinata* (Peru), *L. jesupii* (Jamaica), *L. martae* (Cuba), *L. revoluta* (Peru), *L. terborchii* (Peru), *Masdevallia castor*, (Peru), *M. pantomima* (Ecuador), *M. zamorensis* (Ecuador), *Octomeria dalstroemii* (Ecuador), *O. rotundata* (Ecuador), *Pleurothallis cremasta* (Ecuador), *Stelis chasei* (Costa Rica), *S. hammellii* (Costa Rica), *S. meganthera* (Panama), *S. megapetala* (Panama), and *S. veraguasensis* (Panama).

Key words: Orchidaceae, Pleurothallidinae, *Dryadella*, *Lepanthes*, *Masdevallia*, *Octomeria*, *Pleurothallis*, *Stelis*

INTRODUCTION

Nineteen new species in the following Pleurothallidinae genera or infrageneric taxa not yet treated in *Icones Pleurothallidinae* are described and illustrated: *Dryadella*, non-Ecuadorian *Lepanthes*, *Masdevallia* subgen. *Meleagris*, *Masdevallia* subsect. *Caudatae*, *Masdevallia* subsect. *Oscillantes*, *Octomeria*, *Pleurothallis* subgen. *Acianthera*, and *Stelis*.

NEW SPECIES

Dryadella weneri Luer, sp. nov. TYPE: Ecuador. Zamora-Chinchipe: near San Francisco Biological Station, alt. ca. 2700 m, month unknown in 2000, *F. Werner 12528* (Holotype: MO), C. Luer illustr. 19376.

FIGURE 1.

Species haec *D. lilliputiana* (Cogn.) Luer similis, sed foliis anguste ovatis crassis semiteretibus, sepalorum caudis laminae subaequilongis, labelli lamina convexa bicallosa apice late rotundata ungueque breve laetque et columna dentata distinguitur.

Plant small, epiphytic, densely caespitose; roots slender but proportionately coarse. **Rami-cauls** erect, 1–1.5 mm long, enclosed by a tubular sheath. **Leaf** erect, thickly coriaceous, narrowly ovate, semiterete, subacute, 15–20 mm long, 4–5 mm wide, 3 mm thick, abruptly narrowed at the base. **Inflorescence** a congested, successively few-flowered raceme borne by a peduncle 1–2 mm long, enclosed by a sheath, from low on the ramicaul; floral bracts thin, imbricating, acuminate, 4 mm long; pedicel 3–4 mm long; ovary 2 mm long, 2 mm wide, thickly trialate. **Sepals** spotted with red, the dorsal sepal

ovate, concave, the blade 4 mm long, 3 mm wide, barely connate to the lateral sepals to form a gaping sepaline cup, the apex subacute, contracted into a thickened tail 3–3.5 mm long, the blades of the lateral sepals broadly ovate, oblique, 3 mm long, 2.5 mm wide, the apex obtuse, contracted into a thickened tail 3–3.5 mm long, with a transverse callus above the deflexed base. **Petals** subsagittate-obovate, the apex obtuse with a broad angle on the upper margin and a broadly rounded angle on the labellar margin, 2 mm long, 1.75 mm wide. **Lip** unguiculate, the blade suborbicular, convex, with an erect, acute angle to either side of the claw, 2 mm long expanded, 1.75 mm wide, the disc with a pair of low, erect calli below the middle, the apex broadly rounded, decurved, the claw thick, 0.75 mm long, 0.5 mm wide, with a pair of lobules at the base, hinged to the apex of the column-foot. **Column** semiterete, 2.75 mm long, with a retrorse, oblong process below the middle, the apex dentate, the foot equally long, thick with the apex of the ovary.

Etymology. Named in honor of Florian Werner, of the San Francisco Biological Station, who discovered this species.

This species is most similar to the Brazilian *Dryadella lilliputiana*, but distinguished from the latter by shorter tails; a short, thick claw of the lip; and a dentate column. *Dryadella weneri* is characterized by the small, densely caespitose habit with thick, semiterete to fusiform leaves. The leaves, broadest below the middle, are contracted at the base into a very short pedicel and ramicaul. The flowers are produced in a congested, successively flowered raceme. The tails

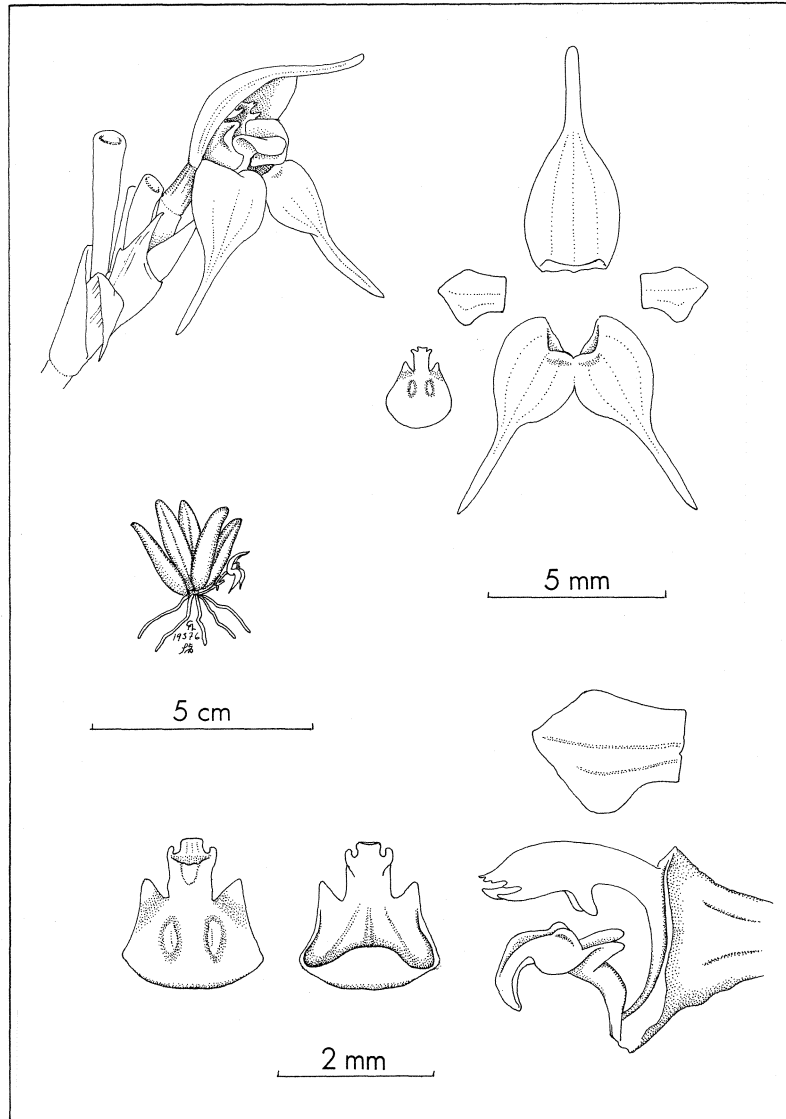


FIGURE 1. *Dryadella wernerii* Luer.

of the sepals are thick and about as long as the blade. The margins of the petals are broadly angled. The claw of the lip is short and broad. The column bears a pair of retrorse processes near the middle, while the apex is denticulate.

Lepanthes cyrillicola Luer & Llamacho, sp. nov. TYPE: Cuba. Santiago de Cuba: Sierra Maestra, Pico de Turquino, epiphytic on *Cyrrilla antillana*, 8 June 1999, J. Llamacho 0014 (Holotype: HAC; Isotype: MO), C. Luer illustr. 19258, Cuba: Santiago de Cuba: Sierra Maestra, Pico de Turquino,

epiphytic on *Cyrrilla antillana*, 8 June 1999, J. Llamacho 0014 (Holotype: HAC; Isotype: MO), C. Luer illustr. 19258.

FIGURE 2.

Planta parva, foliis late ellipticis obtusis racemo congesto longioribus, sepalis ovatis obtusis, petalis transverse bilobis suboblongis, labelli laminis ellipticis convexis, connectivis brevibus et appendice triangulari aequilongo distinguitur.

Plant small, epiphytic, caespitose; roots slender. **Ramicauls** slender, erect, 17–22 mm long, enclosed by 5–6 minutely ciliate, lepanthiform

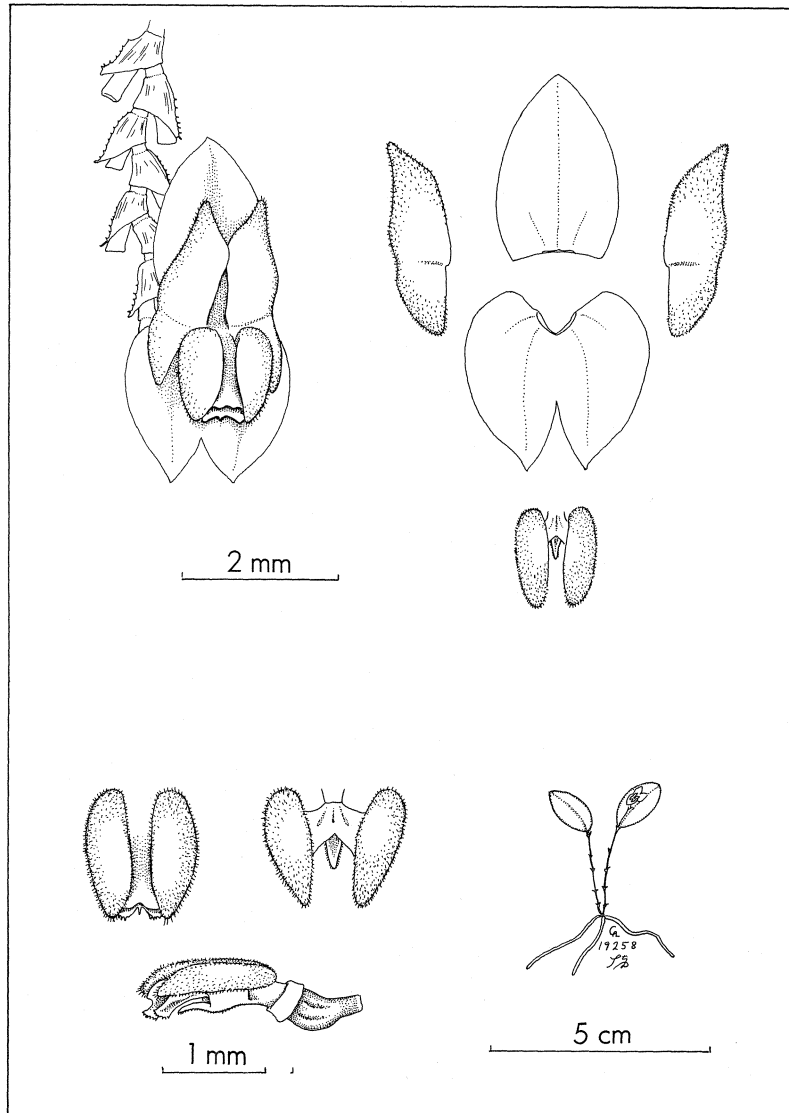


FIGURE 2. *Lepanthes cyrillicola* Luer & Llamacho.

sheaths. **Leaf** erect, thinly coriaceous, suffused with purple, elliptical, obtuse, slightly concave, 11–14 mm long, 6.5–7.5 mm wide, the base broadly cuneate into a petiole less than 1 mm long. **Inflorescence** a congested, distichous, successively many-flowered raceme up to 5 mm long, borne behind the leaf by a filiform peduncle 4 mm long; floral bracts muricate, 1 mm long; pedicels 0.8 mm long; ovary 0.6 mm long. **Sepals** light red, entire, the dorsal sepal ovate, obtuse, 2.75 mm long, 1.75 mm wide, incompletely 3-veined, connate to the lateral sepals for

0.4 mm, the lateral sepals ovate, oblique, subacute, 2.5 mm long, 1.25 mm wide, partially 2-veined, connate 1 mm above the middle. **Petals** red-purple, microscopically pubescent, transversely bilobed, 0.75 mm long, 2.75 mm wide, the upper lobe oblong with the apex obliquely truncate, the lower lobe oblong-triangular, obtuse, shorter than the upper lobe. **Lip** red-purple, bilaminate, the blades elliptical, obtuse, convex, minutely pubescent, 1.6 mm long, the oblong, short, the body connate to the column above the base, the sinus obtuse with the appendix micro-

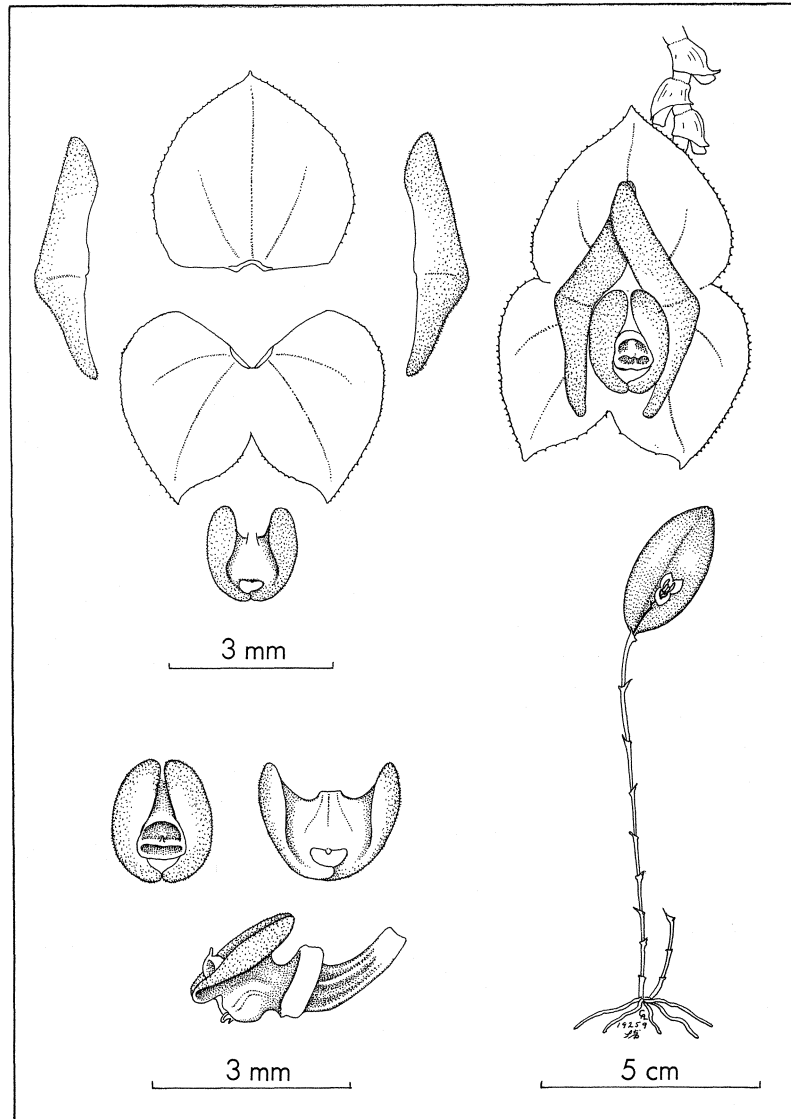


FIGURE 3. *Lepanthes decoris* Luer & Llamacho.

scopically pubescent, narrowly triangular, as long as the connectives. *Column* semiterete, 1.6 mm long, the anther and stigma apical.

Etymology. Named for *Cyrilla* the genus of trees upon which this species was growing.

This species is known only from the original collection. It is characterized by the small habit; broadly elliptical, obtuse leaves; a congested raceme borne behind the leaf; obtuse sepals; broad petals; and convex, elliptical blades of the lip borne by short connectives with an equally long, triangular appendix.

***Lepanthes decoris* Luer & Llamacho, sp. nov.**

TYPE: Cuba. Santiago de Cuba: Sierra Maestra, Pico de Turquino, paso de Mono, 5 June 1999, *J. Llamacho 0010A* (Holotype: HAC; Isotype: MO), C. Luer illustr. 19259. FIGURE 3.

Species haec *L. acunae* Hesp. similis sed vaginis nondilatatis, inflorescentia quam folio brevior, sepalis minutissime denticulatis, petalorum lobo inferiore quam superiore brevior, labelli laminis apice incurvatis differt.

Plant small to medium in size, epiphytic,

caespitose; roots slender. *Ramicauls* slender, erect, ca. 9 cm long, enclosed by 8–9 minutely ciliated, lepanthiform sheaths. *Leaf* erect, coriaceous, elliptical, acute to subacute, margined, minutely subdentate above the middle, 3.5 cm long, 1.7 cm wide, the base cuneate into a petiole ca. 1.5 mm long. *Inflorescence* a congested, distichous, successively several-flowered raceme up to 5 mm long, borne on top of the leaf by a filiform peduncle 5–10 mm long; floral bracts oblique, 1.5 mm long; pedicels 1 mm long; ovary carinate, 1.5 mm long. *Sepals* light yellow, suffused with red, minutely denticulate, carinate, the dorsal sepal broadly ovate to suborbicular, shallowly concave, broadly obtuse, very shortly acuminate, 4 mm long, 4 mm wide, 3-veined, connate to the lateral sepals for 1 mm, the lateral sepals broadly ovate, oblique, obtuse, very shortly acuminate, 3.5 mm long, 2.5 mm wide, connate 1.5 mm. *Petals* yellow with tips purple, minutely pubescent, transversely bilobed, 1 mm long, 4.5 mm wide, the upper lobe oblong, obliquely subtruncate-obtuse, 2.5 mm long, the lower lobe triangular, narrowly obtuse, 2 mm long. *Lip* purple, cellular at most, bilaminar, 2 mm long, the lobes obliquely oblong-falcate, forming a blade below the middle, with the bases rounded and apices oblong, incurved beneath the column, the connectives broadly cuneate, the body deep, connate to the base of the column, the sinus broad with a triangular, bipartite appendix hinged externally. *Column* stout, semiterete, 1 mm long, the anther dorsal, the stigma apical.

Etymology. From the Latin *decor, decoris*, “of beauty,” referring to the flower.

This species is apparently endemic on Pico de Turquino of the Sierra Maestra. The plants are characterized by slender *ramicauls* with obliquely acuminate ostia; a congested raceme borne on top of an elliptical leaf; broadly ovate minutely denticulate sepals; petals with elongated lobes, the upper longer than the lower; and a lip with lunate blades formed below the middle and with apices incurved beneath the column. The appendix is bipartite and hinged just outside the transverse sinus.

Another specimen (Llamacho 0010B) collected with the above is smaller with ovate leaves and a similar inflorescence but with much shorter lobes of the petals.

Lepanthes echinata Luer & Cloes, sp. nov.

TYPE: PERU: Huánuco: near Carpish, collected July 2000, cultivated in Hasselt, Belgium, by P. Cloes s.n. (Holotype: MO), C. Luer illustr. 19416. FIGURE 4.

Species haec *L. nycteris* Luer & Vásquez affinis, sed

sepalo dorsali profunde concavo et labelli lobis triangularibus retrorsis differt.

Plant small, epiphytic, caespitose; roots slender. *Ramicauls* slender, erect, 2–4 cm long, enclosed by 4–5 microscopically ciliate, lepanthiform sheaths. *Leaf* erect, coriaceous, broadly elliptical, obtuse, 20 mm long, 10 mm wide, the base broadly cuneate, contracted into a petiole 1 mm long. *Inflorescence* a lax, successively few-flowered raceme, up to 4 cm long including the slender peduncle 2 cm long, exceeding the leaf; floral bracts 1.5 mm long; pedicels 1.5 mm long; ovary echinate, 2 mm long. *Sepals* whitish, striped with purple along the veins, the margins erose-fimbriate, the dorsal sepal orbicular, deeply concave, 9 mm long, 8 mm wide unexpanded, rounded at the apex with a slender tail 3 mm long, connate to the lateral sepals for 1 mm, the lateral sepals connate 8 mm into a synsepal, concave above the base for about a fourth the length, convex above the cavity, the sides recurved above the cavity, 11 mm long, 9 mm wide, with the tips of the laterals contracted into acute, incurved tails 3 mm long. *Petals* purple, transversely lobed, 0.3 mm long, 3 mm wide, the lobes narrowly linear, about equal. *Lip* purple, bilobed, the lobes triangular, retrorse, 1.75 mm long, 1 mm wide, flanking the column, with the anterior corners rounded and the posterior angles acute, ciliate-pubescent, the body narrow, connate to under surface of the column at the base, no appendix seen. *Column* terete, 2.25 mm long, the anther and the stigma apical.

Etymology. From the Latin *echinatus*, “prickly,” referring to the sepals.

This species is closely related to Bolivian *Lepanthes nycteris*, but the flowers are easily distinguished by the deeply concave, orbicular dorsal sepal. As in *L. nycteris*, the synsepal is concave in the basal third above which it is convex, where the sides recurve. The apices are contracted into acute tails. The lobes of the lip are triangular and retrorse.

Lepanthes jesupii Luer, sp. nov. TYPE: Jamaica.

Surrey: St. Thomas: Rio Grande near Bowden Pen, collected by H. Brown, 1967, flowered by P. Jesup in Bristol, CT, 26 Apr. 1987, C. Luer A12873 (Holotype: MO).

FIGURE 5.

Species haec *L. ellipticae* Fawc. & Rendle affinis sed habitu majore, foliis orbiculatis lateribus deflexis, floribus flavis majoribus, lobis petalorum nec subquadratis non truncatis, laminis labelli glabris differt.

Plant medium in size, epiphytic, caespitose; roots slender. *Ramicauls* erect, slender, 3–5 cm long, enclosed by 7–8 long-ciliate, lepanthiform sheaths. *Leaf* erect, coriaceous, green, broadly

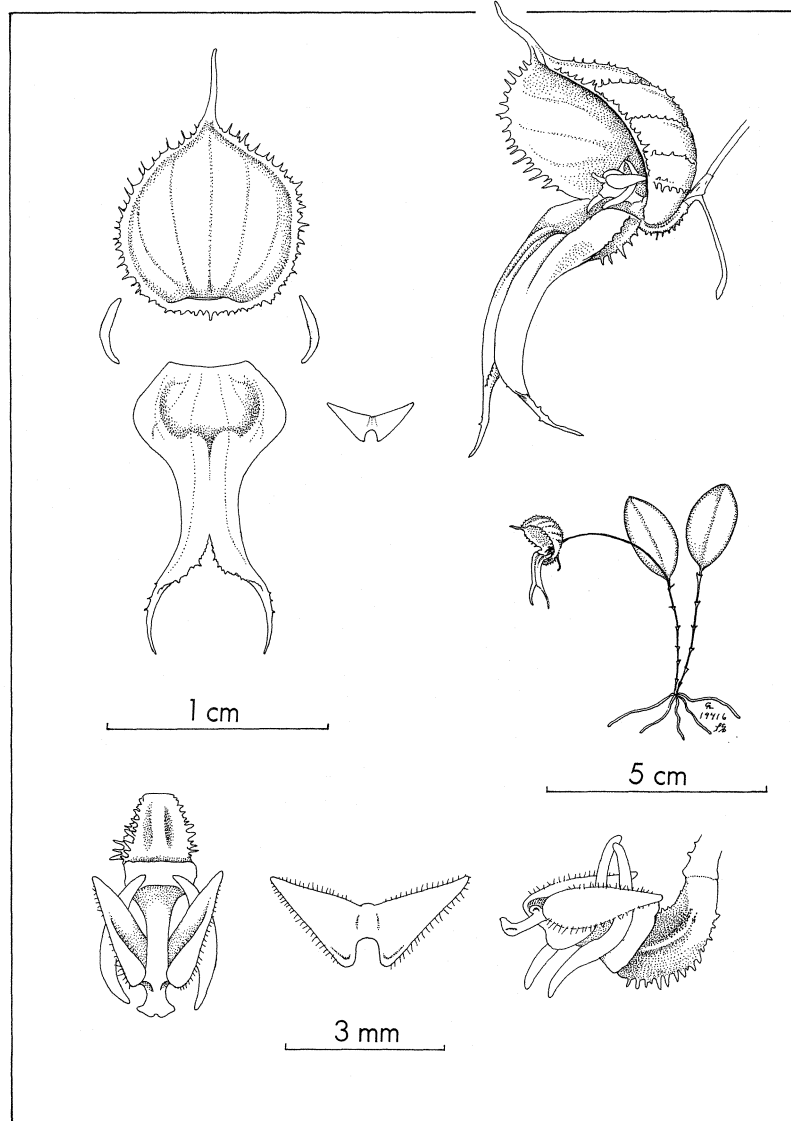


FIGURE 4. *Lepanthes echinata* Luer & Cloes.

elliptical to suborbicular, the apex obtuse to rounded, the sides of mature leaves deflexed, 25–35 mm long, 21–27 mm wide, the rounded base abruptly contracted into a petiole 2 mm long. **Inflorescence** a congested, distichous, successively several-flowered raceme up to 7 mm long, borne on top or beneath the leaf by a filiform peduncle 6–7 mm long; floral bracts 1.5 mm long; pedicels 1.5 mm long; ovary 2 mm long. **Sepals** light yellow, entire, ovate, acute, the dorsal sepal 6.5 mm long, 3.75 mm wide, connate to the lateral sepals for 1.75 mm, the lateral sepals oblique, 6 mm long, 3 mm wide,

connate 1.5 mm. **Petals** light yellow, minutely pubescent, transversely bilobed, 1 mm long, 1.5 mm wide, the lobes subequal in size, the upper lobe oblong, oblique, rounded, the lower lobe triangular, acute, with an obtuse angle on the margin. **Lip** light yellow, glabrous, bilaminiate, the blades narrowly ovate as thickened margins of the falcate connectives, 2 mm long, embracing the column, the apices narrowly acute, attenuate, protruding beyond the apex of the column, the connectives cuneate, the body broad, connate to the base of the column, the sinus acute, with a minute, oblong, pubescent appen-

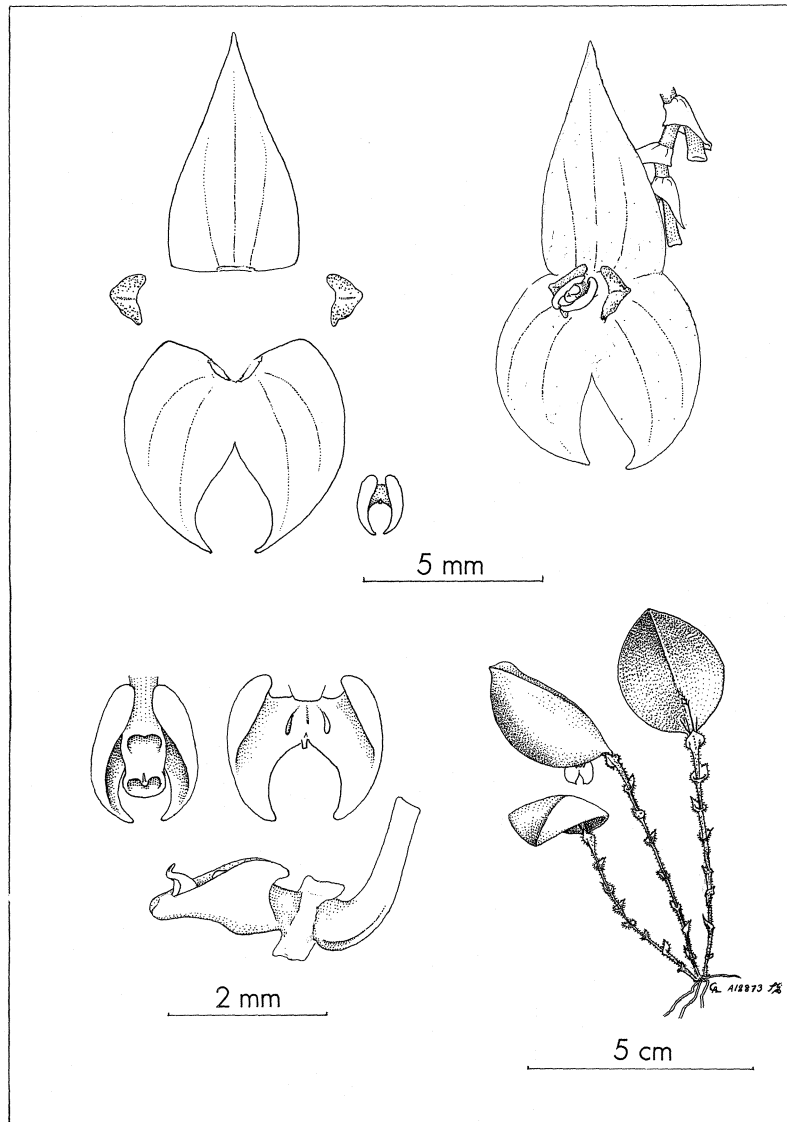


FIGURE 5. *Lepanthes jesupii* Luer.

dix. **Column** stout, 1.5 mm long, the anther and stigma apical.

Etymology. Named in honor of H. Phillips Jesup of Bristol, Connecticut, who has successfully cultivated this species for more than 25 years.

Paratypes. Jamaica. Surrey: St. Thomas: Rio Grande near Bowden Pen, alt. 900 ft., M.R. Crosby & W.R. Anderson 1087 (DUKE, UCWI).

This rare species is apparently endemic in a limited area of forest of the eastern part of the

island. One plant has been in cultivation for about 25 years by Jesup in Connecticut. It had been considered to be a form of the rather frequent *Lepanthes elliptica* that is found in the central part of the island.

Lepanthes jesupii is related to *L. elliptica* from which it differs in the larger habit; large, green, round leaves with the sides more or less decurved; larger, pale yellow flowers; petals with oblique lobes that are not quadrate and truncate; and glabrous blades of the lip.

Lepanthes martae Luer, sp. nov. TYPE: Cuba. Collection data unavailable, 1999, M.A.

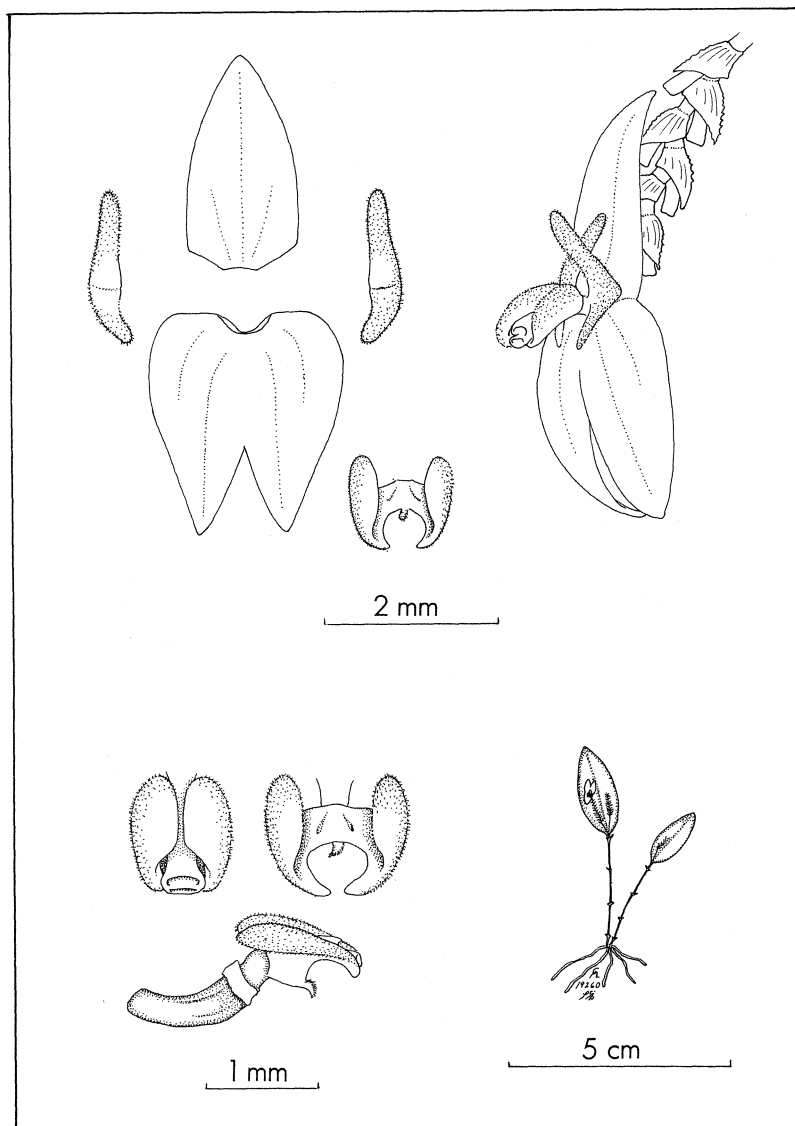


FIGURE 6. *Lepanthes mariae* Luer.

Díaz 10 (Holotype: HAC; Isotype: MO), C. Luer illustr. 19260. FIGURE 6.

Planta parva, racemo congesto folio elliptico microscopicamente denticulato breviori, sepalis triangularibus acutis lateralibus semiconnatis, petalorum lobis anguste oblongis inferiore breviori, labello erecto lamina ovoides apice incurvatis, connectivis corporeque latis cum appendice oblongis ciliatis distinguitur.

Plant small, epiphytic, caespitose; roots slender. **Ramicauls** slender, erect, 10–25 mm long, enclosed by 3–4 microscopically ciliate, lepanthiform sheaths. **Leaf** erect, coriaceous, elliptical-ovate, acute to subacute, microscopically

subdenticulate, 10–25 mm long, 4–9 mm wide, the base cuneate into a petiole ca. 1.5 mm long. Inflorescence a congested, distichous, successively several-flowered raceme up to 8 mm long, borne behind the leaf by a filiform peduncle 4–5 mm long; floral bracts oblique, muriculate, 0.75 mm long; pedicels 0.75 mm long; ovary 1 mm long. **Sepals** color?, glabrous, the dorsal sepal narrowly ovate, acute, 2.5 mm long, 1.25 mm wide, incompletely 3-veined, connate to the lateral sepals for 0.3 mm, the lateral sepals connate 1.25 mm, to above the middle, into an ovate, bifid lamina with acute tips, 2.5 mm long, 2 mm

wide together, incompletely 4-veined. **Petals** color?, minutely pubescent, transversely bilobed, 0.3 mm long, 1.75 mm wide, the upper lobe narrowly oblong, obtuse, the lower lobe oblong-triangular, obtuse, half as long as the upper lobe. **Lip** color?, minutely pubescent, bilaminar, 1 mm long, the lobes ovoid, rounded at the base, narrowed above the middle with the apices incurved beneath the column, the connectives and body broad, with the sinus transverse, with an oblong, ciliate appendix. **Column** semiterete, 1 mm long, the anther and stigma apical.

Etymology. Named for Marta Aleida Díaz, who collected this species.

This species is characterized by a small habit; a congested raceme shorter than elliptical leaves with a microscopically denticulate margin; triangular sepals with the laterals connate above the middle; petals with oblong lobes, the upper twice as long as the lower; and a protruding column surrounded by convex, minutely pubescent blades with narrowed apices curved beneath the column. The appendix is small, oblong, and ciliate.

Lepanthes revoluta Luer & Cloes, sp. nov.

TYPE: Peru. Huánuco: near Carpish, alt. 2700 m, July 2000, *P. Cloes 200813* (Holotype: MO), C. Luer illustr. 19418.

FIGURE 7.

Species haec *L. katleri* Luer affinis, sed sepalis non erosis, petalorum lobis oblongis subsigmoideis et labelli lobis late flabelliformibus cum appendice differt.

Plant small, epiphytic, caespitose; roots slender. **Ramicauls** slender, erect, 3–4 cm long, enclosed by 6–7 microscopically ciliate, lepanthiform sheaths. **Leaf** erect, coriaceous, elliptical, subacute to obtuse, 25–27 mm long, 11 mm wide, the base cuneate into a petiole 2 mm long. **Inflorescence** a lax, successively few-flowered raceme, 1–3 cm long, borne by a slender peduncle 3–3.5 cm long, exceeding the leaf; floral bracts 2 mm long; pedicels 2 mm long; ovary carinate, 2 mm long; sepals? whitish, striped with purple along the veins, the margins entire, the dorsal sepal broadly ovate below the middle, contracted above the middle into a narrowly triangular, acute apex, 11 mm long, 7.5 mm wide, 3-veined, connate to the lateral sepals for 1.5 mm, the lateral sepals connate 10 mm into a synsepal with the sides revolute, 13 mm long, 5 mm wide, 4-veined, with the free tips acute, 2 mm long. **Petals** diffusely pubescent, transversely lobed, 1 mm long, 3.5 mm wide, 1-veined, with a minute apiculum on the outer margin at the midvein, the lobes oblong-sigmoid, the lower lobe slightly longer. **Lip** bilobed, the lobes flabellate with broadly rounded, slightly thick-

ened margins, 2 mm long, 1.4 mm wide, flanking the column, ciliate-pubescent, the body connate to under surface of the column at the base, the appendix small, oblong, pubescent. **Column** terete, 2 mm long, the anther and the stigma apical.

Etymology. From the Latin *revolutus*, “revolute,” referring to sides of the synsepal.

This species is characterized by a relatively large flower borne successively in a distantly, few-flowered raceme. The dorsal sepal is broadly ovate but acutely triangular above the middle. The lateral sepals are connate into a tubular synsepal with the revolute sides. The lobes of the petals are sigmoid and pubescent. The lobes of the lip are flabellate.

Lepanthes terborchii Luer & Sijm, sp. nov.

TYPE: Peru. Pasco: Oxapampa, collected by H. ter Borch s.n., July 2000, cultivated by P. Cloes, *C. Luer 19419* (Holotype: MO).

FIGURE 8.

Species haec *L. nycteris* Luer & Vásquez affinis, sed synsepali lateribus non valde recurvis, petalis brevioribus et crassioribus, labelli lobis subquadratis differt.

Plant small, epiphytic, caespitose; roots slender. **Ramicauls** slender, erect, 1.5–3 cm long, occasionally superposed, enclosed by 4–6 microscopically ciliate, lepanthiform sheaths. **Leaf** erect, coriaceous, broadly elliptical, obtuse, 12–18 mm long, 8–13 mm wide, the base broadly cuneate, contracted into a petiole 3 mm long. **Inflorescence** a lax, successively few-flowered raceme, 1–2 cm long, borne by a slender peduncle 3 cm long, exceeding the leaf; floral bracts 1.5 mm long; pedicels 1.5 mm long; ovary echinate, 2 mm long. **Sepals** whitish, striped with purple along the veins, the margins erose-fimbriate, the dorsal sepal orbicular, shallowly concave, 9 mm long, 9 mm wide, rounded at the apex with a short, acuminate tip, connate to the lateral sepals for 1 mm, the lateral sepals connate 8 mm into a synsepal, shallowly concave above the base, longitudinally convex above the cavity, the sides not recurved, 12 mm long, 5 mm wide, with the tips of the laterals narrowly acute, free 3 mm. **Petals** purple, cellular-papillose, transversely lobed, 0.5 mm long, 2.5 mm wide, the lobes oblong-falcate, incurved, the lower lobe narrower. **Lip** purple, bilobed, the lobes subquadrate-truncate, 1 mm long, 0.5 mm wide, flanking the column, short- and long-ciliate-pubescent, the body broad as the blades, connate to under surface of the column at the base, the appendix replaced by cilia. **Column** terete, 2 mm long, the anther and the stigma apical.

Etymology. Named for Herman ter Borch

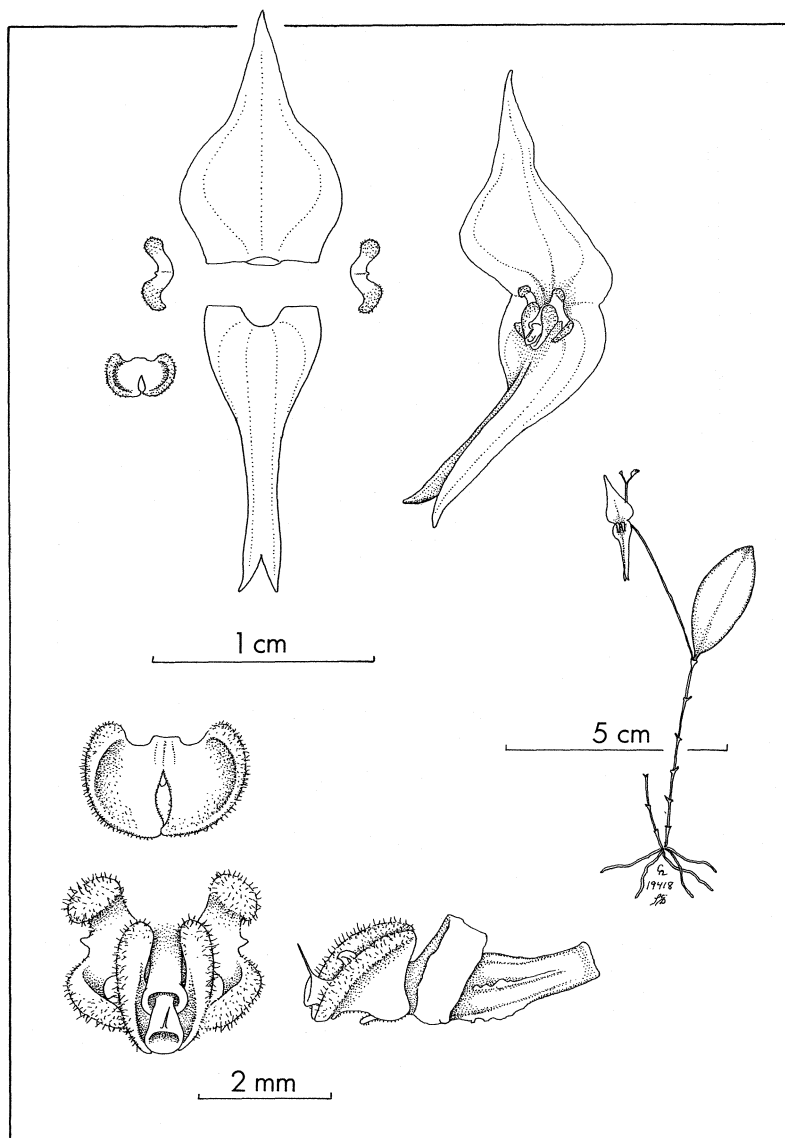


FIGURE 7. *Lepanthes revoluta* Luer & Cloes.

of Eindhoven, the Netherlands, who collected this species.

Paratype. Peru. Pasco. Oxapampa, collected by H. ter Borch s.n., cultivated by A.P. Sijm 992604 (paratype: MO), C. Luer illustr. 19304.

This species is closely related to Bolivian *Lepanthes nycteris*, but the flowers are easily distinguished by the synsepal that is only shallowly concave in the basal third, beyond which the sides are not recurved. The apices are narrowly acute. The lobes of the lip are subquadrate.

Masdevallia castor Luer & Cloes, sp. nov.

TYPE: Peru. Amazonas: between Lacallate and Pomacochas, alt. 2200 m, July 1998, P. Cloes & M. Cloes 990913 (Holotype: MO), C. Luer illustr. 19270. FIGURE 9.

Species haec *M. andreottanae* Luer affinis, sed labelli alis majoribus et labelli apice latiore obtuso recurvo differt.

Plant small to medium in size, epiphytic, caespitose; roots slender. **Ramicauls** blackish, slender, 1–1.5 cm long, enclosed by 2–3 loose,

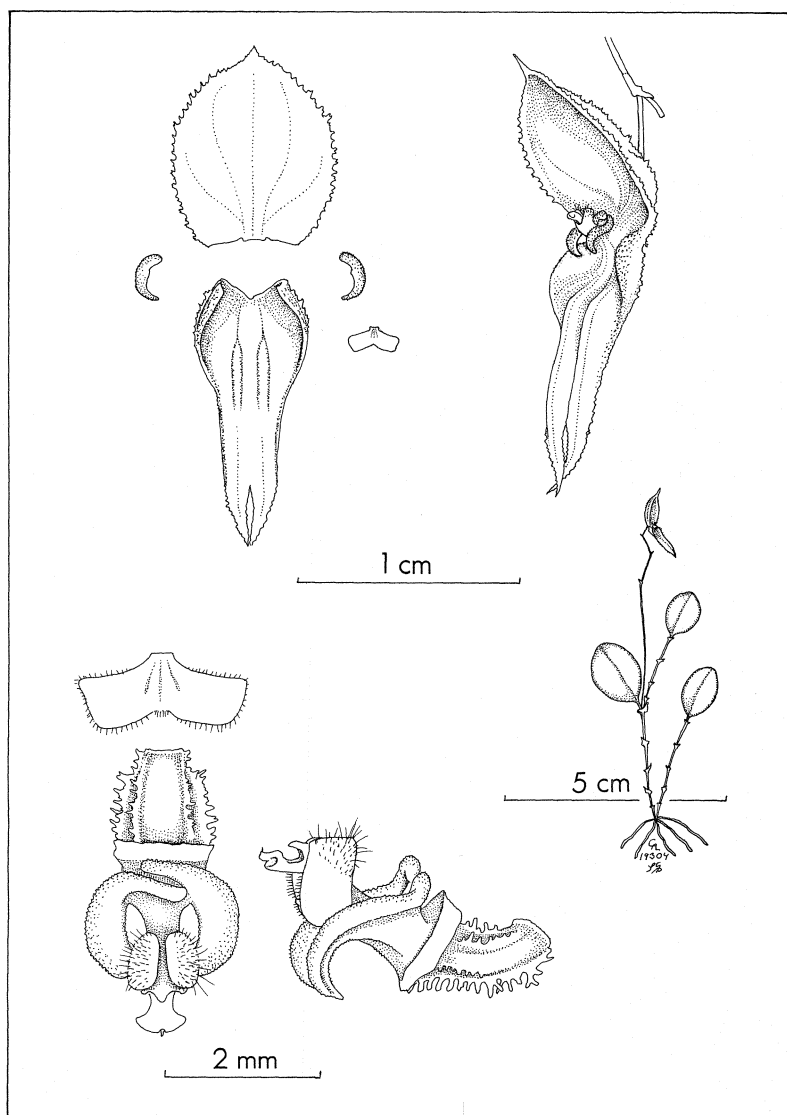


FIGURE 8. *Lepanthes terborchii* Luer & Sijm.

tubular sheaths. **Leaf** erect, coriaceous, long-petiolate, 5.5–7 cm long including the 1.5–2 cm long, blackish petiole, the blade elliptical, obtuse, 2–2.3 cm wide, the base cuneate into the petiole. **Inflorescence** a solitary flower borne by an erect to ascending, slender peduncle 6 cm long, from low on the ramicaul; floral bract 8 mm long; pedicel 10 mm long; ovary 6 mm long. **Sepals** creamy white, yellow toward the base, glabrous to cellular-glandular, the dorsal sepal obovate, obtuse, anteflexed, 10 mm long, 10 mm wide, connate to the lateral sepals for 7 mm to form a tube, the rounded apex reflexed, abruptly contracted into an acutely reflexed,

slender, white tail 4.5 cm long, the lateral sepals connate 11 mm into a broadly expanded, transversely obovate, lamina 12 mm long, 18 mm wide, the broadly obtuse apices abruptly contracted into slender, descending white tails 3 cm long. **Petals** light yellow, oblong, 5 mm long, 1.75 mm wide, the apex truncate, obscurely trilobulate, with a low, longitudinal callus along the lower margin ending in a short, triangular process a short distance above the base. **Lip** yellow, suffused with purple below the middle, oblong-subpandurate, subsigmoid from the lateral view, 5.5 mm long, 1.5 mm wide, 2 mm wide at the apex, with minutely serrulate wings near

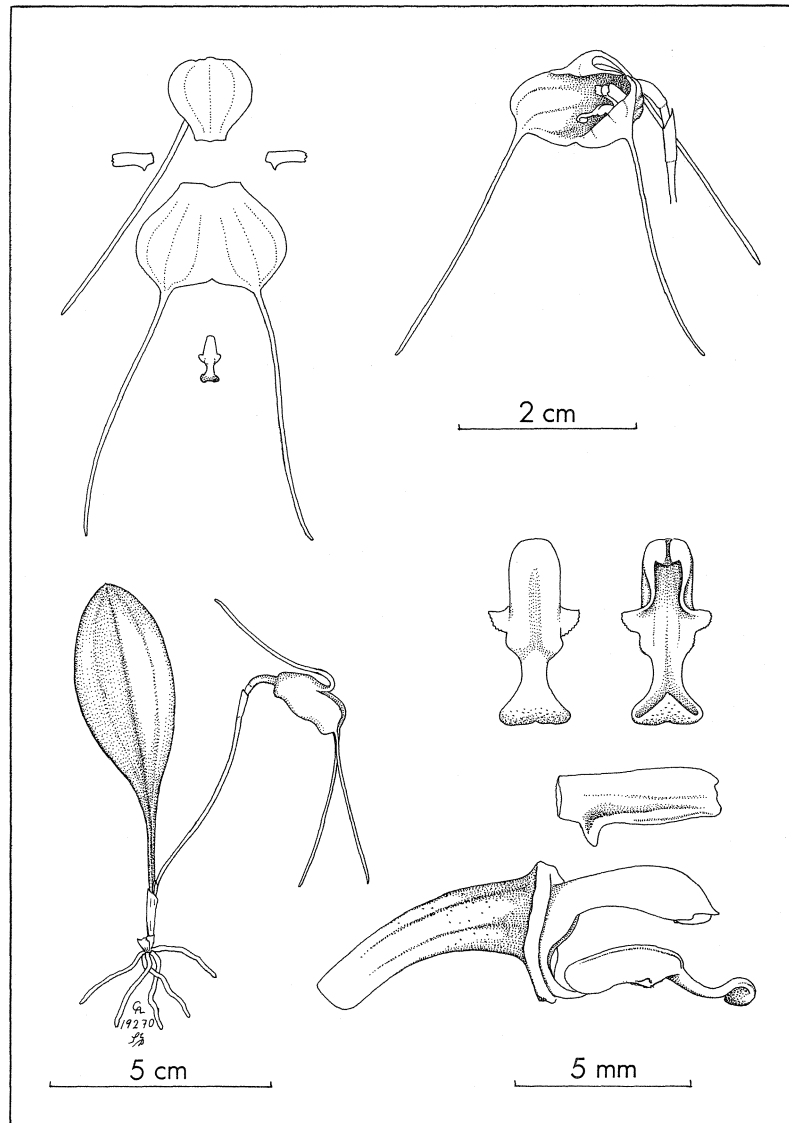


FIGURE 9. *Masdevallia castor* Luer & Cloes.

the middle beneath, narrowed above the middle, the apex dilated, with the obtuse tip acutely revolute, the base thickened, cordate, flexibly hinged by a thin strap below, 1 mm from the basal margin. *Column* semiterete, 4.5 mm long, with a thick foot 2 mm long.

Etymology. Named for Castor, one of the twin stars, in turn named for one of the sons of Leda.

This species of *Masdevallia* subsection *Oscilantes*, apparently endemic in Amazonian Peru, is related to the Ecuadorian *M. andreottana*. It differs from the later in the much less widely

spread synsepal beyond the sepaline tube; larger, expanding wings of the lip; and a broad apex with the obtuse tip recurved.

***Masdevallia pantomima* Luer & Hirtz, sp. nov.**

TYPE: Ecuador. Azuay: without locality, purchased from a local collector and cultivated in Cuenca, 6 Mar. 2001, by *E. Sánchez s.n.* (Holotype: MO), C. Luer illustr. 19794.

FIGURE 10.

Species haec *M. parvulae* Schltr. affinis, sed sepalis bis majoribus caudis gracilioribus, et labello infra medium late dilatato distinguitur.

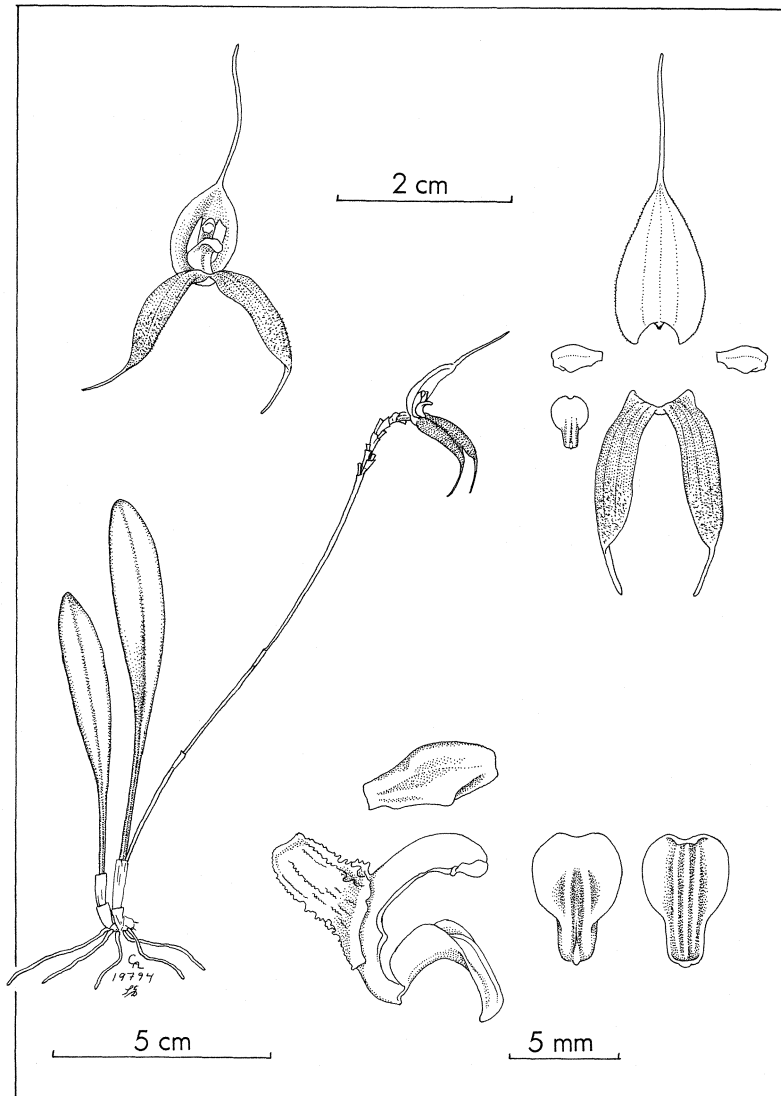


FIGURE 10. *Masdevallia pantomima* Luer & Hirtz.

Plant medium in size, epiphytic, caespitose; roots slender. **Ramicauls** slender, erect, 1–1.5 cm long, enclosed by 2–3 loose, tubular sheaths. **Leaf** erect, thinly coriaceous, 7–10 cm long including the petiole 1.5–2.5 cm long, the blade elliptical, subacute, 1–1.5 cm wide, cuneate below into the narrowly conduplicate petiole. **Inflorescence** a congested, successively several-flowered raceme up to ca. 2 cm long, borne by a slender, suberect peduncle to 13 cm long, with a bract below the middle, from low on the ramicaul; floral bracts thin, imbricating, 7–8 mm long; pedicel 6–7 mm long; ovary 5 mm long, with crested carinae; dorsal sepal translucent,

with large, transverse, purple spots, with minutely ciliate margins, the blade ovate, shallowly concave, 18 mm long, 10 mm wide, the apex acute, contracted into a slender, purple tail 16 mm long, the base free from the lateral sepals. **Lateral sepals** dark purple, minutely pubescent, the margins minutely ciliate, oblong, the blades 16 mm long, 4 mm wide, connate basally below the column-foot, the apex acute, contracted into a slender, purple tail 6 mm long. **Petals** cartilaginous, white, spotted with purple, elliptical-oblong, 6.5 mm long, 3 mm wide, the apex truncate, obscurely lobulate, the labellar margin with a longitudinal carina, obtusely angled near the

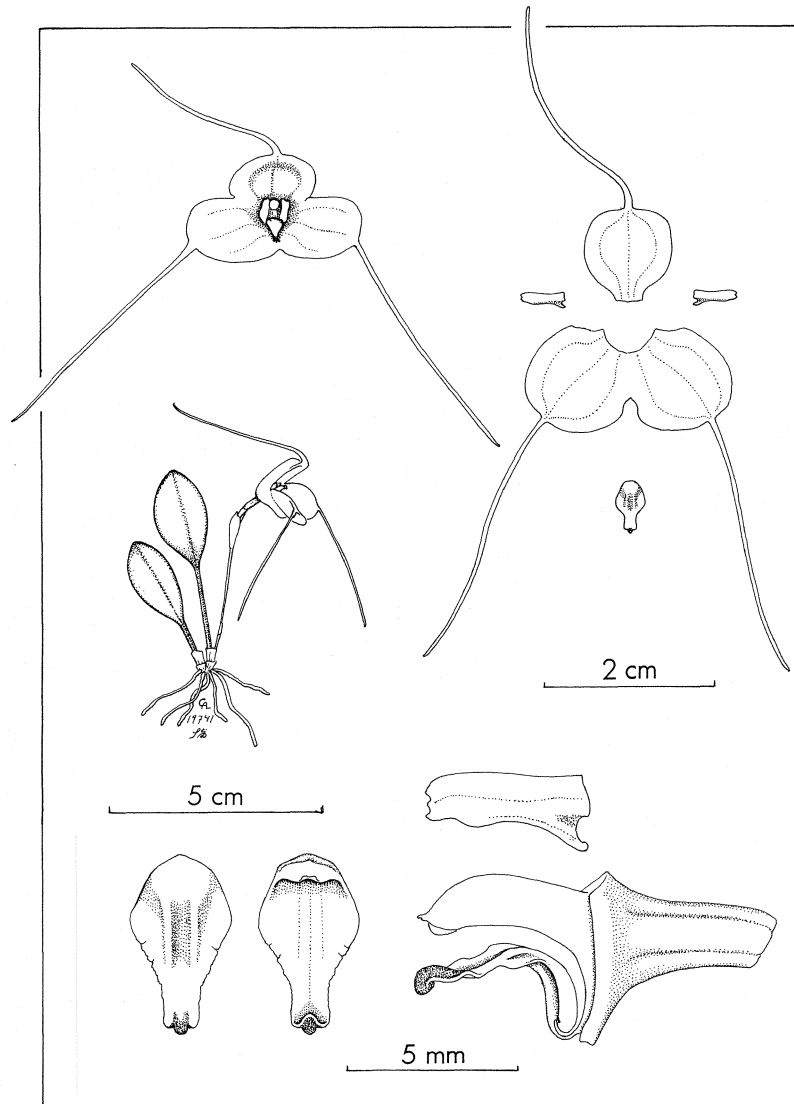


FIGURE 11. *Masdevallia zamorensis* Luer & Portilla.

middle. **Lip** dark purple, ovate, 6 mm long, 4 mm wide, narrowed in the apical third, the apex obtuse, with a low, midline callus, the basal two-thirds broadly dilated, the base subcordate, hinged on the end; column yellow, spotted with purple, semiterete, 6 mm long, the foot stout, bicallous, 5 mm long, with a thick, incurved extension.

Etymology. From the Greek *pantomimos*, "a silent mimic," in allusion to the posturing flower.

This species, with flowers large for the subgenus *Meleagris*, superficially resembles the Colombian *Masdevallia heteroptera*, but, except

for size, the details most closely resemble those of *M. parvula*. It is known only from one collection.

Masdevallia pantomima is characterized by large flowers with the dorsal sepal ovate and only shallowly concave and with large, transverse spots or bars. The tail is slender and equally long. The dark purple lateral sepals are narrowly oblong with much shorter tails. The petals are oblong with an obtusely angled callus at the middle. The lower two-thirds of the lip is dilated, with the distal third narrowly oblong.

***Masdevallia zamorensis* Luer & Portilla, sp. nov.** TYPE: Ecuador. Zamora-Chinchipe:

near Zamora, alt. ca. 1000 m, flowered in cultivation at Ecuagenera, Gualaceo, Ecuador, 5 Mar. 2001, *C. Luer 19741* (Holotype: MO). FIGURE 11.

Species haec *M. euchari* Luer similis, sed petalorum calli in dentem deorsum terminantibus, labello obovato supra medium angustato et callo apicali negro distinguitur.

Plant small, epiphytic, caespitose; roots slender. **Ramicauls** erect, slender, 0.5–0.8 cm long, enclosed by 2–3 loose, tubular sheaths. **Leaf** erect, coriaceous, petiolate, 3–4.5 cm long including the petiole 0.5–1.2 cm long, the blade elliptical, obtuse, 1.1–1.3 cm wide, cuneate below into the petiole. **Inflorescence** a solitary flower, borne by a slender, erect peduncle 20–25 mm long, with a bract above the base, from low on the ramicaul; floral bract tubular, 9 mm long; pedicel 9 mm long; ovary 4.5 mm long. **Sepals** light yellow, lightly suffused with brown toward the base, glabrous, with the edges cellular-erose, the dorsal sepal suborbicular-obovate, concave, 11 mm long, 10 mm wide, connate to the lateral sepals for 3 mm to form a shallow, conical, sepaline cup, the apex rounded, abruptly contracted into a slender, yellow tail 32 mm long, the lateral sepals suborbicular, 12 mm long, 11 mm wide, connate 5 mm to form a transverse lamina, the apices rounded, abruptly contracted into a slender tail 30 mm long, similar to that of the dorsal sepal. **Petals** white, oblong, 5 mm long, 1.75 mm wide, the apex truncate, shallowly tridentate, the labellar margin with a longitudinal callus, terminating in descending, narrowly obtuse processes just above the base. **Lip** light tan, obovate, narrowed above the middle, 5.5 mm long, 3 mm wide, with the margins thin, minutely erose and undulating, broadly rounded below the middle, the apex narrowly truncate, with a black, marginal callus, the disc shallowly sulcate between a pair of low calli on the middle third, the base rounded, hinged beneath. **Column** white with purple margins, semiterete, 5 mm long, the foot ca. 2 mm long, with an incurved extension.

Etymology. Named for the community of Zamora, near where the species was collected.

This species of *Masdevallia* subsection *Caudatae* from southern Ecuador is another of the numerous species closely allied to the variable *M. xanthina*. *Masdevallia zamorensis* is characterized by gaping, rounded, light yellow sepals, lightly suffused with brown basally, and abrupt, slender tails. The marginal callus of the petals terminates in a narrowly obtuse process just above the base. The lip is obovate and narrowed above the middle to a narrow apex with a black callus.

Octomeria dalstroemii Luer, sp. nov. TYPE: Ecuador. Morona-Santiago: near Chigüinda, alt. ca. 1000 m, cultivated at Ecuagenera, Gualaceo, 7 Mar. 2001, *C. Luer 19837* (Holotype: MO). FIGURE 12.

Species haec *O. linearifoliae* Barb.Rodr. affinis, sed habitu caespitoso leveter majore, floribus majoribus, labello late oblongo lobis inferioribus differt.

Plant medium in size, epiphytic, caespitose, roots slender. **Ramicauls** slender, erect, terete, 9–22 cm long, 2 mm wide, enclosed by 6–8 tubular, deciduous sheaths. **Leaf** erect, thickly coriaceous, narrowly linear, channeled, acute, 8–12 cm long, 3–4 mm wide, 1.5 mm thick, continuous below into the sessile base, more or less twisted. **Inflorescence** a single flower produced successively in a fascicle, borne by abbreviated peduncles 1–2 mm long, at the apex of the ramicaul; floral bracts 2–3 mm long; pedicels 2–3 mm long; ovary 2 mm long. **Sepals** light yellow, the laterals shortly connate at the base, glabrous, elliptical, rounded at the acute apex, 6–8 mm long, 2.5–3 mm wide, 3-veined. **Petals** light yellow, elliptical, rounded at the acute apex, 5.5–7 mm long, 1.75–2.5 mm wide, 3-veined. **Lip** red, broadly oblong or ovate-subquadrate, trilobed, glabrous, 2.5–3.5 mm long, 2–2.5 mm wide, with margins slightly irregular, broadly rounded-subtruncate at the apex with a short, obtuse apiculum, with the lateral lobes above the base, erect, low, round, the disc with a pair of parallel calli descending from the lateral lobes, the midvein thickened toward the apex, the base broadly truncate, hinged to the tip of the column-foot. **Column** white, semiterete, 2–2.5 mm long, the anther and stigma subapical.

Etymology. Named for Stig Dalström, of the Marie Selby Botanical Gardens, who collected this species.

Paratype. Ecuador. Morona-Santiago above Gualaquiza, alt. 1700 m, 26 Dec. 1982, *S. Dalström 396* (SEL), *C. Luer* illustr. 8710.

This species is similar to *Octomeria linearifolia* of southern Brazil, but differs with a caespitose habit instead of repent. The plant is larger with larger flowers with a red lip. The lip is broader with lower basal lobes.

Octomeria rotundata Luer & Hirtz, sp. nov.

TYPE: Ecuador. Morona-Santiago: Cordillera del Cutucú, between Mendez and Morona, alt. 950 m, 18 Jan. 1989, *C. Luer, J. Luer, A. & P. Jesup, A. Hirtz & S. Ortega 13986* (Holotype: MO). FIGURE 13.

Species haec *O. cordilabiae* C. Schweinf. similis, sed labello convexo ecalloso apice integro cum lobis basalibus columnam amplectentibus differt.

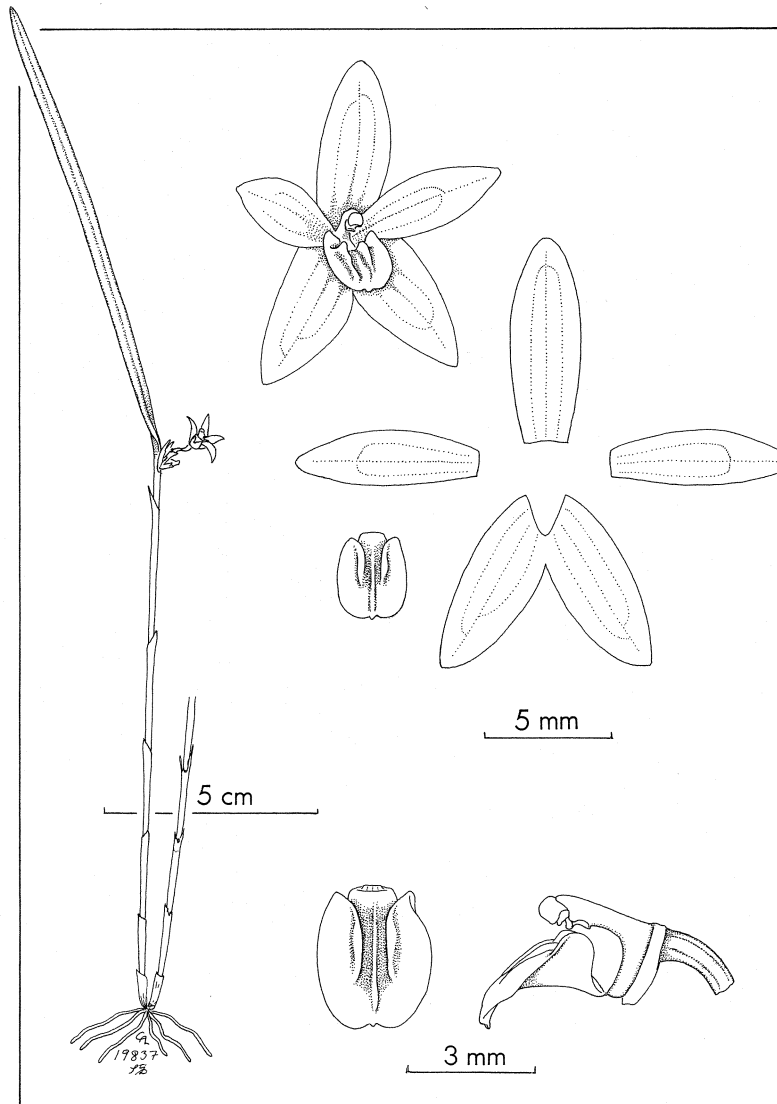


FIGURE 12. *Octomeria dalstroemii* Luer.

Plant medium in size, epiphytic, caespitose, roots slender. **Ramicauls** stout, erect, terete, 4–8 cm long, enclosed by 4–8 tubular sheaths. **Leaf** erect, coriaceous, narrowly elliptical, acute, 5–7.5 cm long, 1–1.2 cm wide, cuneate below into a subpetiolate base. **Inflorescence** a single flower produced successively in a fascicle of abbreviated peduncles 2 mm long, at the apex of the ramicaul; floral bracts 2 mm long; pedicels 2 mm long; ovary 2 mm long. **Sepals** translucent pale rose, glabrous, free, the dorsal sepal broadly elliptical, obtuse, 5 mm long, 3 mm wide, 3-veined, the lateral sepals broadly elliptical, obtuse, overlapping, 6 mm long, 3.3 mm wide,

3-veined. **Petals** colored as the sepals, broadly elliptical, obtuse, overlapping the sepals, 5 mm long, 3 mm wide, 3-veined. **Lip** pale rose, glabrous, broadly cordate with basal lobes, 2 mm long, 2 mm wide, the apex broadly rounded, smooth, the basal lobes oblong, rounded, flanking the column, the disc convex without calli, the base decurved between the basal lobes, hinged to the tip of the column-foot. **Column** yellow, stout, semiterete, 1.5 mm long, with the anther and stigma subapical.

Etymology. From the Latin *rotundatus*, “round,” referring to the suborbicular sepals and petals.

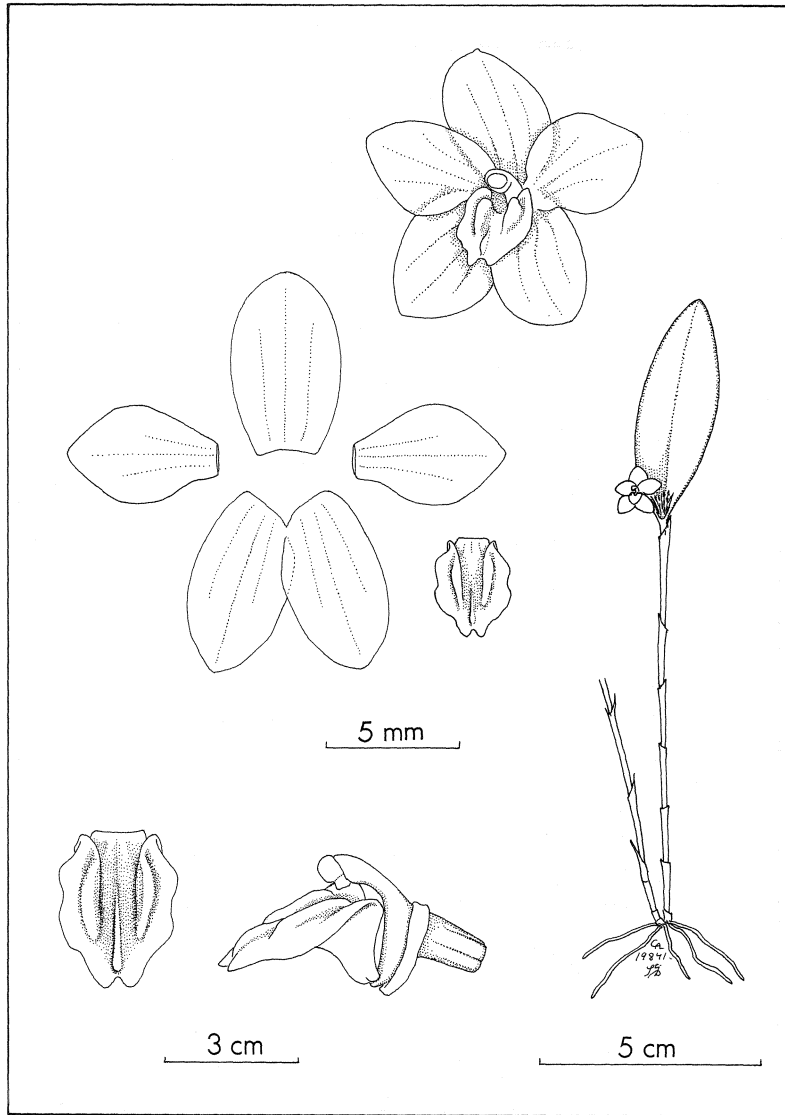


FIGURE 13. *Octomeria rotundata* Luer & Hirtz.

Known only from the original collection, this species is similar both vegetatively and florally to *Octomeria cordilabia* of Venezuela. The sepals and petals of both species are broadly elliptical. *Octomeria rotundata* differs from the latter mainly in the smooth, convex lip with elongated, basal lobes that flank the column. The lip of *O. cordilabia* is bicallous and biapiculate with short basal lobes.

Pleurothallis cremasta Luer & Portilla, sp. nov.
 TYPE: Ecuador. Morona-Santiago: north of Gualaquiza, alt. 800 m, collected by J. Portilla, cultivated at Gualaceo, Nov. 1999, A.

Hirtz 7132 (Holotype: MO), C. Luer illustr. 19365. FIGURE 14.

Planta mediocris pendens, racemo congesto folio anguste ovato brevior, sepalis crassis carinatis acutis lateralibus semiconnatis, petalis minutissime denticulatis, labello trilobato, lobo antico subacuto eroso, lobis lateralibus infra medium erectis rotundatis, disco bicarinato, basi concavo supra callum transversem.

Plant medium in size, epiphytic, pendent, caespitose; roots slender. **Ramicauls** slender, pendent, 3–5 cm long, enclosed by a loose, tubular, slightly inflated sheath below the middle, with 2 other sheaths at the base. **Leaf** pendent,

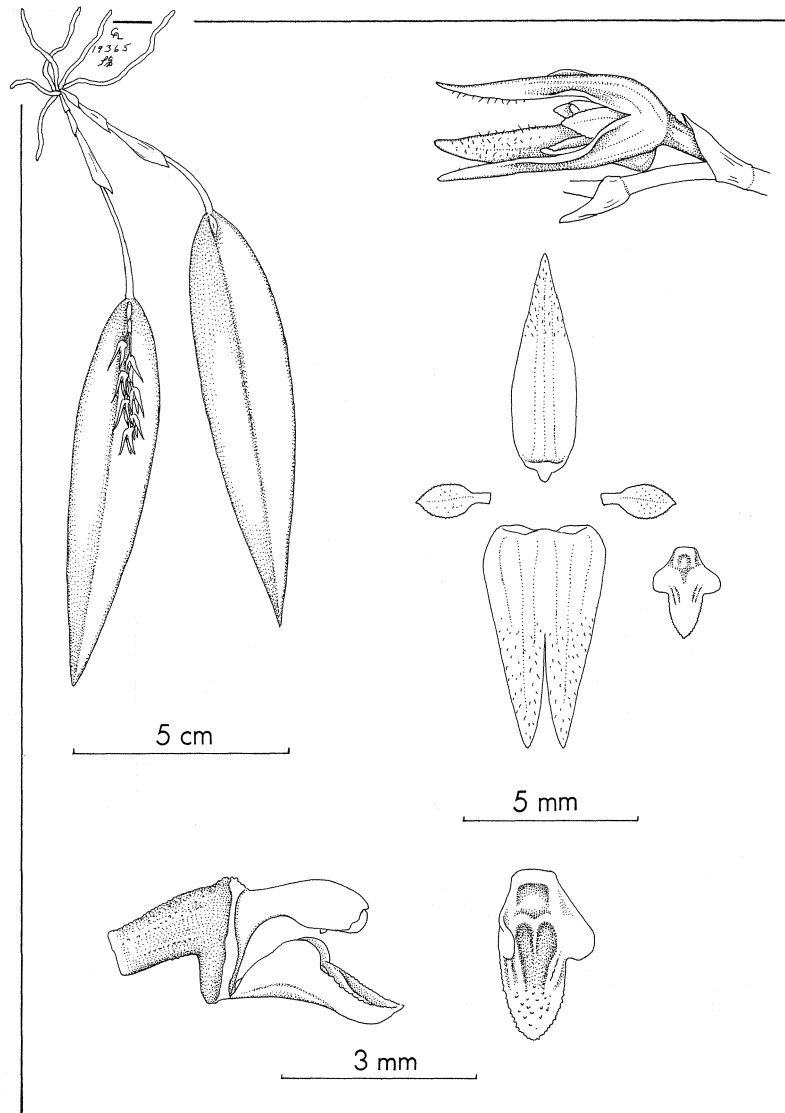


FIGURE 14. *Pleurothallis cremasta* Luer & Portilla.

coriaceous, suffused with purple, narrowly ovate, acute, 8–10.5 cm long, 1.7–2.2 cm wide, cuneate into the sessile base. **Inflorescence** a pendent, simultaneously several-flowered raceme, ca. 3 cm long including the peduncle ca. 0.5 cm long, borne from the base of the leaf, subtended by a spathe 6 mm long; floral bracts infundibular, 2.5 mm long; pedicels 1–1.5 mm long, enclosed within the bract; ovary cellular-glandular, 1–1.5 mm long. **Sepals** finely mottled rose-purple, whitish toward the base, fleshy carinate, glabrous externally, sparsely pubescent within, the dorsal sepal ovate, acute, 7 mm long, 2 mm wide, 3-veined, the lateral sepals ovate,

acute, 7.5 mm long, 1.9 mm wide, connate 3 mm. **Petals** translucent white, spatulate, shortly unguiculate, subacute, minutely denticulate, 2.2 mm long, 1 mm wide, 1-veined. **Lip** purple, trilobed, 3.8 mm long, 1 mm wide (1.8 mm wide across the expanded lobes), the middle lobe ovate, subacute, erose, minutely subverrucose, the basal lobes below the middle, erect, broadly rounded, the disc with a pair of minutely verrucose calli near the middle, the base truncate, concave above a transverse callus. **Column** semiterete, winged above the lower third, 2 mm long, the foot 1.5 mm long, the anther, rostellum and stigma ventral.

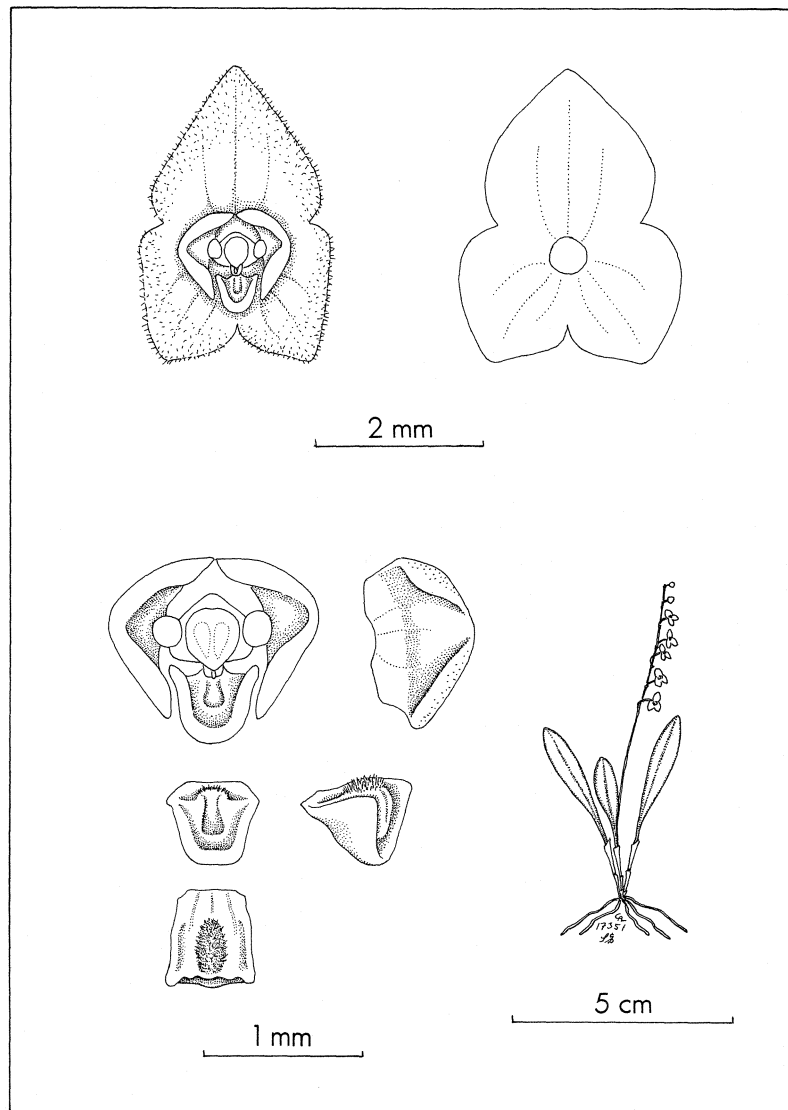


FIGURE 15. *Stelis chasei* Luer.

Etymology. From the Greek *kremastos*, "hanging," referring to the habit.

Paratype. Ecuador, without collection data, cultivated at Ecuagenera, Gualaceo, 5 Mar, 2001, C. Luer 19685 (MO).

This species, known only from the original collection, is apparently rare and endemic in southeastern Ecuador. It is characterized by the pendent habit with the ramicaul, clad with a loose sheath that is shorter than the narrowly ovate leaf. The raceme is congested and simultaneously flowered, about half the length of the leaf. The sepals are fleshy carinate, narrow and

acute; the petals are minutely denticulate; and the lip is three-lobed with the lobes erect, below the middle and rounded. The base of the lip is concave above a transverse callus.

Stelis chasei Luer, sp. nov. TYPE: Costa Rica. Cartago: southwest of Pejibaye toward Siquirres, alt. 650–700 m, 25 Mar. 1984, M. Chase 84376 (Holotype: CR; Isotype: MICH), C. Luer illustr. 17351.

FIGURE 15.

Species haec *S. parvulae* Lindl. similis, sed foliis angustioribus, bracteis floralis parvis tubulosis, sepalis

pubescentibus, sepalis lateralibus obliquis quam sepalo dorsali minoribus et stigmatibus brachiato distinguitur.

Plant small, epiphytic, caespitose; roots slender. **Ramicauls** erect, slender, 9–11 mm long, enclosed by a loose, tubular sheath and 2 others at the base. **Leaf** erect, coriaceous, narrowly ovate, obtuse, 2.5–3.5 cm long, 0.6–0.8 cm wide, cuneate below into a petiole ca. 5 mm long. **Inflorescence** an erect, laxly several to (8)-flowered raceme, 6 cm long including the peduncle 3.5 cm long, from an annulus below the apex of the ramicaul; floral bracts tubular, acute, 1.5 mm long; pedicels ca. 1.5 mm long; ovary 1 mm long. **Sepals** reddish with yellow-white margin, spread, pubescent within, connate basally, unequal in size, the dorsal sepal broadly ovate, obtuse, 2 mm long, 2 mm wide, 3-veined, the lateral sepals oblique, 1.6 mm long, 1.6 mm wide. **Petals** transversely obovate, broadly rounded and thickened along the apical margins, 0.66 mm long, 1 mm wide. **Lip** oblong, triangular in side-view, 0.5 mm long, 0.5 mm wide, 0.6 mm deep, the apical margin rounded and thickened, the dorsum with an oblong, pubescent callus, with a glenion on the anterior surface, the base truncate, hinged to the base of the column. **Column** 0.6 mm long, 0.7 mm wide, with the foot obsolescent, the anther and the stigma apical and bilobed, the stigmatic lobes on arms to either side of the anther.

Etymology. Named for Mark Chase, who collected this species.

Isotype. Costa Rica. Cartago, southwest of Pejibaye toward Siquirres, alt. 650–700 m, 25 Mar. 1984, *M. Chase 84376* (MICH).

This species, described from Costa Rica, is similar to *Stelis parvula*, but it differs in significant details. *Stelis chasei* is characterized by a small habit with short ramicauls; narrow leaves 6–8 mm wide; inconspicuous floral bracts; obtuse sepals densely pubescent within; a proportionately large dorsal sepal; distinctly smaller, oblique lateral sepals; proportionately large, flabellate petals; a proportionately small lip with a pubescent callus; and a stigma with stigmatic arms.

Stelis hammelii Luer, sp. nov. TYPE: Costa Rica. Heredia: La Selva, Río Puerto Viejo, alt. ca. 100 m, 20 May 1982, *B. Hammel 12374* (Holotype: MO), C. Luer illustr. 17890.

FIGURE 16.

Species haec *S. cleistogamae* Schltr. similis, sed foliis latioribus, racemo disticho densifloro brevior, bracteis floralis parvis tubulosis et spatha parva distinguitur.

Plant medium in size, epiphytic, caespitose;

roots slender. **Ramicauls** erect, slender, 3–7 cm long, enclosed by a tubular sheath near the middle, and 2–3 other sheaths at the base. **Leaf** erect, coriaceous, narrowly elliptical, subacute, petiolate, 5–11 cm long including the petiole 1–1.5 cm long, 1.5–2 cm wide, narrowly cuneate below into the petiole. **Inflorescence** a slender, erect, congested, distichous, many-flowered raceme, 8–15 cm long including the peduncle 2 cm long, subtended by a spathe 6–8 mm long, from an annulus below the apex of the ramicaul; floral bracts tubular, 1 mm long; pedicels 1 mm long; ovary 1.5 mm long. **Sepals** purple, not widely spread, ovate, obtuse, glabrous externally, cellular-pubescent within, the dorsal sepal 1.75 mm long, 1.25 mm wide, 3-veined, the lateral sepals 1.25 mm long, 1.25 mm wide, 3-veined. **Petals** transversely obovate, flabellate, shallowly concave, 0.5 mm long, 0.6 mm wide, the apex broadly rounded, thickened. **Lip** ovoid, 0.6 mm long, 0.6 mm wide, 0.6 mm deep, shallowly concave anteriorly, the apex obtuse to rounded, the disc thickened, low-callous on the dorsum, the base broadly truncate, hinged to the base of the column. **Column** 0.6 mm long, the foot obsolescent, the anther and the bilobed stigma apical.

Etymology. Named for Barry Hammel of the Missouri Botanical Garden, who collected this species.

Isotypes. Costa Rica. Heredia, La Selva, Río Puerto Viejo, alt. ca. 100 m, 20 May 1982, *B. Hammel 12374* (AMES, DUKE).

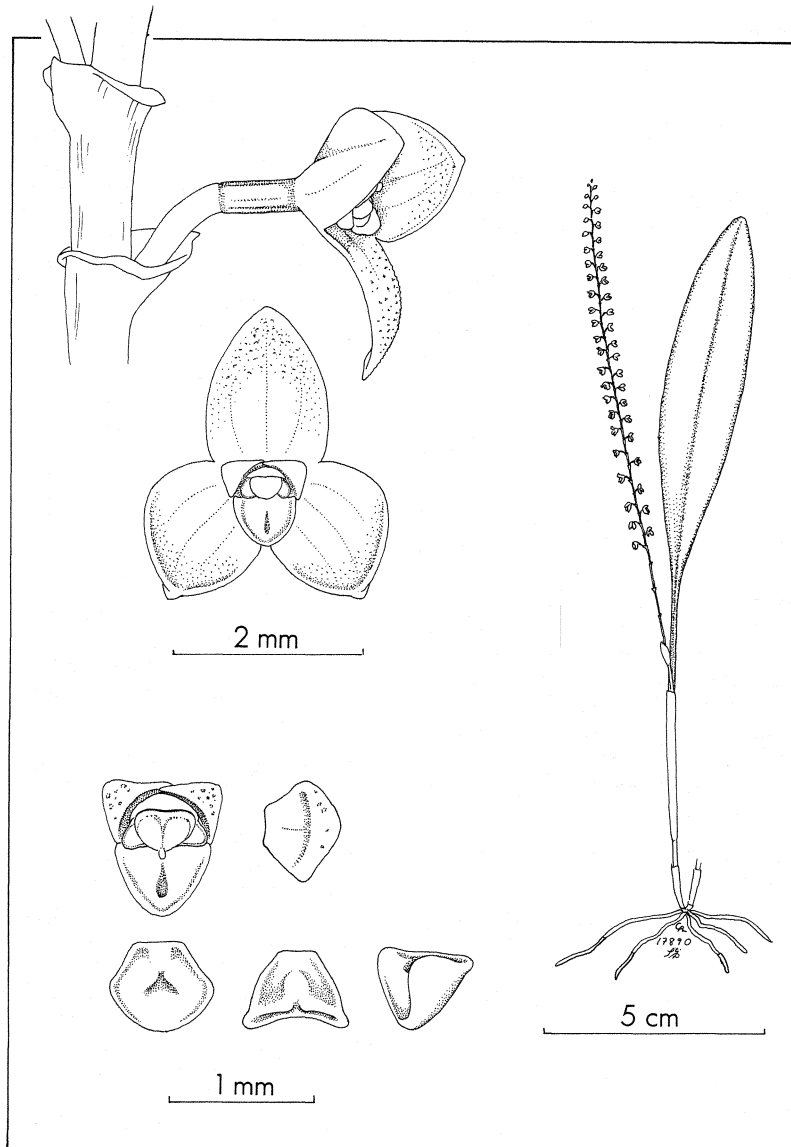
This species, known from a single collection from Costa Rica, is similar to *Stelis cleistogama*, but it differs in significant details. *Stelis hammelii* is characterized by a medium-sized habit with ramicauls shorter than the elliptical, petiolate leaves; a shorter, congested, distichous raceme subtended by a much shorter spathe; inconspicuous floral bracts; and ovate, obtuse sepals not widely spread. The petals and lip are not remarkably different from the pattern frequently seen in the genus.

Stelis meganthera Luer, sp. nov. TYPE: Panama. Chiriquí: Cerro Colorado, alt. 650–700 m, 16 Feb. 1977, *C. Luer, J. Luer, R. & K. Dressler 1453* (Holotype: SEL).

FIGURE 17.

Species haec *S. parvulae* Lindl. similis, sed foliis angustioribus, bracteis floralis parvis tubulosis, sepalis albis glabris, sepalis lateralibus obliquis quam sepalo dorsali minoribus et anthera magna distinguitur.

Plant small, epiphytic, densely caespitose; roots slender. **Ramicauls** erect, slender, 1–1.5 cm long, enclosed by 2 tubular sheaths. **Leaf**

FIGURE 16. *Stelis hammelii* Luer.

erect, coriaceous, narrowly linear obovate, semiterete, obtuse, apiculate, 3–6 cm long, 0.2–0.3 cm wide, gradually narrowed below into the base. **Inflorescence** an erect, distichous, subdensely many-flowered raceme, 4–7 cm long including the peduncle 2–3 cm long, from an annulus below the apex of the ramicaul; floral bracts tubular, acute, 1.5 mm long; pedicels 1 mm long; ovary 1 mm long. **Sepals** white, glabrous, connate basally, unequal in size, the dorsal sepal broadly ovate, subacute, 1.6 mm long, 1.4 mm wide, 3-veined, the lateral sepals ovate,

subacute, oblique, 1.4 mm long, 1 mm wide. **Petals** transversely obovate-flabellate, broadly rounded and thickened along the apical margins, 0.5 mm long, 0.6 mm wide. **Lip** oblong, triangular in side-view, 0.5 mm long, 0.4 mm wide, 0.3 mm deep, the apex triangular, acute, concave, the dorsum with an oblong callus, with a glenion on the anterior surface, the base truncate, hinged to the base of the column. **Column** 0.5 mm long, 0.5 mm wide, with the foot obsolescent, the anther apical, 5 mm long, 5 mm wide, the stigma bilobed.

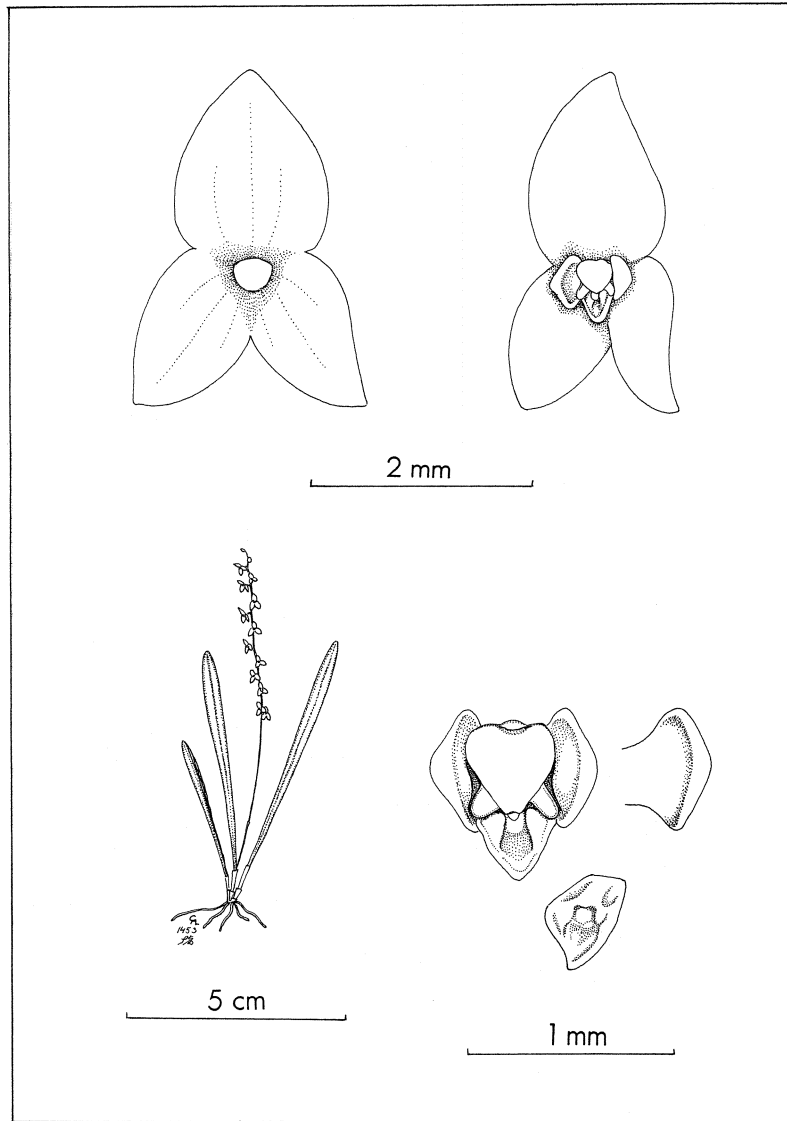


FIGURE 17. *Stelis meganthera* Luer.

Etymology. From the Greek *meganthera*, “with large anther,” referring to the anther cap.

This species, known only from western Panama, is similar to *Stelis parvula*, but it differs in significant details. *Stelis meganthera* is characterized by a small habit with short ramicauls; linear, semiterete leaves 2–3 mm wide; inconspicuous floral bracts; white, glabrous, subacute sepals; a slightly proportionately large dorsal sepal; flabellate petals; an oblong lip with and acute apex; and a proportionately large anther, larger than the lip.

***Stelis megapetala* Luer, sp. nov.** TYPE: Panama. Coclé: El Valle, alt. ca. 1000 m, Sept. 1976, C. Luer & H. Butcher 1264 (Holotype: SEL). FIGURE 18.

Species haec *S. parvulae* Lindl. similis, sed foliis late ellipticis latioribus, bracteis floralis parvis cucullatis, sepalis subaequalis obtusis minute papillois, petalis crassis lunatis proportionate magnis distinguitur.

Plant small, epiphytic, caespitose; roots slender. **Ramicauls** erect, slender, 1–1.5 cm long, enclosed by a loose, tubular sheath and another at

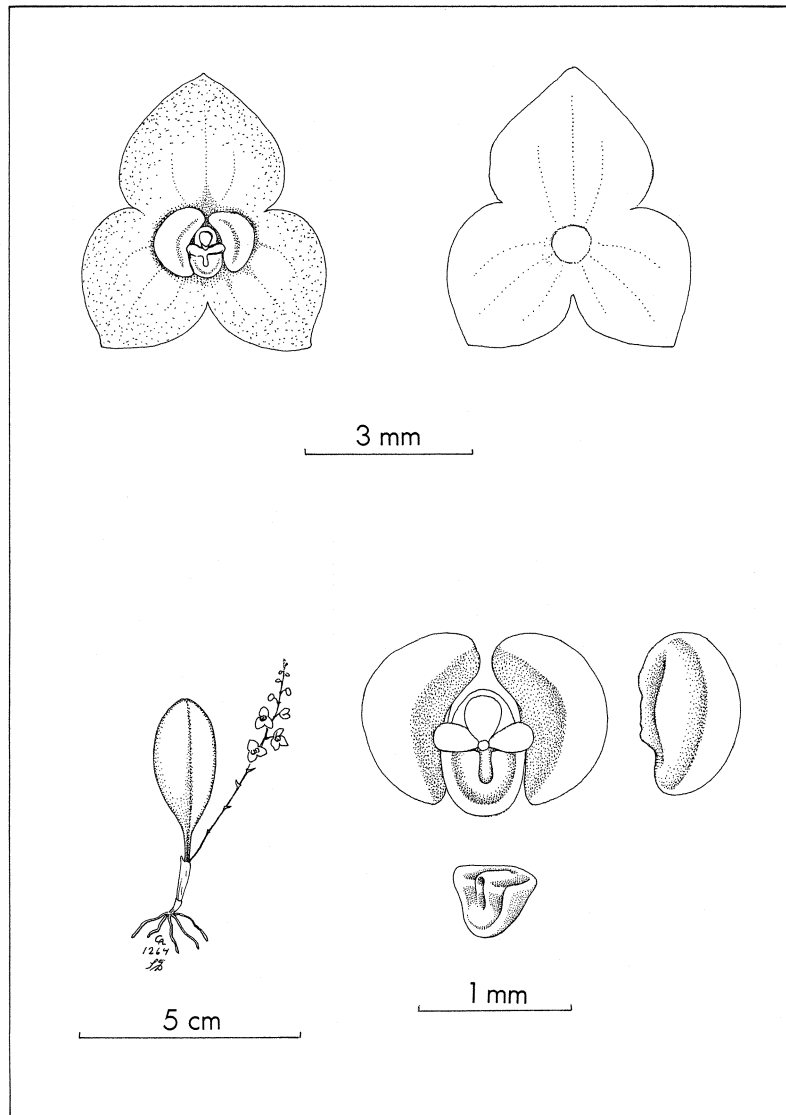


FIGURE 18. *Stelis megapetala* Luer.

the base. **Leaf** erect, coriaceous, broadly elliptical, obtuse, petiolate, 2–4 cm long, 1–1.7 cm wide, cuneate below into the petiole ca. 1 cm long. **Inflorescence** an erect, distichous, subdensely several-flowered raceme, 4–6 cm long including the peduncle 2–4 cm long, from an annulus below the apex of the ramicaul; floral bracts inflated, acute, 2 mm long; pedicels 1 mm long; ovary 0.5 mm long. **Sepals** dark grayish purple, spread, cellular-papillose within, connate basally, subequal in size, broadly ovate, obtuse, the dorsal sepal 2.5 mm long, 3 mm wide, 3-veined, the lateral sepals oblique, 2 mm long,

2.5 mm wide. **Petals** transversely elliptical, broadly rounded and broadly thickened along the apical margins, 1 mm long, 1.5 mm wide. **Lip** oblong, subquadrate, triangular in side-view, 0.6 mm long, 0.5 mm wide, 0.5 mm deep, the apical margin rounded and thickened, the central callus with a glenion on the shallowly concave anterior surface, the dorsum with a low, oblong callus, the base truncate, hinged to the base of the column. **Column** 0.5 mm long, 0.6 mm wide, with the foot obsolescent, the anther and the bilobed stigma apical.

Etymology. From the Greek *megapetalon*,

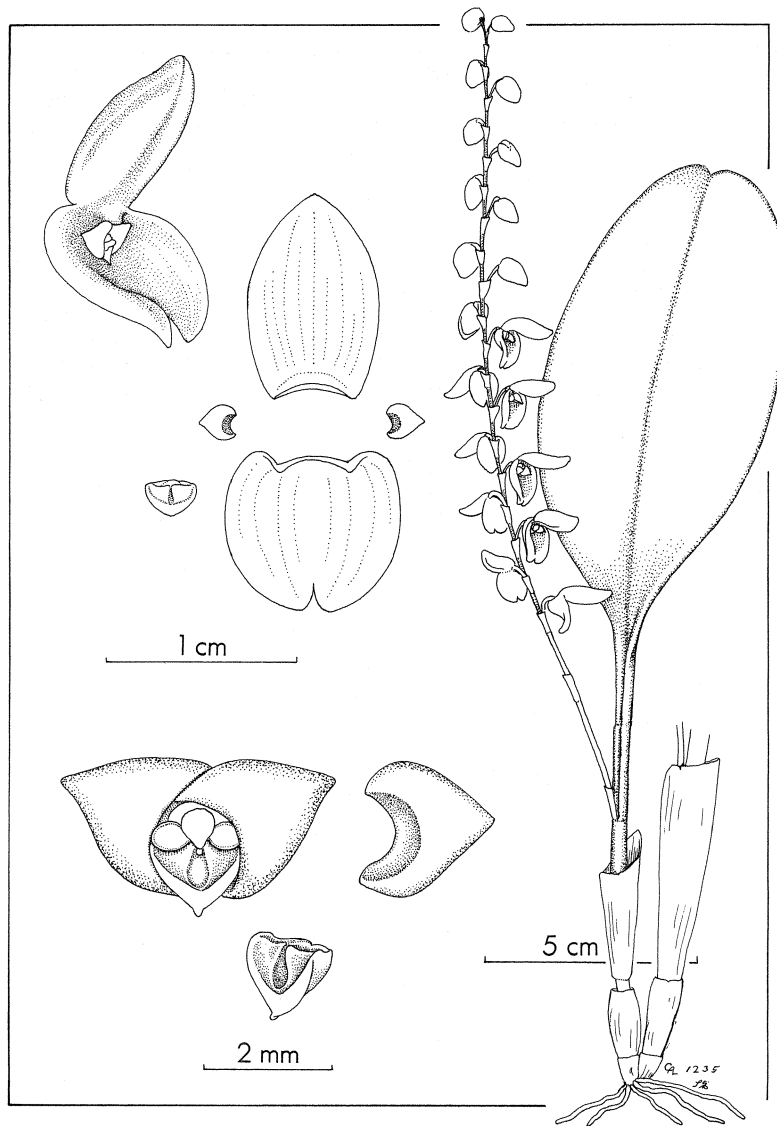


FIGURE 19. *Stelis veraguasensis* Luer.

“with large petals.” referring to the size of the petals.

This species, known only from central Panama, is similar to *Stelis parvula*, but it differs in significant details. *Stelis megapetala* is characterized by a small habit with short ramicauls; broadly elliptical leaves more than 1 cm wide; cucullate floral bracts; broadly obtuse sepals densely cellular-papillose within; proportionately large, thick, transversely elliptical petals; and a proportionately small, subquadrate lip.

Stelis veraguasensis Luer, sp. nov. TYPE: Panama. Veraguas: alt. ca. 500 m, 5 Sept. 1976,

C. Luer & R. Dressler 1235 (Holotype: SEL). FIGURE 19.

Species haec *S. lankesteri* Ames similis, sed habitu floribusque majoribus, petalis cordatis acutis leviter acuminatis, et labello ad apicem subacuto apiculato difert.

Plant large, epiphytic, caespitose; roots slender. **Ramicauls** erect, stout, 6–8 cm long, enclosed by 2 loose, tubular sheaths. **Leaf** erect, coriaceous, elliptical, petiolate, with the apex obtuse to rounded, 10–15 cm long including the petiole 1.5–2 cm long, 4–5.5 cm wide, cuneate below into the petiole. **Inflorescence** an erect,

subdense, distichous, many-flowered, raceme with several flowers open simultaneously, 15–20 cm long including the peduncle 3–5 cm long, from an annulus below the apex of the ramicaul; floral bracts infundibular, 3 mm long; pedicels 3 mm long; ovary 3 mm long; flowers bilabiate. **Sepals** glabrous, bright purple externally, cellular-glandular, greenish purple within, the dorsal sepal erect, elliptical, obtuse, convex, 12.5 mm long, 8.5 mm wide, 5(–9)-veined, connate basally to the synsepal, the lateral sepals connate into a broadly ovate, shallowly concave synsepal, 10 mm long, 11 mm wide, 8-veined. **Petals** broadly overlapping above the column, purple, edged in green, cordate-triangular, 2.25 mm long, 2.25 mm wide, the apex broadly thickened, acute, slightly acuminate, the base narrowly concave. **Lip** red, ovoid, 1 mm long, 1.5 mm wide, the apex subacute, apiculate, thickened along the

margin, the base transversely thickened with a large glenion, truncate, hinged to the base of the column. **Column** stout, 0.75 mm long, 1.5 mm wide, the foot obsolescent, the anther and the stigma apical, the stigma bilobed.

Etymology. Named for the Panamanian province of Veraguas, where the species was collected.

This species is apparently rare in central Panama. It is a large, robust plant with a tall raceme of large, bilabiate flowers. Appearing as a gigantic variation of the Costa Rican *Stelis lankesteri*, it differs from the latter in the following: a larger habit with twice broader leaves; twice larger floral parts; acute, slightly acuminate, cordate-ovate petals; and lip with the apical margin thick and subacute with a small, rounded apiculum.