

*Pleurothallis acuminata* (HBK) Lindl., Edward's Bot. Reg. 28:misc. 70. 1842.

*Dendrobium acuminatum* HBK, Nov. Gen. Sp. 1:357. 1816.

*Specklinia acuminata* (HBK) Lindl., Edward's Bot. Reg. 21:sub t. 1797. 1835.

*Pleurothallis aurea* Lindl., Ann. Mag. Nat. Hist. 12:397. 1843; not A. Rich. & Gal.

*Humboldtia acuminata* (HBK) Kuntze, Rev. Gen. Pl. 2:667. 1891.

*Humboldtia aurea* (Lindl.) Kuntze, l. c. 2:667. 1891.

*Pleurothallis angustipetala* C. Schweinf., Bot. Mus. Leaflet. 16:45. 1953.

Plant small to medium in size, epiphytic, caespitose; roots slender, flexuous. Secondary stems slender, terete, 3-10 cm long, with a closely fitting tubular sheath below the middle and another at the base, unifoliate. Leaf erect, coriaceous, narrowly elliptical to oblong, obtuse, the base cuneate, attenuate into a short petiole about 2 cm long, 5-11 cm long (including the petiole), 1.5-2 cm wide. Inflorescence a loose, many-flowered raceme, 10-20 cm long, the peduncle slender, from a small spathe 3-5 mm long, at the base of the leaf; floral bract thin, acute, 3 mm long; pedicel and ovary glabrous, each 3 mm long; sepals free, light green narrowly ovate, acuminate, acute, minutely pubescent within, the lateral sepals oblique, 9 mm long, 3 mm wide; petals obovate, the apex obtuse, minutely denticulate, 3.5 mm long, 1.5 mm wide, translucent pale green with a purple stripe; lip pale green edged in purple, ovate, arcuate, the apex obtuse to rounded with the margins minutely verrucose and denticulate, the base rounded, shortly hinged to the column-foot, the disc with a well-defined longitudinal, smooth callus, flanked by a pair of longitudinal, parallel elevations, 4.2 mm long, 2 mm wide; column terete, 2 mm long, green edged in purple, with a short foot.

ETYMOLOGY: From the Latin *acuminatus*, "tapering with the sides curved inward," in reference to the shape of the sepals.

TYPE: PERU: "Prov. Jean de Bracamoros," cloud forest near Pomahuaca, alt. 3360 m, Aug., *Humboldt & Bonpland s.n.*

DISTRIBUTION: Peru, Ecuador, Colombia, and Venezuela.

ECUADOR: COTOPAXI: epiphytic along the road between Quevedo and Latacunga, alt. ca. 1000 m, Nov. 1974, *G. Kennedy s.n.* (SEL) greenhouse acc. no. 30-74-184, flowered in cult. 9 June 1976, 22 Dec. 1976.

This species is somewhat variable in its wide range through the Andes. It may be recognized by its elliptical leaf borne by a slender stem, and a raceme of pale green to yellowish flowers considerably longer than the leaf. The sepals spread to expose the petals with a conspicuous purple stripe. The margin of the rounded apex of the simple lip is minutely verrucose and edged in purple in the specimen illustrated.

*Pleurothallis acuminata* is similar to *P. asperilinguis* Rchb.f. & Warsc., which has narrower leaves, and a lip more narrowed toward the base and more verrucose toward the apex.

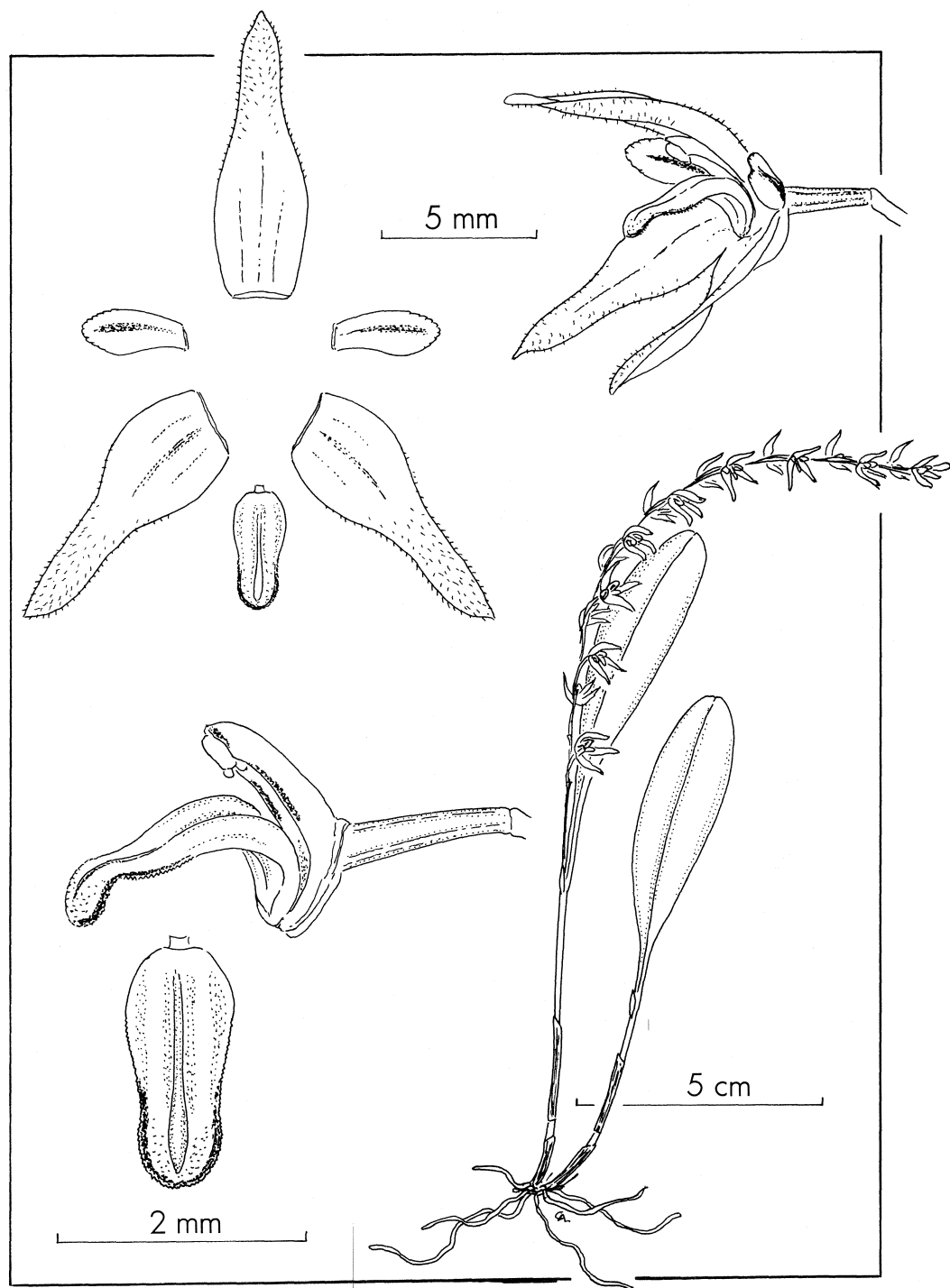


Figure 219. *PLEUROTHALLIS ACUMINATA* (HBK) Lindl.

**Pleurothallis alpina** Ames, Sched. Orchid. 5:14. 1923.

Plant medium in size, epiphytic, caespitose; roots slender, flexuous. Secondary stems erect, horizontal, or drooping, terete at the base, becoming markedly winged and triquetrous above, 6-28 cm long, unifoliate, with a brown, tubular sheath near the base and 1-2 other smaller ones. Leaf erect, coriaceous, elliptical, acute, tridenticulate, the base cuneate, sessile, the margins continuous with the wings of the stem, 6-13 cm long, 1.5-3 cm wide. Inflorescence a few (1-3), short (about 2 cm), congested, few-flowered (3-4) racemes, the short peduncles from a 1 cm spathe at the apex of the stem; floral bracts loose, infundibular, 3-4 mm long; pedicel 1-2 mm long; ovary minutely pubescent, 2 mm long; sepals thick, not widely spread, microscopically pubescent and olive-green externally, glabrous and striped with purple within, the dorsal sepal obovate, subacute, 7 mm long, 3 mm wide, 3-veined, the lateral sepals oblong, oblique, lightly coherent, the apex of the coherent pair subacute, bifid, 6 mm long, 5 mm wide together, each 3-veined; petals elliptical-obovate, subacute, the margin minutely serrulate above the middle, 3 mm long, 1 mm wide, edged in purple and the 3 veins purple; lip oblong, 3-lobed, the middle lobe oblong, rounded, purple, irregularly dentate, the lateral lobes near the middle narrowly triangular, oblique, acute, directed forward, the base cuneate, yellow marked with purple, the disc with a pair of lamellae above the middle, 4 mm long, 2 mm wide; column slender, 3 mm long, with a foot 2 mm long.

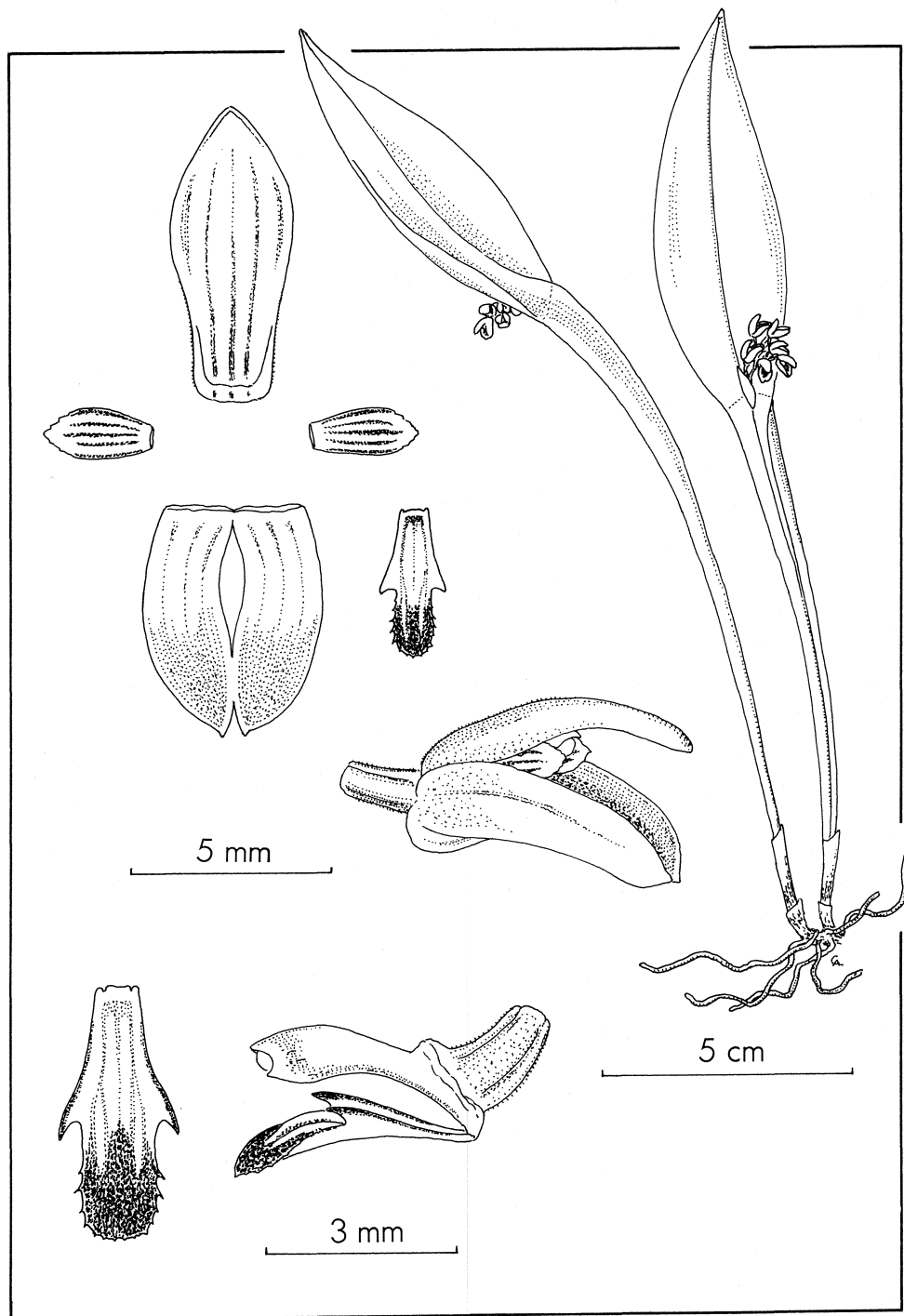
ETYMOLOGY: From the *alpinus*, "pertaining to mountains, alpine," in allusion to the habitat.

TYPE: PANAMA: CHIRIQUI: "Caramilla," alt. ca. 1500 m, March 1923, C. W. Powell 282 (HOLOTYPE: AMES).

DISTRIBUTION: Costa Rica and Panama.

PANAMA: CHIRIQUI: epiphytic in cloud forest above Boquete, alt. 1700 m, 17 Dec. 1976, C. Luer, A. Luer & R. L. Dressler 1355 (SEL), greenhouse acc. no. 155-76-22, flowered in cult. 4 Feb. 1977.

Vegetatively this species is inseparable from the South American *Pleurothallis sicaria* Lindl., and the flowers of the two species are very similar. Ames acknowledged that the differences were minor, and that *P. alpina* may prove to be merely a geographical variation of *P. sicaria*. This may still be considered true, but living, flowering plants are distinguishable. The striped flowers of *P. sicaria* are gaping, the dorsal sepal recurves, and the sides of the joined lateral sepals are everted. The olive-green flowers of *P. alpina* seem fleshier, and the sepals do not spread. The blunt dorsal sepal remains concave, and the adherent lateral sepals form a concave, boat-shaped synsepal. The anterior lobe of the lip of *P. sicaria* is ovate and subacute with essentially entire margins. The anterior lobe of the lip of *P. alpina* is oblong with a rounded apex and denticulate margins.

Figure 220. *PLEUROTHALLIS ALPINA* Ames

***Pleurothallis annectens* Luer, sp. nov.**

Planta mediocris epiphytica caespitosa, caulibus secundariis gracilibus teretibus unifoliatis, foliis tenuibus ovatis cordatis acuminatis acutis, floribus fasciculatis successivis solitariis longipedicellatis rubropunctulatis, sepalo dorsali synsepaloque late ovato acuminato concavo, petalis grandibus sigmoideis acuminatis, labello carnosso sessili late cordato geniculato apiculatis lobis basalibus rotundatis erectis.

Plant medium in size, epiphytic, caespitose; roots slender, flexuous. Secondary stems slender, terete, unifoliate, 5-10 cm long, with a closely fitting, tubular sheath below the middle and 1-2 others at the base. Leaf suberect to horizontal, thin, coriaceous, ovate, acuminate, acute, tridenticulate, the base shallowly cordate, sessile. Inflorescence fasciculate, the long-pedicellate flowers borne singly and successively from a slender spathe, 5-10 mm long, at the base of the leaf; peduncle 15-20 mm long; pedicel 5-6 mm long; floral bract 3 mm long; ovary 2 mm long; flowers diffusely suffused with red and covered with dark red flecks; dorsal sepal concave, broadly ovate, acuminate, acute, 4-5 mm long, 2.75-3 mm wide, 3-veined; lateral sepals connate into a concave synsepal similar to the dorsal sepal, the apex minutely bidentate, 4-5 mm long, 3.5-4 mm wide, 4-veined; petals oblong-sigmoid, acuminate, acute, minutely and sparsely toothed, 4-5 mm long, 1.5 mm wide; lip fleshy, broadly ovate-cordate, geniculate, the apex acuminate, apiculate, the base sessile, the basal lobes rounded, erect and surrounding the column, 2 mm long, 2 mm wide spread; column stout, 1.5 mm long, the foot obsolete.

ETYMOLOGY: From the Latin *annectens*, "linking, connecting" (from *nectere*, "to bind or tie"), suggesting a link between solitary flowers and racemose inflorescences.

TYPE: PANAMA: CHIRIQUI: epiphytic in cloud forest along the continental divide above Camp Escopeta, Cerro Colorado, alt. 1700 m, 16 Feb. 1977, C. Luer, J. Luer & R. L. Dressler 1583 (HOLOTYPE: SEL), greenhouse acc. no. 77-1746, flowered in cult. 12 April 1977.

DISTRIBUTION: Panama.

This species is closely allied to the one- to two-flowered *Pleurothallis archicolonae* Luer, but it is readily separated by its larger habit and ovate-cordate leaves. The habit and flowers are very similar to those of the small-flowered *P. volcanica* Luer and the widespread, larger-flowered *P. rowleei* Ames, but the inflorescence of the latter two is racemose. The inflorescence of *P. annectens* is a fascicle of long, single-flowered peduncles, suggesting a link between the single-flowered and racemose species.

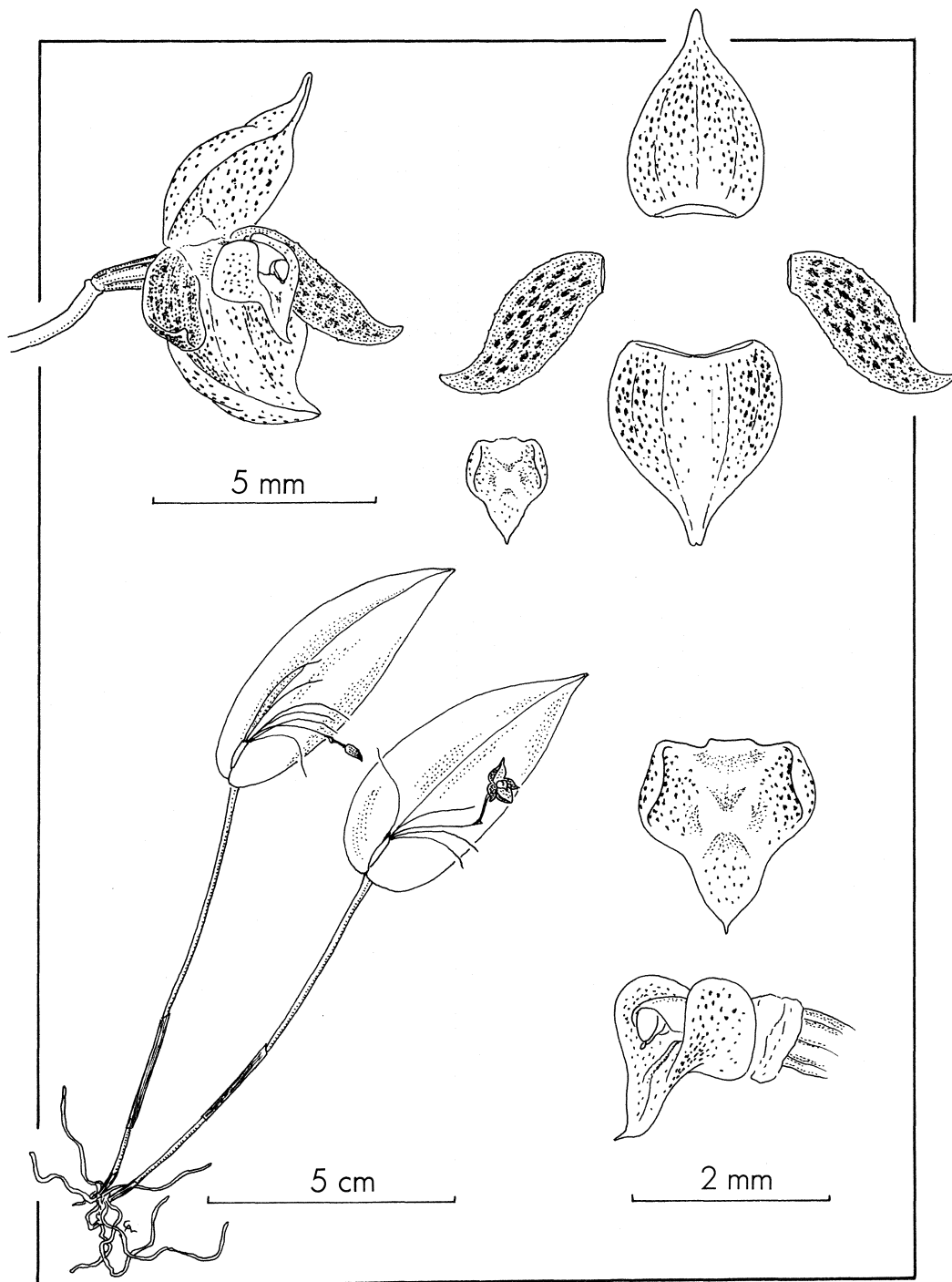


Figure 221. *PLEUROTHALLIS ANNECTENS* Luer

**Pleurothallis antonensis** L. O. Wms., Ann. Missouri Bot. Gard. 29:341. 1942.

Plant medium-sized, epiphytic, caespitose; roots fasciculate, flexuous. Secondary stems slender, terete, 6-27 cm long, with a closely fitted tubular sheath below the middle and 1-2 others at the base, unifoliate. Leaf suberect to spreading, coriaceous, ovate to narrowly ovate, acuminate, acute, tridenticulate, the base deeply cordate, sessile, 5-10 cm long, 2.5-3.8 cm wide. Inflorescence fasciculate, the flowers produced singly and successively from a spathe 8-15 mm long, at the base of the leaf; floral bract 3-6 mm long; pedicel 3-10 mm long; ovary 3-5 mm long; sepals glabrous, yellow, suffused with red or purple; dorsal sepal elliptical, obtuse to subacute, 6-7 mm long, 3 mm wide, 3-veined; lateral sepals connate into a broadly ovate synsepal, subacute, 5.5-6.5 mm long, 4.5-5 mm wide, 6-veined; petals red-brown to orange, linear-oblong, slightly oblique, subacute, the margins serrulate, 4-4.5 mm long, 0.8-1.3 mm wide, 1-veined; lip yellow, heavily suffused with red-brown, ovate-cordate, the apex obtuse to rounded, minutely denticulate, the base concave at the end, the glenion well-developed, the disc microscopically verrucose to smooth, 3-3.5 mm long, 2-2.25 mm wide; column stout, 1 mm long, 1.5 mm wide.

ETYMOLOGY: Named for El Valle de Anton, where the species was found.

TYPE: PANAMA: COCLE: hills north of El Valle de Anton, alt. 1000 m, *Allen 2156* (HOLOTYPE: AMES).

DISTRIBUTION: Panama.

PANAMA: COCLÉ: epiphytic in the cloud forest above El Valle, alt. 1000 m, 6 March 1976, *C. Luer, J. Luer, P. Taylor & R. L. Dressler 1015* (SEL), greenhouse acc. no. 43-76-225, flowered in cult. 5 July 1976; CHIRIQUI: Camp Hornito, Fortuna dam site, alt. 1000 m, 13 Aug. 1976, *R. L. Dressler 5336, 5351* (SEL); same locality, Oct. 1976, *R. L. Dressler s.n.* (SEL); cloud forest above Camp Escopeta, Cerro Colorado, alt. 1700 m, 16 Feb. 1977, *C. Luer, J. Luer & R. L. Dressler 1591* (SEL), greenhouse acc. no. 77-1853.

This Panamanian species may be distinguished from the great number of other cordate-leaved species by its medium-sized, deeply cordate leaves which vary from ovate to narrowly ovate, a small, yellowish flower tinged with red, a three-veined dorsal sepal, oblong petals minutely serrated, and an ovate lip about 3 mm long.

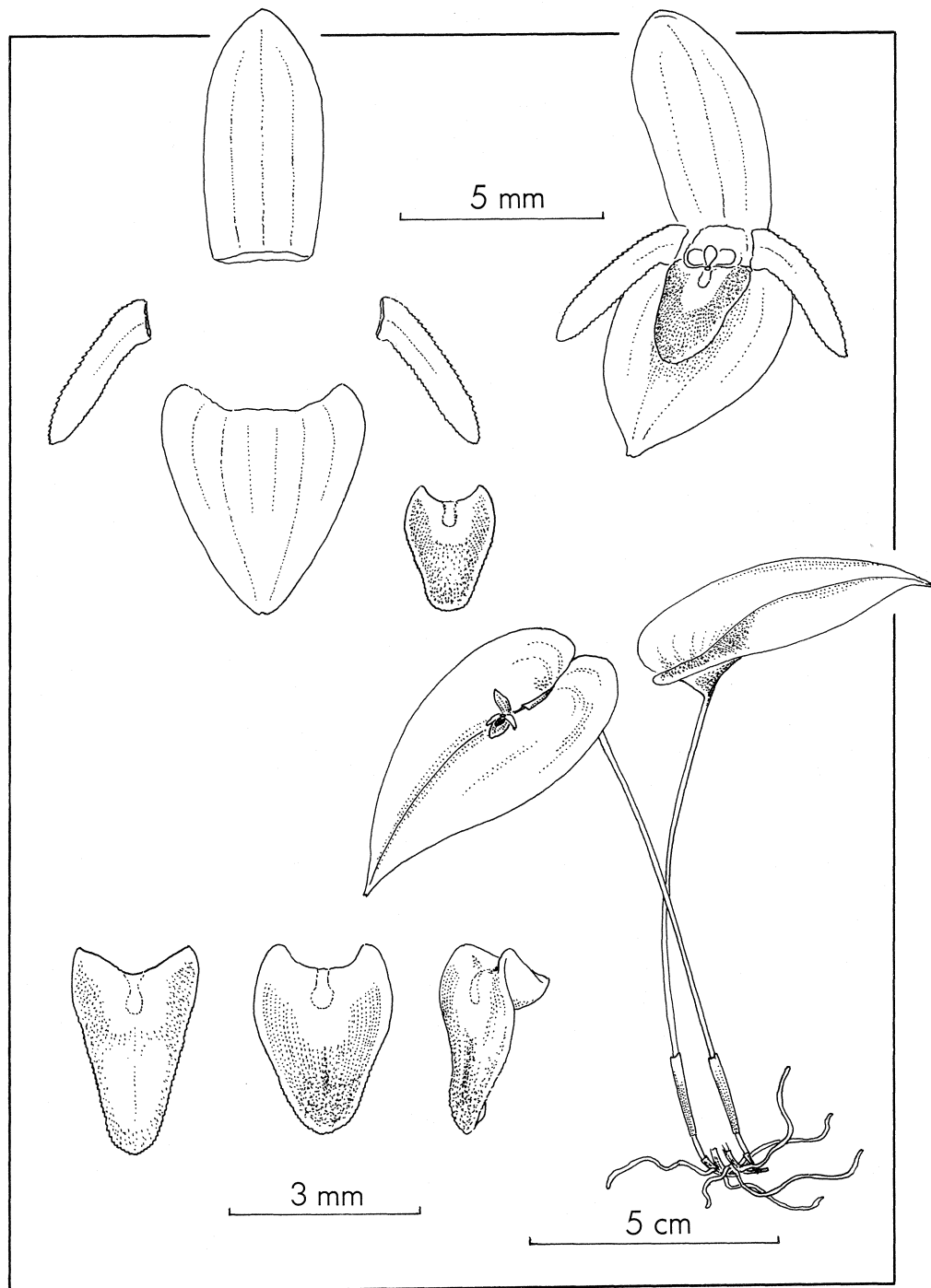


Figure 222. *PLEUROTHALLIS ANTONENSIS* L. O. Wms.



***Pleurothallis arietina* Ames, Sched. Orchid. 4:16. 1923.**

Plant medium in size, epiphytic, caespitose; roots slender, flexuous. Secondary stems slender, laterally compressed and thin above, up to 6 mm deep at the junction with the leaf, terete below, 10-20 cm long, with a tubular sheath below the middle and another at the base, unifoliate. Leaf coriaceous, ovate, acuminate, acute, tridenticulate, the base cordate, the auricles erect, more or less appressed together, sessile, 6-9 cm long, 3-4 cm wide. Inflorescence a fascicle of single, successive, long-pedicellate flowers, from a narrow spathe, 8-10 mm long, at the base of the leaf; peduncle 5-10 mm long; floral bract 5 mm long; pedicel 15-20 mm long; ovary curved, 4 mm long; sepals glabrous, light yellow, spotted with purple; dorsal sepal elliptical, the apex rounded to obtuse, 10-11 mm long, 4.5 mm wide, 3-veined, the veins prominent dorsally; lateral sepals connate into an oblong, concave, rounded synsepal, 8-10 mm long, 4-5 mm wide; petals elliptical, subacute, narrowed below the middle into a distinct claw, thickened, semi-terete; lip purple-brown, minute, thickened, triangular, the apex obtuse, pubescent, with a basal pair of doubly-folded, acute, oblique, narrowly triangular lobes, pubescent on the outer surface, the base concave, attached to the column by a thin strip of tissue, the disc with a thick, bilobed, glabrous callus, the lobes rounded, directed forward, with a small cavity between them; column 4 mm long, with a triangular projection below the middle, immediately in front of the attachment of the lip, the rostellum subulate, the foot absent.

ETYMOLOGY: From the Latin *arietinus*, "of a ram" (from *aries*), in allusion to the appearance of the lip.

TYPE: COSTA RICA: CARTAGO: La Estrella, C. H. Lankester & Alfredo Sancho s.n. (HOLOTYPE: AMES).

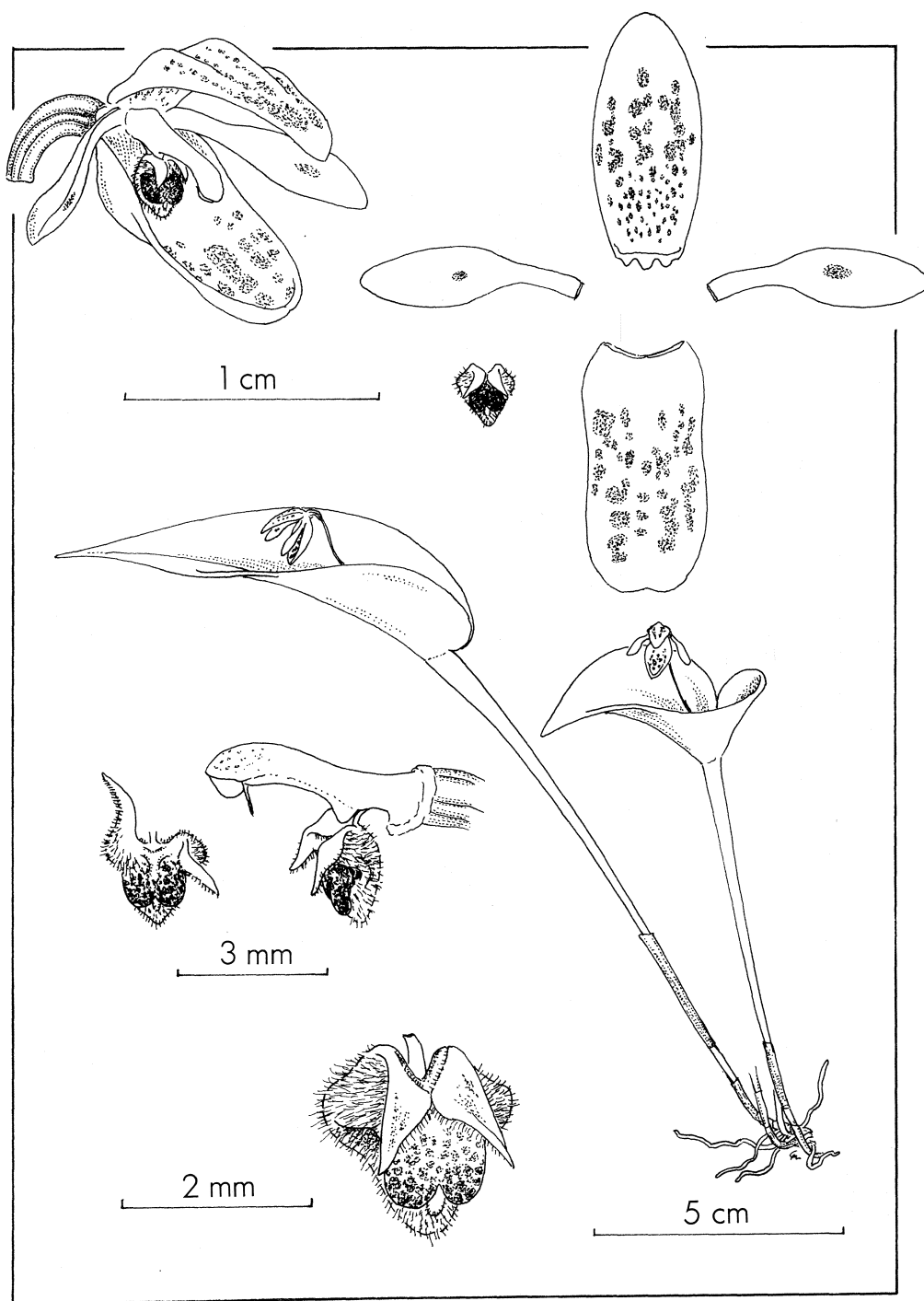
DISTRIBUTION: Costa Rica and Panama.

COSTA RICA: HEREDIA: epiphytic near Cariblanco, north of Volcan Pass, alt. 850 m, 24 April 1956, L. O. Williams 20286 (SEL).

PANAMA: CHIRIQUI: Fortuna dam site, Oct. 1976, R. L. Dressler s.n. (SEL); VERAGUAS: epiphytic in cloud forest near the continental divide above Santa Fe, alt. ca. 750 m, 6 Sept. 1976, C. Luer & R. L. Dressler 1136 (SEL).

This species is very closely allied to *Pleurothallis crocodiliceps* Rchb. f., differing only in minor details. The length of the flattened stems is too variable to be of diagnostic value. The leaves of *P. crocodiliceps* from South America are long and narrow with a cuneate base. The leaves of *P. crocodiliceps* from eastern Panama are broader, as wide as those of *P. arietina*, and the base of mature leaves is rounded. The base of the leaves of *P. arietina* is cordate, the basal lobes extending behind the level of junction with the stem, and in the natural position they are erect with the rounded margins touching.

The sepals and petals of *P. crocodiliceps* from South America (Ecuador) and eastern Panama are white, suffused with green toward the base. The sepals and petals of *P. arietina* are yellowish and spotted with purple. The callus of the lip is thick, bilobed and glabrous, that of *P. crocodiliceps* from eastern Panama is merely convex, and shortly pubescent.

Figure 223. *PLEUROTHALLIS ARIETINA* Ames

***Pleurothallis asperilinguis*** Rchb. f. & Warsc., Bonplandia 2:114. 1854.

*Humboldtia asperilinguis* (Rchb. f. & Warsc.) Kuntze, Rev. Gen. Pl. 2:667. 1891.

*Pleurothallis aurea* Lindl. var. *asperilinguis* (Rchb. f. & Warsc.) Foldats, Acta Biol. Venez. 2:373. 1959.

Plant small, epiphytic, caespitose; roots slender, flexuous. Secondary stems slender, terete, 1.5-5 cm long, with 2-3 close-fitting tubular sheaths below the middle, unifoliate. Leaf thick, coriaceous, rigid, erect, narrowly elliptical to linear, obtuse, tridenticulate, the base attenuate, channeled, 5-8 cm long, 6-7 mm wide. Inflorescence a laxly many-flowered, slender, flexuous raceme to 12 cm long; peduncle slender, from a small, 4 mm long spathe at the base of the leaf; floral bract and pedicel each 2-3 mm long; ovary 2 mm long; sepals free, fleshy, light yellow, narrowly ovate, obtuse, shortly pubescent within, the lateral sepals oblique, forming a mentum with the column-foot, 10 mm long, 2 mm wide; petals oblong, obtuse to rounded, 3.5 mm long, 1 mm wide, translucent greenish white with a purple carinate vein externally; lip green, oblong-obovate, the apex rounded, the base unguiculate, the disc with a longitudinal pair of calli which meet near the apex in a band of verrucosities, 4 mm long, 1.3 mm wide; column slender, 3 mm long with an equally long foot.

ETYMOLOGY: From the Latin *asper*, "rough," and *linguis*, "tongued," in allusion to the verrucose apex of the lip.

TYPE: *PERU*: without specified locality, *Warscewicz s.n.*

DISTRIBUTION: Peru, Ecuador, Colombia, and Venezuela.

*ECUADOR*: PASTAZA: epiphytic east of Mera, alt. 1000 m, 19 March 1976, C. Luer, J. Luer & P. Taylor 948 (SEL).

This species is widely distributed in the Andes. It may be recognized by its small, narrow, thick leaves borne by slender, somewhat shorter secondary stems. The raceme, somewhat longer than the leaf, bears relatively large, pale yellow flowers with narrow, recurving, pubescent sepals. The petals are obtuse with a prominent purple mid-vein. The lamellae of the obtuse, simple lip terminate in verrucosities.

*Pleurothallis asperilinguis* is similar to *P. acuminata* (HBK) Lindl., which has broader leaves, and an oblong, less verrucose lip.

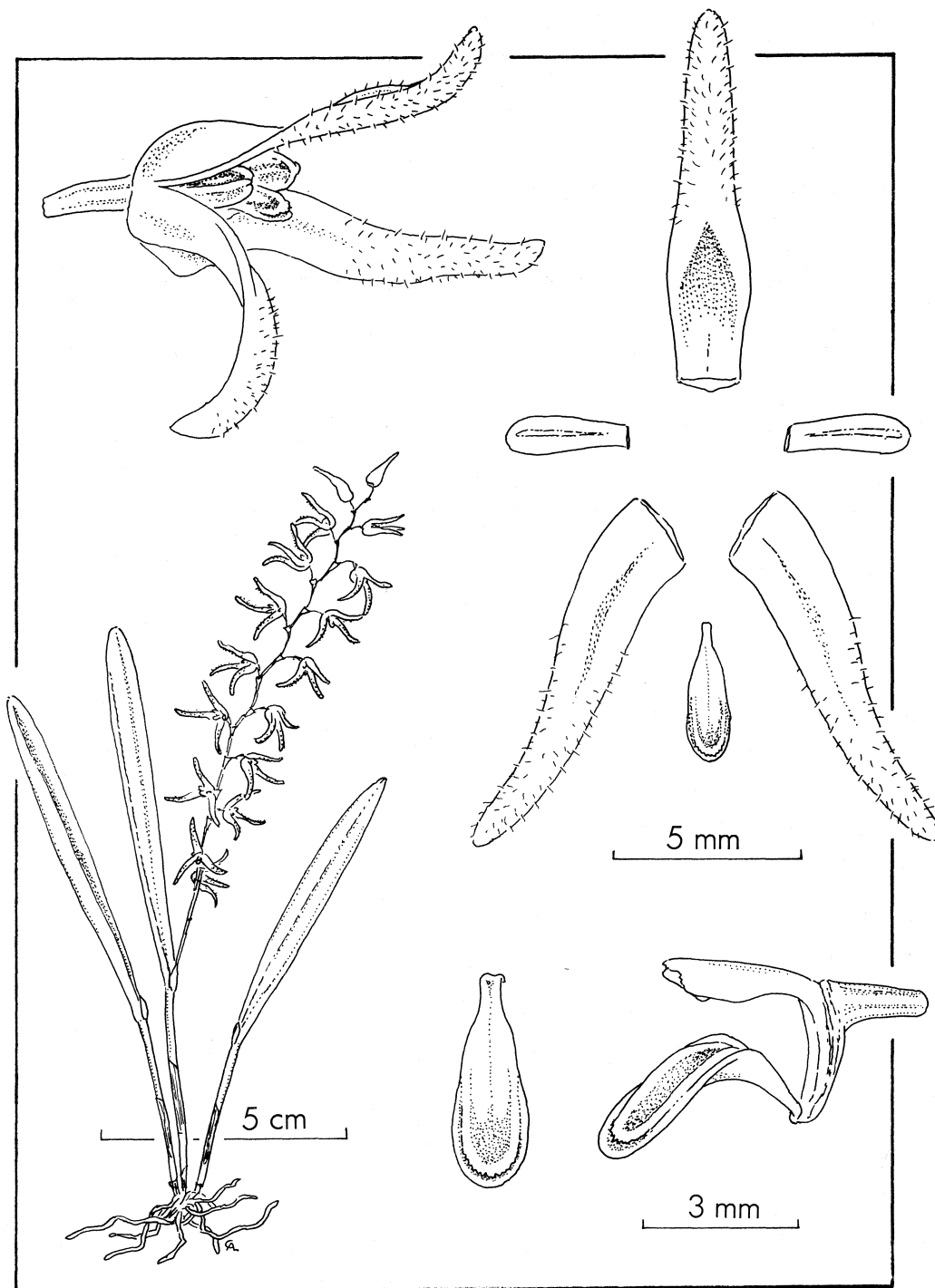


Figure 224. *PLEUROTHALLIS ASPERILINGUIS* Rchb. f. & Warse.

**Pleurothallis aurantio-lateritia** Speg., *Anales Mus. Nac. Hist. Nat. Buenos Aires* 28:132. 1916.

*Physosiphon herzogii* Schltr. *Repert. Spec. Nov. Regni*. 12:485. 1913; not *Pleurothallis herzogii* Schltr.

Plant small, epiphytic, stout, shortly repent, the primary stem invested with short, pubescent sheaths; roots coarse, flexuous. Secondary stems ascending, terete, stout, 2.5-4.5 cm long, 3 mm thick, clothed on the lower half by 1-2 coarse, brown, pubescent, fugacious sheaths, monophyllous. Leaf fleshy, coriaceous, elliptical, subacute, tridentate, base cuneate, sessile, 4.5-6.5 × 1.5-2 cm. Inflorescence a few-flowered (5-8) raceme, 5-6 cm long, flowers fleshy, shortly pubescent, tubular, incompletely opening, yellow-green suffused with orange-brown; peduncle stout, green, pubescent, from a 5 mm spathe in the axil of the leaf; floral bract tubular, tight-fitting, below the junction of the pedicel with the rachis, pubescent, 3-4 mm long; pedicel united with the rachis, pubescent; ovary green, pubescent 1-1.5 mm long; dorsal sepal very narrowly obovate, linear-clavellate, terete above the middle, the inner surface orange and microscopically papular, red below the middle, apex rounded, lightly adherent below the middle to the synsepal, 11 × 2.5 mm; lateral sepals united into an oblong synsepal, concave, the apex rounded and shortly cleft, orange-brown within, 9 × 6 mm; petals red and orange, oblong, slightly falcate, margin dentate above the middle, apex rounded, mucronate from the dorsum, 3 × 1 mm; lip fleshy, orange marked with red, elliptical, apex rounded, denticulate, dilated near the middle with elevated, denticulate margins, base shortly bilobulate and shortly hinged to the column-foot, disc microscopically tuberculate, with a pair of smooth crests below the middle near the margins, 3 × 1.5 mm; column terete, 2.5 mm long, clinandrium dentate, foot short.

ETYMOLOGY: From the Latin *aurantium*, "orange," and *lateritius*, "brick-red", in reference to the color of the flowers, especially within.

TYPE: (of *Physosiphon herzogii*): BOLIVIA: SANTA CRUZ: epiphytic on the edge of the forest near Tres Cruces, alt. 1500 m, Feb. 1911, *Th. Herzog* 1628.

DISTRIBUTION: Bolivia and Argentina.

BOLIVIA: SANTA CRUZ: epiphytic near Samaipata, Dec. 1975, *Fred Fuchs, Jr.* 107 (SEL).

This species is easily recognized by its small, stout stature. The thick, round stems, partially concealed by pubescent, papery sheaths, bear a somewhat longer, thick fleshy leaf. In a slow procession the stout raceme bears a few greenish, downy, tubular flowers. The dorsal sepal is lightly adherent to the synsepal (the united lateral sepals) below the middle, obviously Schlechter's reason for first describing the species in *Physosiphon*. In the same article he described *Pleurothallis herzogii*, a different plant.

Above the middle the dorsal sepal is fleshy and cylindrical, protruding like the blunt nose of a dolphin. The apex of the synsepal bends downward to expose the red-orange interior at the bottom of which are hidden the petals, column and lip. The petals are terminated by a claw-like process which projects from the external surface, but the column and lip are similar to those of many species of *Pleurothallis*.

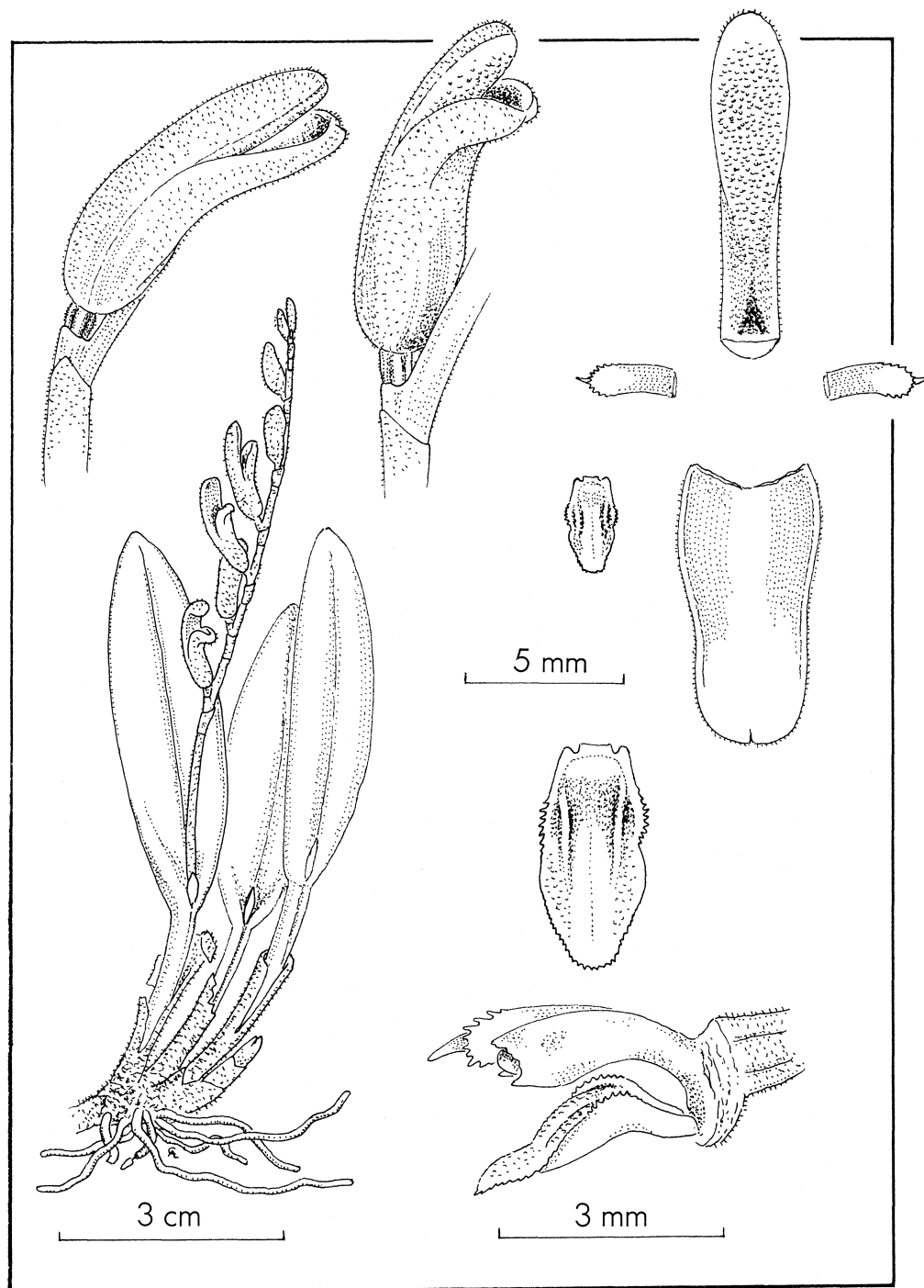


Figure 225. *PLEUROTHALLIS AURANTIO-LATERITIA* Speg.

**Pleurothallis auriculata** Lindl., *Campanion Bot. Mag.* 2:356. 1836.

*Pleurothallis longicaulis* Lindl., *Edward's Bot. Reg.* 28:misc. 72. 1842.

*Pleurothallis anthoxantha* Rchb. f. in *Wawra, Bot. Ergeb. Maxim. Bros.* 149. 1866.

*Pleurothallis compressiflora* Barb. Rodr., *Gen. Sp. Orchid. Nov.* 2:13. 1882.

*Humboldtia auriculata* (Lindl.) O. Ktze., *Rev. Gen. Pl.* 2:667. 1891.

*Humboldtia longicaulis* (Lindl.) O. Ktze., l. c. 2:667. 1891.

*Pleurothallis triquetra* Schltr., *Repert. Spec. Nov. Regni Veg.* 12:488. 1913; not Kl. ex Lindl.

Plant epiphytic, small, caespitose, primary stems swollen, producing a secondary stem about every 2 mm; roots slender, flexuous. Secondary stem slender, terete below, laterally compressed and channeled above, 3-11 cm long, provided with 3-5 tubular evanescent sheaths, unifoliate. Leaf coriaceous, elliptical, apex acute to subacute, tridentate, base cuneate to nearly rounded, sessile, 2.5-5 cm X 10-16 mm. Inflorescence an arcuate raceme, 3-5 cm long, of 5-13 flowers; peduncle slender, from a 2-5 mm spathe at the base of the leaf; floral bract tubular, 2-4 mm long; pedicel and the ovary each about 1 mm long; flowers bilabiate, yellow-green, sometimes marked with purple; dorsal sepal elliptical to obovate, obtuse, apiculate, 5 X 2 mm, concave below the middle, convex above the middle, alate externally; lateral sepals connate at least to the middle into an oblong, bifid, bicarinate lamina, 5 X 3 mm, concave toward the base into a shallow mentum; petals elliptical, slightly oblique, acute, slightly erose above the middle, 3 X 1 mm; lip elliptical, 2.75 X 1.75 mm, 3-lobed, mid-lobe oblong, rounded and apiculate, lateral lobes small, broadly falcate, acute, erect, near the middle, base broadly unguiculate with a soft, spongy, transverse pad which exudes a fluid when disturbed, disc with a pair of low smooth lamellae just above the middle; column 2.5 mm long, clinandrium dentate, anther verrucose, column-foot short.

ETYMOLOGY: From the Latin *auriculatus*, "having small ears" (from *auricula*, dim. of *auris*, "ear"), in reference to the subulate auricles of the lip.

TYPE: BRAZIL: near the river Macahé, *Miers, Descourtilz s.n.*

DISTRIBUTION: Southern Brazil and Bolivia.

BOLIVIA: COCHABAMBA: east of Cochabamba, alt. 1700 m, *Fred Fuchs, Jr. s.n.* (SEL) greenhouse acc. no. 26-74-130, flowered in cult. Nov. 1974, May through Sept. 1975; SANTA CRUZ: near Zamapata, alt. 1000 m, *Fred Fuchs, Jr. s.n.* (SEL) greenhouse acc. no. 26-74-88, flowered in cult. Dec. 1974, May through Sept. 1975.

This species, previously known from southern Brazil but reported from Bolivia by Schlechter as *P. triquetra*, has recently been found in two localities in Bolivia by Fuchs. Plants from Santa Cruz are slightly larger, sometimes with prolific stems, arching racemes considerably longer than the leaves, and clear yellow flowers. Plants from Cochabamba have racemes with yellow-green flowers mottled with lilac.

The slender racemes are weak and drooping, so that the flowers, which develop as non-resupinate, become inverted or resupinate without rotation. The racemes continue to elongate as anthesis slowly progresses. The dorsal sepal and synsepal are widely winged, the carinae extending onto the ovary. The margins of the elliptical petals are slightly irregular. The three-lobed lip is apiculate and broadly unguiculate. At the attachment to the column-foot, a transverse spongy elevation is covered with a thin membrane which ruptures when the lip is removed. A minute amount of fluid exudes which is probably intended for a specific sucking insect.

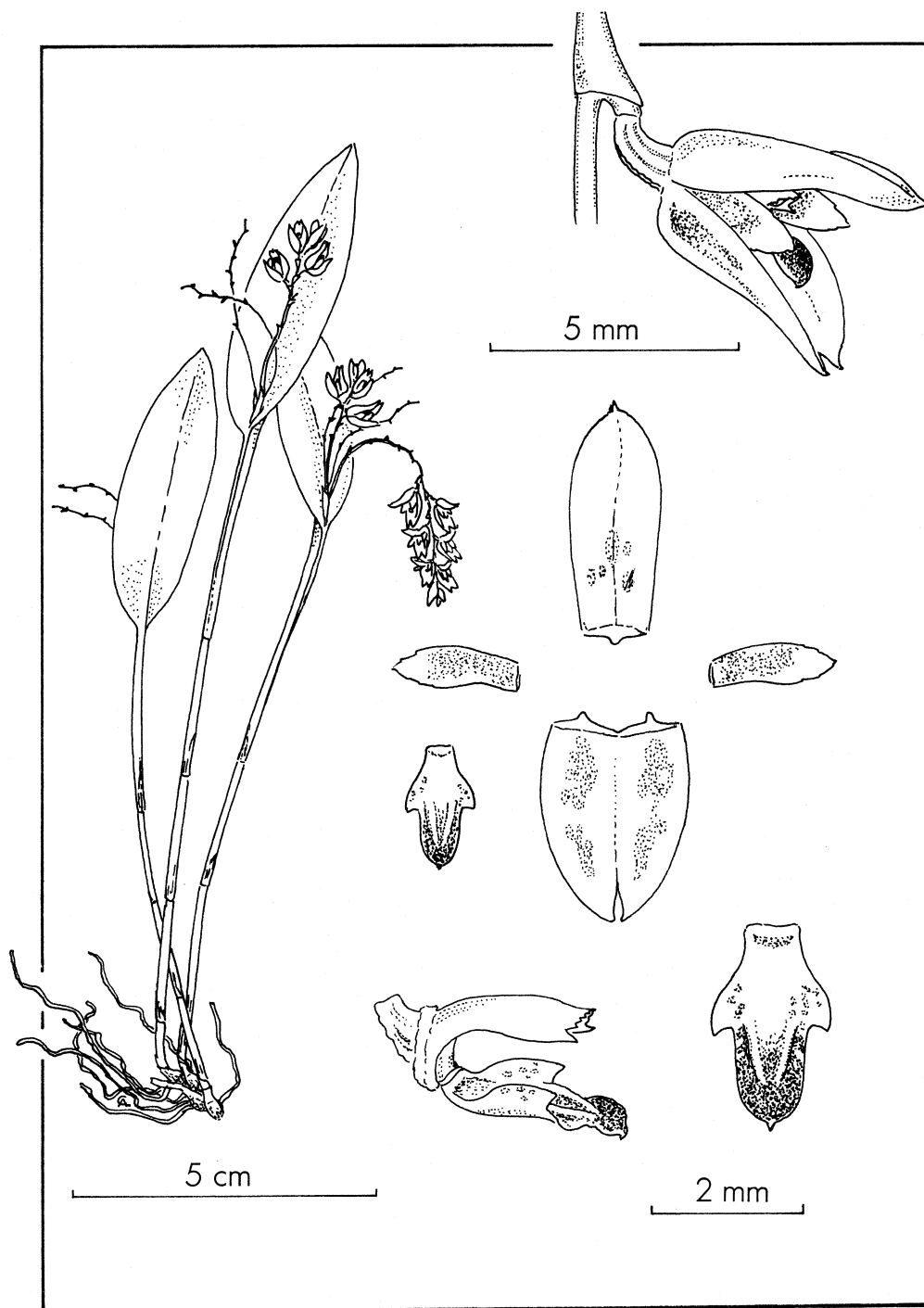


Figure 226. *PLEUROTHALLIS AURICULATA* Lindl.



*Pleurothallis butcheri* L. O. Wms., Fieldiana, Bot. 29:346. 1961.

Plant epiphytic, medium in size, caespitose, pendent; roots fine, flexuous, ascending. Secondary stems purple, terete, 2-7.5 cm long, largely concealed by 3 invaginating sheaths, widened and compressed toward the dependent apex, unifoliate. Leaf pendent, thick, coriaceous, suffused with purple, especially the back surface, narrowly linear-elliptical, slightly curved, acute, the base cuneate, sessile, 7-19 cm long, 1-2.5 cm wide. Inflorescence a descending, pendent, compact, few-flowered (4-6) raceme, to 20 cm long including the slender, flexible peduncle, from a spathe 1-2 cm long at the base of the leaf; floral bract tubular, 3-4 mm long; pedicel obsolescent, less than 1 mm long; ovary 6-winged, 1.5 mm long; dorsal sepal yellow-green spotted with purple, narrowly linear, acute, sulcate along the mid-vein with the sides revolute, carinate dorsally, sparsely pubescent apically, 15 mm long, 2 mm wide, 3-veined; lateral sepals shiny yellow-green with purple spots, connate into a more or less oblong, obtuse, bifid synsepal with revolute margins, sparsely long-pubescent marginally and toward the apex, 15 mm long, 6 mm wide unspread, bicarinate externally; petals membranous, sigmoid, acute, 4 mm long, 1 mm wide, 3-veined; lip brown, thick, ovate, obtuse, with erect, rounded, basal lobes, the base narrowly hinged to the column-foot, with a pair of thick calli near the middle, 5.5 mm long, 3 mm wide; column pink, terete, 4 mm long, the rostellum with linear lateral lobes, the foot papillose, 3 mm long.

ETYMOLOGY: Named in honor of its discoverer, Henry P. Butcher of Volcán, Chiriquí.

TYPE: PANAMA: CHIRIQUI: epiphyte in mossy cloud forest, along a branch of Río Machomonte, vicinity of Volcán, alt. ca. 1300 m, 19 Jan. 1961, Henry P. Butcher 651 (HOLOTYPE: F).

DISTRIBUTION: Panama.

PANAMA: CHIRIQUI: epiphytic along a canyon stream a few km below Boquete, alt. ca. 1000 m, 18 Dec. 1976, C. Luer, A. Luer & R. L. Dressler, 359 (SEL).

The habitat of this peculiar species, related to *Pleurothallis oscitans* Ames, is the boughs of trees overhanging rocky mountain streams of western Panama. The narrow, purplish leaves and stems hang straight down from the rooted bases. The weak, flimsy peduncle elongates from the base of the leaf until the apex is approached, whereupon the buds begin to develop. Slender, spiny dorsal sepals protrude from the expanded raceme while the shiny, purple-spotted lateral sepals recurve to surround the rachis as well as the lateral sepals of the next lower flower to create a tubular series of overlapping sepals. It resembles a fat, dangling caterpillar.

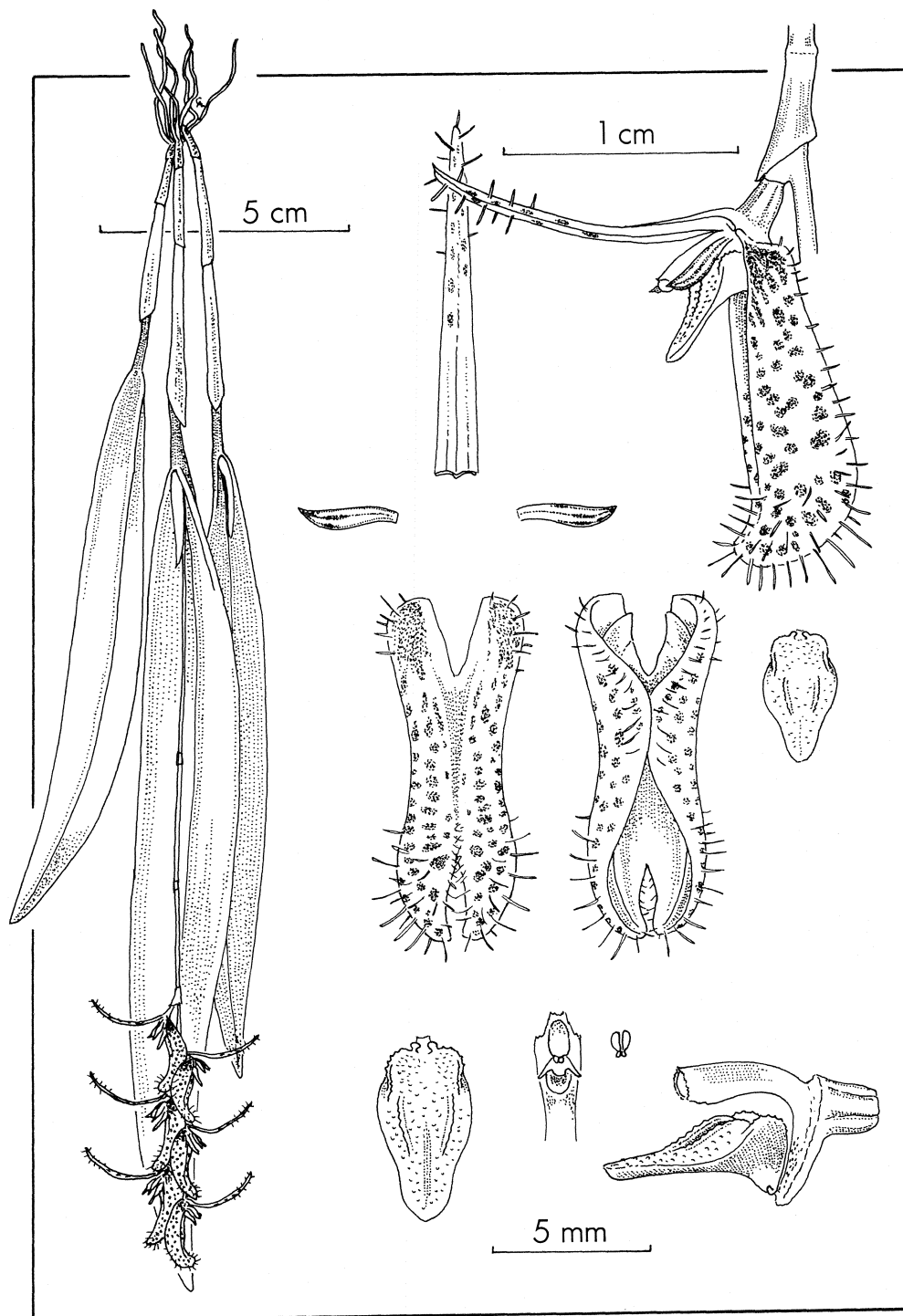


Figure 227. *PLEUROTHALLIS BUTCHERI* L. O. Wms.

*Pleurothallis cardiorthallis* Rchb. f., Bot. Zeitung (Berlin) 15-158. 1857.

*Humboldtia cardiorthallis* (Rchb. f.) Kuntze, Rev. Gen. Pl. 2:667. 1891.

*Pleurothallis acutipetala* Schltr., Repert. Spec. Nov. Regni Veg. 10:353. 1912.

*Pleurothallis costaricensis* Schltr., Beih. Bot. Centralbl. 36(2):395. 1918; not Rolfe.

*Pleurothallis schlechteriana* Ames, Sched. Orchid. 2:24. 1923.

Plant large, epiphytic, caespitose; roots numerous, slender, flexuous. Secondary stems slender, terete, 15 to 45 cm long, often spotted below, with a close, tubular sheath below the middle and 1-2 others at the base, unifoliate. Leaves spreading coriaceous ovate, acuminate, acute, tridentate, the base deeply cordate, sessile, 9-20 cm long, 3.5-8 cm wide. Inflorescence fasciculate, successive, the flower usually solitary, yellow to orange or red-orange, minutely pubescent externally; spathe 1-3 cm long; pedicel 5-10 mm long; floral bract 4-5 mm long; ovary 5-10 mm long; dorsal sepal broadly ovate to suborbicular, obtuse to shortly acuminate, 11-18 mm long, 8-14 mm wide, 7- to 9-veined; lateral sepals united into a broadly ovate to suborbicular synsepal similar to the dorsal sepal, 10-15 mm long, 10-15 mm wide, 8- to 10-veined; petals triangular, falcate, acute to acuminate, 7-10 mm long, 2-3 mm wide; 3-veined; lip yellow to orange or red, oblong to quadrate or subpan-durate, apex abruptly obtuse, apiculate, with thickened finely pubescent margins, broadly hinged to the column-foot, 5-9 mm long 4-6 mm wide; column stout, 1-2 mm long, 2-3 mm wide.

ETYMOLOGY: From the Greek *cardia*, "heart," and *thallos*, "stem, or twig," in reference to the stems bearing heart-shaped leaves.

TYPE: Origin unknown, introduced from England into Hortus Schillerianus, type of *Pleurothallis acutipetala* Schltr.: GUATEMALA: ALTA VERAPAZ: near Pansamala, February 1886, *H. von Tuerckheim* 860.

DISTRIBUTION: Mexico, Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, Panama, and Colombia.

MEXICO: CHIAPAS: Montebello lake district, alt. 1700 m, 22 Aug. 1953, *F. B. Johnson* 353-138 (SEL).

GUATEMALA: without specific locality, *H. H. Morgan* s.n. (SEL), flowered in cult. 2 Feb. 1976.

COSTA RICA: without specific locality, *F. L. Stevenson* 112674-8 (SEL), flowered in cult. 26 Nov. 1974; ALAJUELA: Zapote, alt. 1350 m, 31 Oct. 1938, *A. Smith* H1302 (SEL).

PANAMA: CHIRIQUI: Fortuna dam site, alt. 1000 m, Oct. 1976, *R. L. Dressler* s.n. (SEL); Cerro Colorado, 50 km N of San Félix, alt. 1350 m, 18 Aug. 1975, *R. L. Dressler* 5121 (SEL); VERAGUAS: near the continental divide above Santa Fé, alt. ca. 750 m, 5 Sept. 1976, *C. Luer & R. L. Dressler* 1252 (SEL); Río Dos Bocas, 16 km NW of Santa Fé, alt. 500 m, 15 Nov. 1974, *R. L. Dressler* 4783 (SEL).

This large and somewhat variable species was first described by Reichenbach from horticultural material introduced into Germany by way of England. It is apparently frequent and widespread in Central America, only recently having been identified from Colombia by Garay, and this is the first report from Panama.

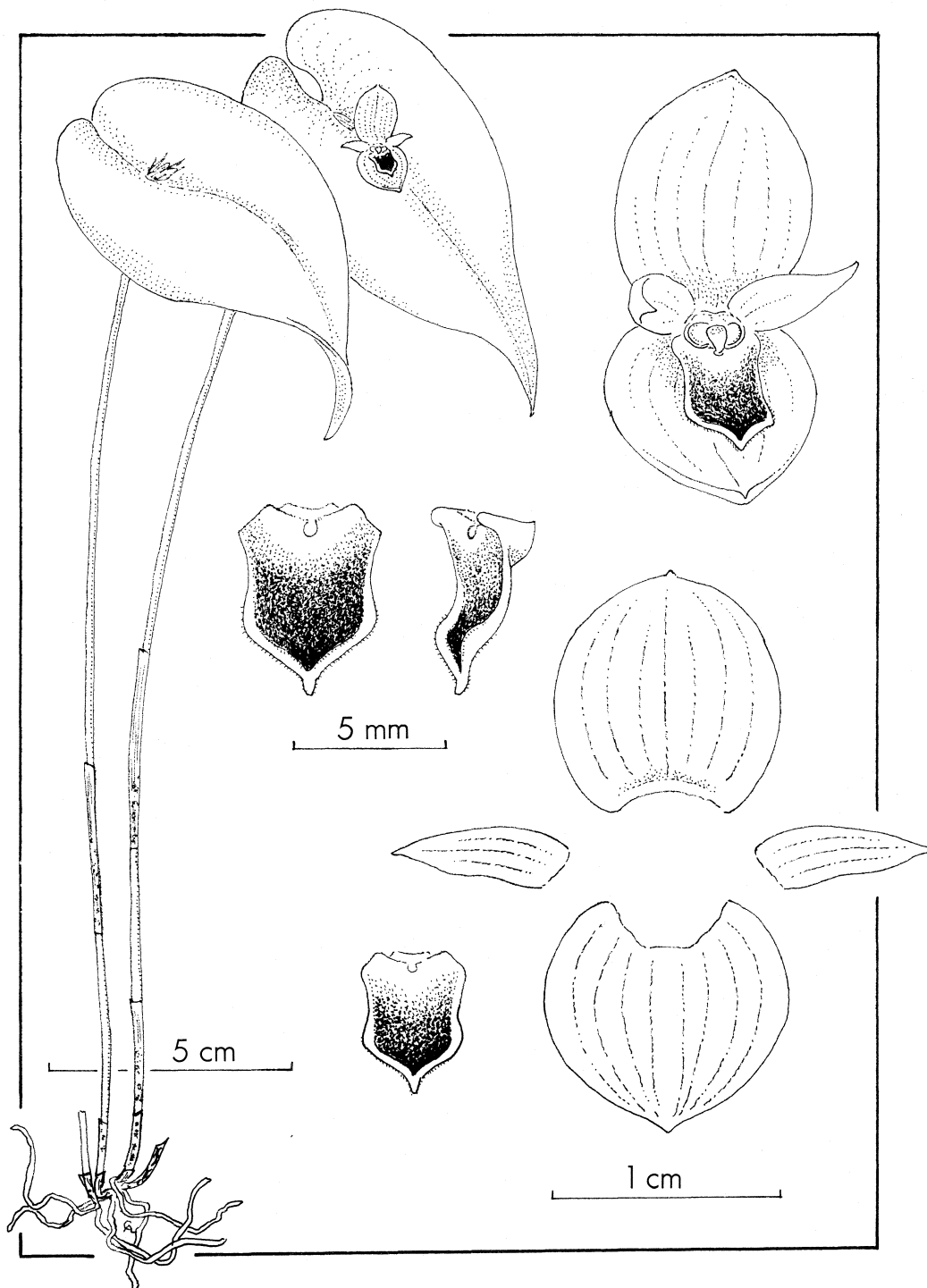


Figure 228. *PLEUROTHALLIS CARDIOTHALLIS* Rchb. f.

The long stems bear large heart-shaped leaves and large flowers which vary in color from pure yellow through orange to brownish. Sometimes the lip is vivid red. The sepals are very broad and multi-veined; the petals are acute; and the more or less shield-shaped lip is characterized by a thickened, pubescent margin.

***Pleurothallis carinilabia* Luer, nom. nov.**

*Pleurothallis broadwayi* Ames var. *tricarinata* C. Schweinf., neither *P. tricarinata* Poeppig & Endl., nor Focke.

Habitu *P. foliatae* Griseb. similis, sed differt labelo obovato tricarinato.

Plant very small, epiphytic, caespitose; roots filiform, flexuous. Secondary stems slender, 1-3 cm long, prolific, forming taller multi-stemmed segments, concealed by 2-4 close-fitting lepanthiform sheaths, unifoliate. Leaf coriaceous, elliptical, obtuse, tridenticulate, the base cuneate to rounded, shortly petiolate, 9-12 mm long, 5-7 mm wide. Inflorescence a loose, several-flowered, flexuous raceme, to 3 cm long; peduncle filiform, from the apex of a secondary stem within the upper sheath; floral bract 0.5 mm long; pedicel 1.5-2 mm long; ovary 0.5 mm long; sepals and petals pale yellow-green; dorsal sepal broadly ovate, concave, acuminate, acute, 2.5 mm long, 1.5 mm wide, 3-veined, the veins prominent externally; lateral sepals free, triangular, oblique, forming a mentum below the column-foot, acuminate, acute, 2 mm long, 1 mm wide, 1-veined; petals broadly elliptical, obtuse, 1 mm long, 0.6 mm wide, 1-veined; lip pale green, obovate, the apex rounded, thickened, minutely papillose, acutely deflexed near the base, the disc with a prominent dark green keel down the center with a low, marginal carina on both sides; column 1 mm long, with a pair of forwardly projecting wings.

ETYMOLOGY: From the Latin *carina*, "keel," and *labium*, "the labellum," in reference to the carinate lip.

TYPE: (*P. broadwayi* var. *tricarinata*): COSTA RICA: ALAJUELA: epiphytic, 2000-2400 m, 9 May 1938, *Austin Smith H532*; 16 May 1938, *A. Smith H589*; 27 May 1938, *A. Smith H668* (HOLOTYPE: AMES).

DISTRIBUTION: Costa Rica and Panama.

PANAMA: COCLÉ: epiphytic in old orange grove in the hills above El Valle, alt. 1000 m, 2 Sept. 1976, *C. Luer & H. Butcher 1120* (SEL).

Although the plant from Panama illustrated here differs in minor details from the description of *Pleurothallis broadwayi* var. *tricarinata*, it most likely is conspecific. Schweinfurth cited longer pedicels, a tricarinate lip, and a wingless column as the differentiating features. The length of the pedicels is known to be variable in *P. foliata*, and should be expected to be variable in this closely allied species. The lip is very similar to the type, the preparation of the lip of the type presumably having been made from a dried specimen. The column of the plant illustrated is terminated by a pair of small, forward-directed wings.

Vegetatively, this species is inseparable from the widespread *P. foliata*. The flexuous racemes of minute yellowish flowers exceed the leaves in length. The flowers are distinguished by the lip which, in fresh material, is broadest above the middle, acutely deflexed at the base, and distinctly carinate centrally, the green carina flanked by a pair of lower, marginal calli.

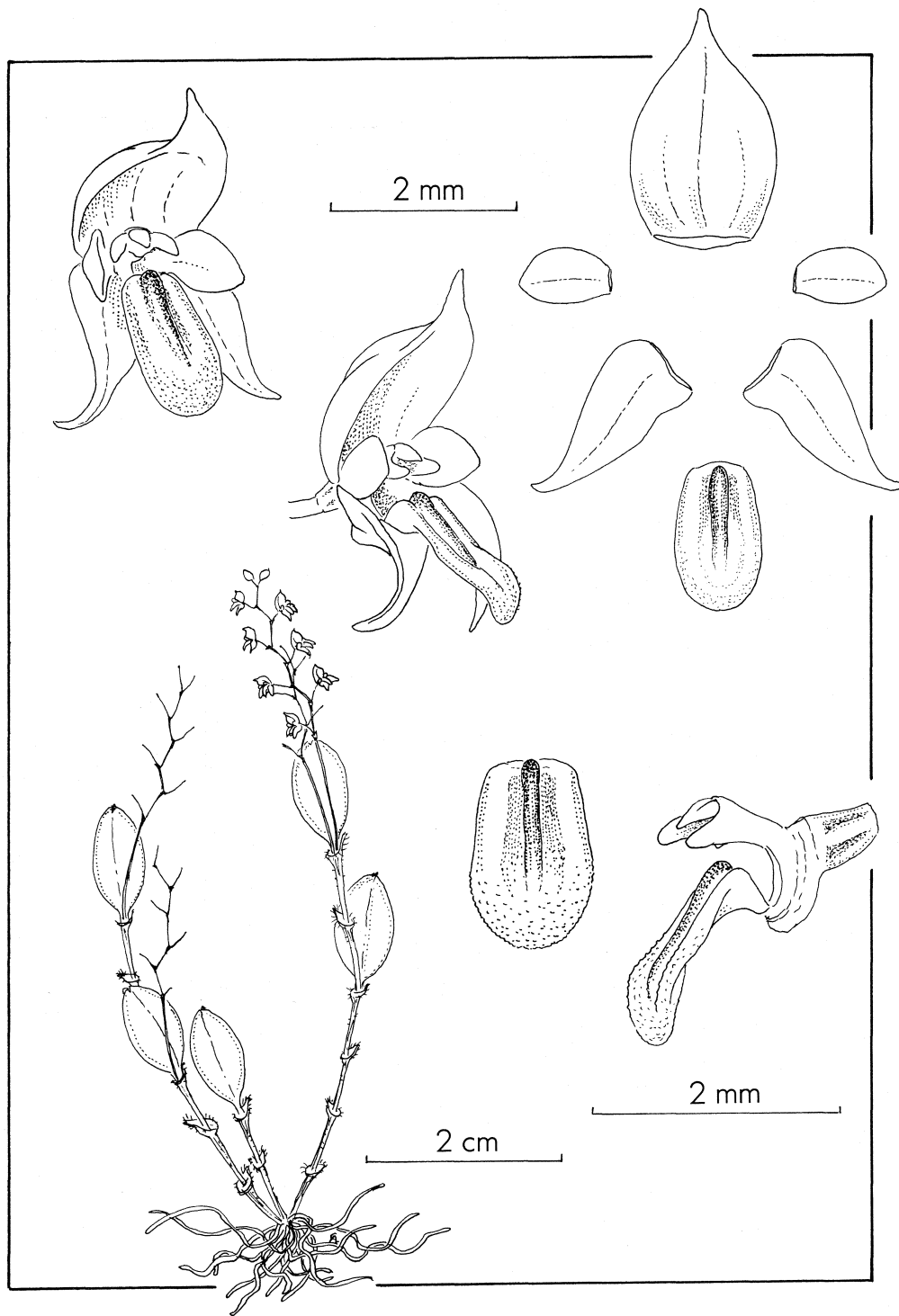


Figure 229. *PLEUROTHALLIS CARINILABIA* Luer

**Pleurothallis carpintera** Schltr., Repert. Spec. Nov. Regni Veg. Beih. 19:105. 1923.

Plant small, epiphytic, caespitose; roots fine, flexuous. Secondary stems very slender, terete, 2.5-9.5 cm long, with a loose tubular sheath below the middle and a smaller one at the base, unifoliate. Leaf coriaceous, erect, elliptical, acuminate, acute, tridenticulate, the base cuneate, sessile, 3-4.5 cm long, the flowers large, gaping, showy, clear yellow to yellow spotted with red-brown, produced singly in a slow succession; peduncle filamentous, from a spathe 2-3 mm long at the base of the leaf; floral bract conduplicate, acute, 3 mm long; pedicel 2.5 mm long; ovary green, dotted with purple, tri-lobate, 1.5 mm long; dorsal sepal elliptical, shortly acuminate, acute, concave, 12 mm long, 8 mm wide, 3-veined, distinctly uncarinate; lateral sepals united into an elliptical, obtuse, concave synsepal, 11 mm long, 8 mm wide, bicarinate; petals broadly obovate-spatulate, obtuse to shortly acuminate, orange, faintly speckled with red-brown, 7 mm long, 4 mm wide, 3-veined; lip orange, obovate-panduriform, 10 mm long, 5 mm wide, the apex obtuse to subacute, abruptly narrowed just below the middle, dilated again in the lower third with the margins infolded, with a claw 1.5 mm long, broadly but lightly adherent to the column-foot; column arcuate, winged, with a broad, thick, indistinct foot.

ETYMOLOGY: Named for Cerro Carpintera where the species was first discovered.

TYPE: *COSTA RICA*: CARTAGO: Carpintera, April 1908, A. and C. Brade 1214.

DISTRIBUTION: Costa Rica and Panama.

*PANAMA*: CHIRIQUI: epiphytic in cloud forest on Cerro Hornito, alt. ca. 1700 m, 15 Dec. 1976, C. Luer, A. Luer, R. L. Dressler & N. H. Williams 1356 (SEL); *VERAGUAS*: epiphytic near the continental divide, third branch of Río Santo María, 12-15 km NW of Santa Fe, alt. 650-750 m, 16 Nov. 1974, R. L. Dressler 4850 (SEL); same area, 5 Sept. 1976, C. Luer & R. L. Dressler 1288 (SEL), greenhouse acc. no. 123-76-57, flowered in cult. 27 Dec. 1976.

This very pretty little species occurs locally in the cloud forest of western and central Panama, where it has recently been discovered for the first time outside Costa Rica. It is easily recognized by its slender stems, each bearing a small elliptical leaf. The weak inflorescence, bearing an oversized flower, only slightly surpasses the leaf. The few flowers are borne singly over a period of time. The sepals are translucent yellow and may or may not be spotted with reddish brown. Both color forms occur in the provinces of Chiriqui and Veraguas. The broad petals and trowel-shaped lip are orange.

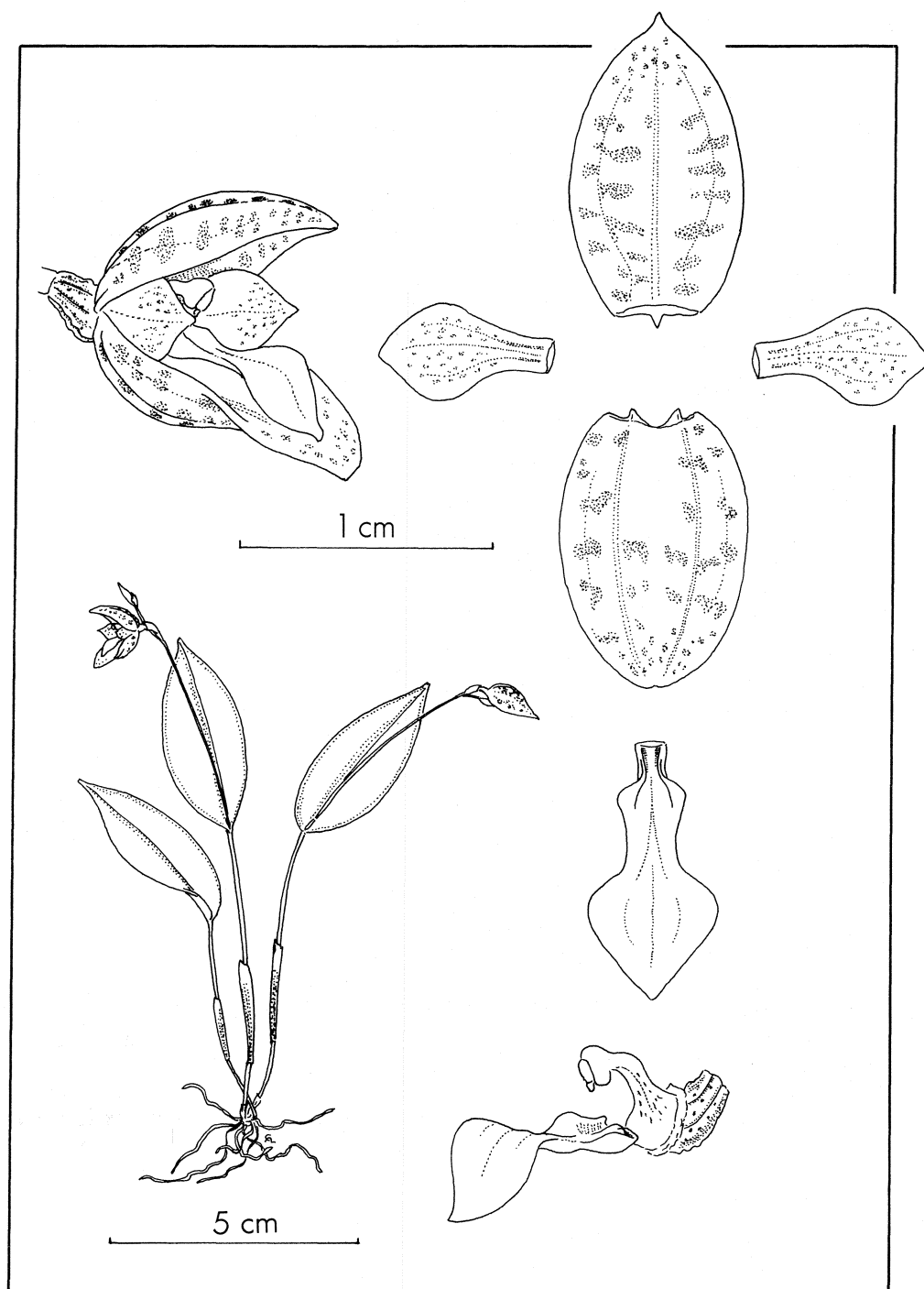


Figure 230. *PLEUROTHALLIS CARPINTERAE* Schltr.



**Pleurothallis cestrochila** Garay, *Orquideologia* 8:180. 1973.

Plant very small, epiphytic, caespitose; roots filamentous, flexuous. Secondary stems terete, abbreviated, 3-4 mm long, with 1-2 sheaths at the base, unifoliate. Leaf coriaceous, elliptical, obtuse to rounded, tridenticulate, base cuneate with a channeled petiole, 10-15 mm long, 3-5 mm wide, the petiole about 3 mm long. Inflorescence a laxly few-flowered (1-2) raceme, about 20 mm long; peduncle capillary from a node on the secondary stem; floral bract 1 mm long; pedicel 5 mm long; ovary cuneate, 0.5 mm long; dorsal sepal very narrowly triangular, attenuate-acuminate, the apex thickened, 6.5 mm long, 1 mm wide, 3-veined and 3-carinate, the carinae red-purple on translucent pink, the apex yellow; lateral sepals free to near the base, ovate, oblique, attenuate-acuminate above the middle with clavellate, yellow apices, 6 mm long, 1.75 mm wide, 2-veined, red with veins purple, scabrous on the veins and margins; petals pink, linear, attenuate-acuminate, the apex thickened and yellow, below the middle with long-ciliate margins, 5 mm long, 0.5 mm wide, 1-veined; lip pyriform, 3-lobed, 3 mm long, 1.75 mm wide, orbicular above the middle, blue-black, minutely scabrous, below the middle with erect, triangular, uncinat lateral lobes, the anterior margins of the lobes denticulate-erose, the disc thickened and tomentose toward the base, the hairs and markings purple on blue-white, base unguiculate, minutely biauriculate; column pink, terete, 2.25 mm long, column-foot very short with a pair of triangular, basal lobes.

ETYMOLOGY: From the Greek *kestra*, "a kind of hammer," and *cheilos*, "lip," in allusion to the shape of the lip.

TYPE: *COLOMBIA*: ANTIOQUIA: El Retiro, Carretera Las Palmas, alt. 2500 m, *Gustavo Wills s.n.* (HOLOTYPE: AMES).

DISTRIBUTION: Colombia and Ecuador.

*ECUADOR*: ZAMORA-CHINCHIPE: epiphytic between Loja and Zamora, alt. ca. 1500 m, *Ron Hawley s.n.* (SEL), cult. by Rebecca Northen, flowered in cult. Nov. 1975.

This species, reported here for the first time from Ecuador, is related to *Pleurothallis macroblepharis* Rchb. f. and *P. ichthyonekys* Luer which share the long-ciliate petals. The former differs, however, in possessing long cilia also on the middle lobe of the lip. The tufts of little elliptical leaves borne on short, secondary stems are similar to those of many others. The few flowers appear in slow succession on a hair-like peduncle. The red, purple-striped sepals are long-attenuate with yellow, clavellate apices. The caudate apices of the pink petals are similarly swollen, but most remarkable are the long, fimbriate divisions of both margins below the middle. The middle lobe of the lip is proportionately large, rounded, minutely papular, and blue-black in color. Below the middle stands a pair of erect, hooked and serrated lateral lobes between which grow a patch of short, purple hairs. The base of the column-foot forks into a pair of pointed triangular lobes.

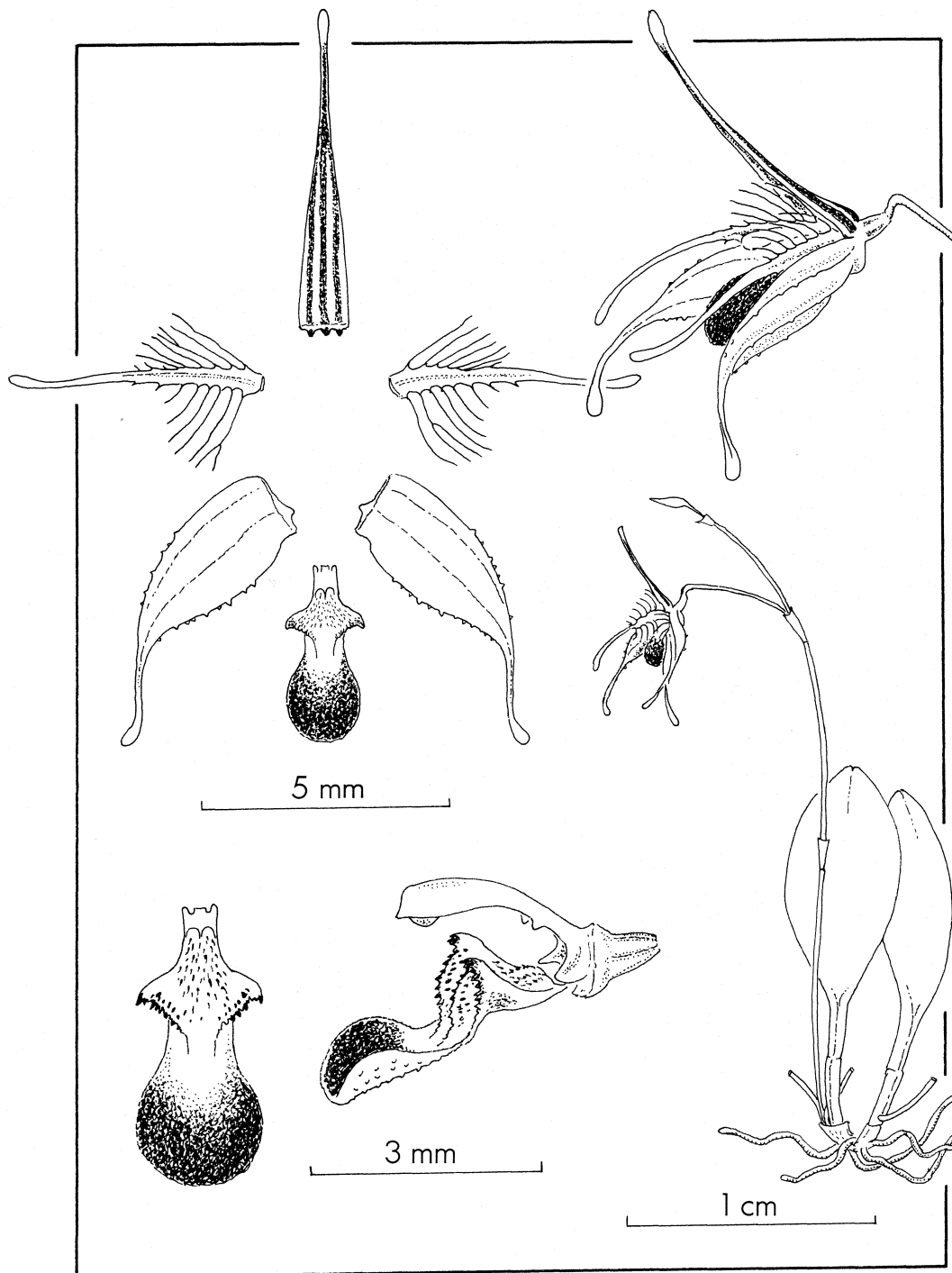


Figure 231. *PLEUROTHALLIS CESTROCHILA* Garay

***Pleurothallis chaetoglossa* Luer, sp. nov.**

Planta parva epiphytica caespitosa, caulibus secundariis brevibus unifoliatis proliferantibus seriebus longis dependentibus formantibus, vaginis costatis scabridulosis, foliis coriaceis ellipticis acutis, pauciracemis paucifloris brevissimis, floribus pallido flavovirescentibus, sepalis petalisque oblongis acutis, labello trilobato, lobo antico angusto tereti obtuso piloso, lobis lateralibus infra medium late obtusis erectis, base transverse calloso.

Plant small, epiphytic caespitose; roots filiform, flexuous. Secondary stems dependent, prolific, the series of individual secondary stems to 17 cm long, each secondary stem slender, unifoliate, 1-3 cm long, enclosed by 1-4 close-fitting, ribbed, tubular sheaths, only slightly dilated at the ostia, minutely scabrous along the ribs and margins. Leaf thick, coriaceous, elliptical, the apex acute, minutely tridenticulate, the base cuneate, with a petiole 1-2 mm long, the blade 18-20 × 4-5 mm. Inflorescence a few (1-3), abbreviated, 2- to 3-flowered racemes, the peduncles 3-5 mm long, from the apices of the secondary stems; flowers glabrous, pale yellow green, not widely spreading; floral bract oblique, acute, 1-1.5 mm long; pedicel 1.5-2 mm long; ovary 0.5 mm long; dorsal sepal oblong-ovate, acute, 5.5 × 2 mm, tricarinate; lateral sepals narrowly oblong, the apices acute and thickened, connate basally to form a shallow mentum below the column-foot, each 5 × 1.25 mm, unicarinate; petals elliptical, oblique, acuminate, acute, 4 × 1.5 mm, 1-veined; lip obscurely 3-lobed, narrowed and terete above the middle to an obtuse apex, glandular pilose, dilated below the middle into erect, obtuse, broadly triangular lateral lobes, pubescent, the base truncate, with a central, transverse, curved callus, 2.5 × 1.5 mm across the spread lateral lobes; column 1.25 mm long, with a short foot.

ETYMOLOGY: From the Greek *chaete*, "long hair," and *glossa*, "tongue," in allusion to the pilose anterior lobe of the lip.

TYPE: ECUADOR: PASTAZA: epiphytic in citrus grove ca. 8 km north of El Puyo, alt. 750 m, 21 March 1976, C. Luer, J. Luer & J. Brenner 1097 (HOLOTYPE: SEL), flowered in cult. 3 Nov. 1976.

DISTRIBUTION: Eastern Ecuador.

The long, trailing, "leafy" stems of this species are composed of a series of short, superposed, secondary stems, each of which bears a single, little, elliptical leaf. The markedly prolific habit is similar to that of *Pleurothallis cedralensis* Ames, but the compound stems are much longer and pendent.

Small, yellowish white flowers in very short, few-flowered racemes are produced simultaneously from the apices of most of the secondary stems. The sepals and petals are nearly equal in size. The lip is most distinct in its narrow, villous, anterior lobe.

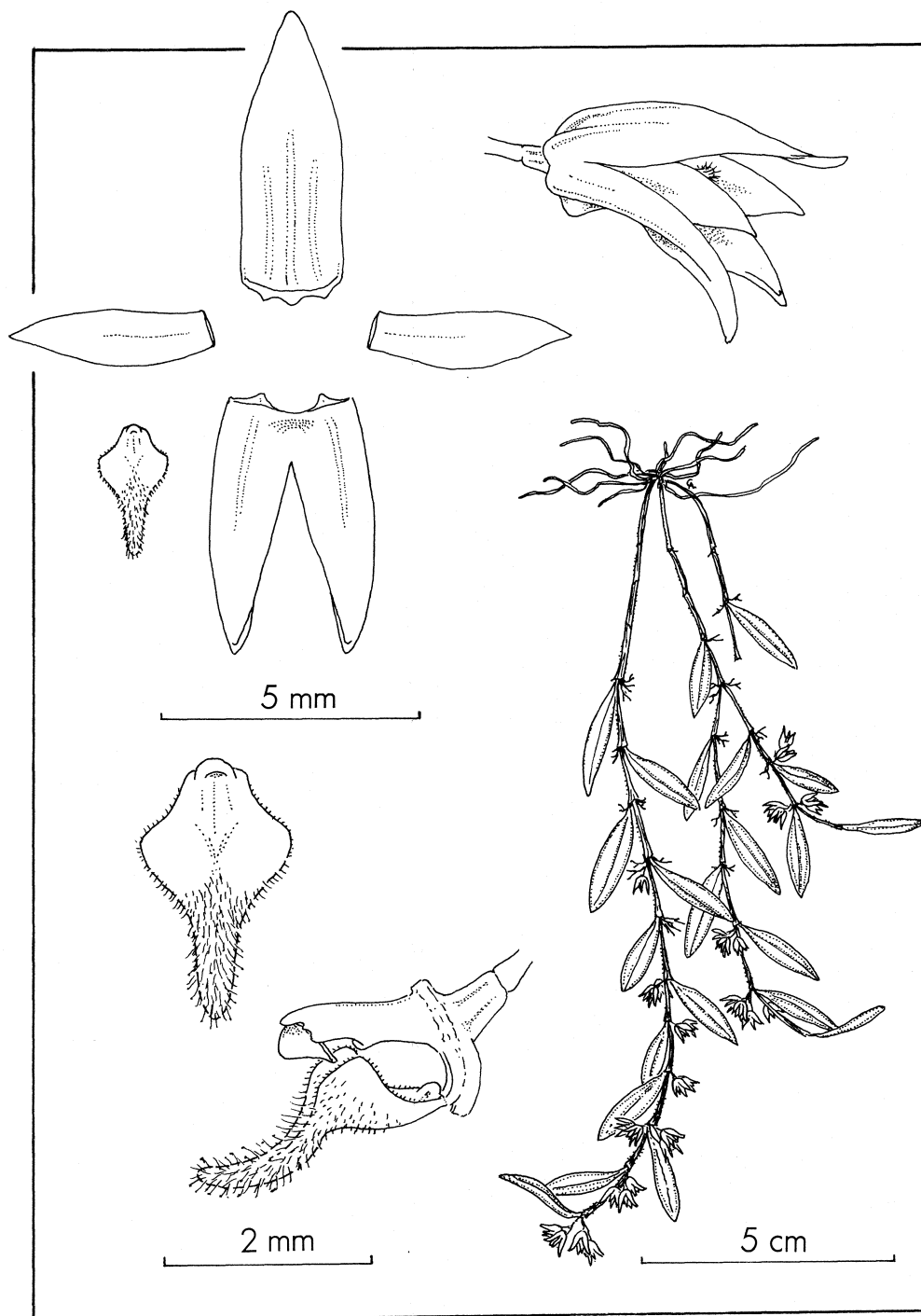


Figure 232. *PLEUROTHALLIS CHAETOGLOSSA* Luer

***Pleurothallis chama* Luer, sp. nov.**

Planta magna terrestris (epiphytica ?) caespitosa, caulibus secundariis teretibus gracilibus unifoliatis, folio erecto coriaceo ovato acuminato acuto tridenticulato base profunde cordato auriculis erectis, floribus singularibus fasciculatis carnosus bilabiatis, sepalis ochraceis rubro punctatis, sepalo dorsali late elliptico obtuso plurivenoso, synsepalo transverse ovato, petalis maroninis oblongis incurvatis acutis denticulatis, labello crasso oblongo-obovato plano obtuso denticulato, disco supra medium verruculoso infra medium biexcavato.

Plant large, terrestrial, presumably epiphytic, caespitose; roots slender, flexuous. Secondary stems slender, terete, 20-35 cm long, with a tubular sheath low on the stem and another at the base, unifoliate. Leaf erect, coriaceous, ovate, acuminate, acute, tridenticulate, the base deeply cordate, the auricles folded upward, sessile, 8-12 cm long, 5-7 cm wide, the auricles 2-2.5 cm deep. Inflorescence fasciculate, the bilabiate, fleshy flowers produced singly and successively from a spathe 11-13 mm long at the base of the leaf; floral bract 5-6 mm long; pedicel 7-8 mm long; ovary 6-7 mm long; sepals pale yellow-brown, speckled with red, glabrous, but microscopically ciliate, the dorsal sepal broadly elliptical, obtuse, 12 mm long, 8 mm wide, 7-veined, the lateral sepals connate into a transversely ovate lamina, acuminate, obtuse, bidentate, 10 mm long, 11 mm wide; petals maroon, oblong, acute, denticulate, incurved, 8 mm long, 3 mm wide; lip thick, oblong-obovate, obtuse, flat, the margins minutely denticulate, the base shallowly concave or truncate, the disc red-brown and finely verrucose above the middle, with a yellow, elliptical depression to either side of the glenion, 4.5 mm long, 2.5 mm wide; column small, 1 mm long, 2 mm wide.

ETYMOLOGY: From the Latin *chama*, "a gaping mollusk, a cockle," in allusion to the bivalved appearance of the flower.

TYPE: *ECUADOR*: ZAMORA-CHINCHIPE: terrestrial on the road embankment near km 25 between Loja and Zamora, through cloud forest, alt. ca. 2000 m, 6 March 1977, C. Luer, J. Luer & K. Cordoba 1554 (HOLOTYPE: SEL).

DISTRIBUTION: Eastern Ecuador.

A single large plant of this species was found growing on a steep road cut through cloud forest of the Oriente. Undoubtedly, it grows epiphytically nearby. The long stems produce more or less erect, deeply cordate leaves with acuminate apices. The broadly rounded auricles of the base are pinched upright, thereby placing the spathe at the bottom of a fold. The gaping, bivalved flowers resemble those of *Pleurothallis cordata* (Ruiz & Pav.) Lindl., but they are larger and the dorsal sepal is multi-veined. The sepals do not spread widely to expose the broad, dark red petals that curve inward around the flat, oblong lip with finely denticulate margins.

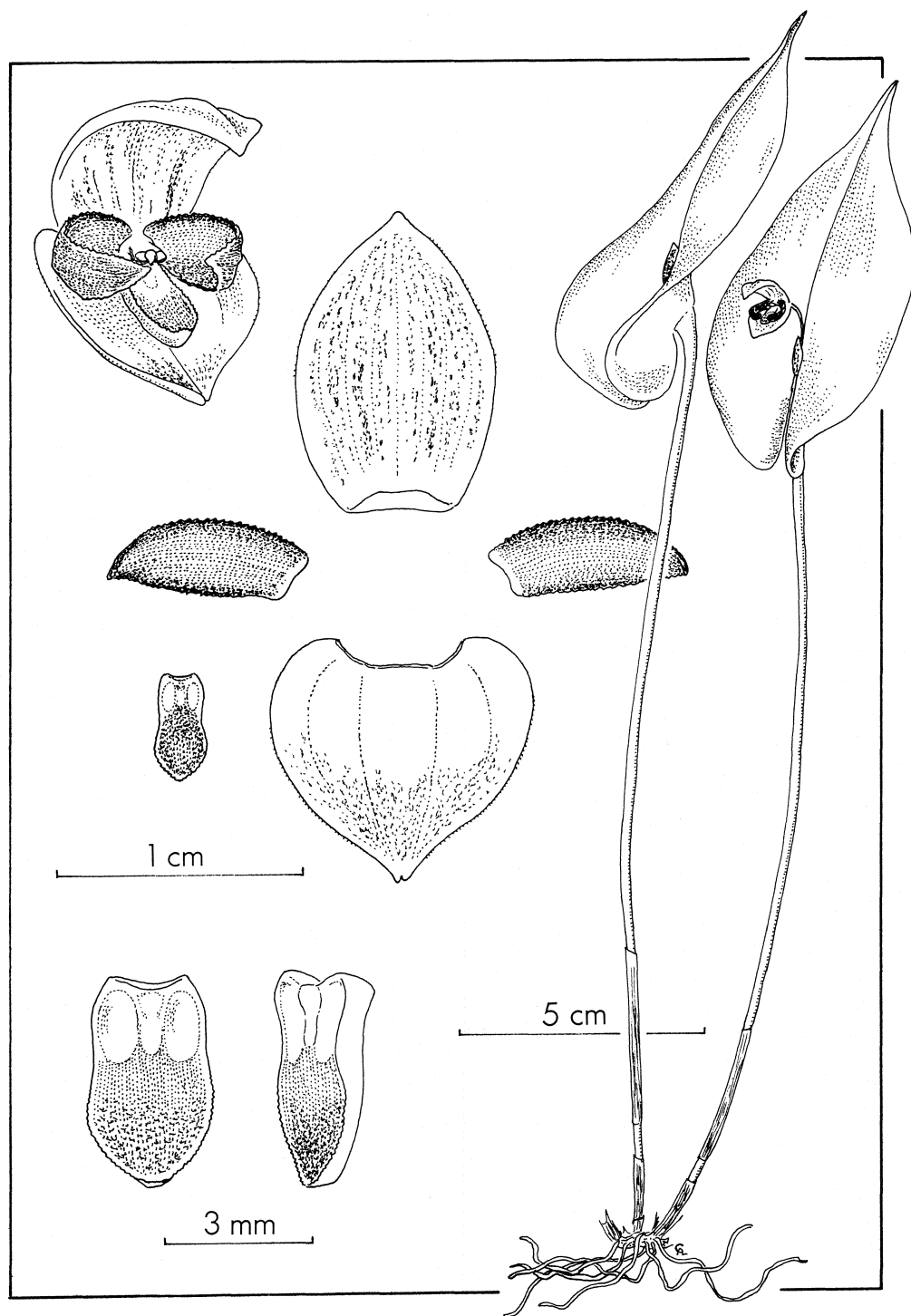


Figure 233. *PLEUROTHALLIS CHAMA* Luer

***Pleurothallis citrophila* Luer, sp. nov.**

Planta mediocris epiphytica caespitosa, caulibus secundariis horizontalibus purpureis breviter compressis unifoliatis, folio horizontali crasso coriaceo purpureo elliptico sessili, racemo brevi paucifloro, floribus carnosis glabris flavovirescentibus porphyreo suffusis vittatisque, sepalo dorsali anguste obovato, sepalis lateralibus ovatis obliquis acutis leviter adherentibus, petalis obovatis obtusis minute erosis, labello crasso ovato obtuso eroso callis denticulatis.

Plant medium in size, epiphytic, caespitose; roots slender, flexuous. Secondary stems more or less horizontal, purple, slender to stout, terete below, compressed above, 3-8 cm long, with a tubular sheath below the middle and 1-2 others at the base, unifoliate. Leaf horizontal, thick, coriaceous, suffused with purple, especially beneath, elliptical, acute to subacute, tridenticulate, the base rounded, sessile, 3.5-6 cm long, 1.8-2.5 cm wide. Inflorescence a short (3 cm), few-flowered (4-5), distichous raceme borne upon the leaf, from a spathe 6-10 mm long, at the base of the leaf; flowers fleshy, glabrous, yellow-green suffused and veined with red-brown; floral bract 1.5-2 mm long; pedicel 1 mm long; ovary glabrous, 2 mm long; dorsal sepal narrowly obovate, acute, 8 mm long, 2.5 mm wide, 3-veined; lateral sepals narrowly ovate, oblique, acute, lightly adherent to free, each 7 mm long, 2.5 mm wide; petals narrowly obovate, obtuse, microscopically erose above the middle, 2.75 mm long, 1 mm wide, 1-veined; lip thick, yellow-brown, ovate, obtuse, minutely erose, the margins rounded and erect below the middle, the base broadly rounded, shortly hinged to the column-foot, the disc with a pair of denticulate, verrucose, longitudinal calli, 3.25 mm long, 2 mm wide spread; column terete, 3 mm long, with a foot 2 mm long.

ETYMOLOGY: From the Greek *kitrea*, "citrus," and *-philus*, "-loving," in reference to the apparent preference of the plant for citrus trees.

TYPE: PANAMA: COCLÉ: epiphytic in old orange grove near the mesa above El Valle, alt. ca. 1000 m, 2 Sept. 1976, C. Luer & H. Butcher 1375 (HOLOTYPE: SEL), greenhouse acc. no. 123-76-82, flowered in cult. 12 March 1977.

DISTRIBUTION: Panama.

Although it undoubtedly occurs in the surrounding cloud forest, this species was found growing only in several old orange groves above El Valle, Panama. The plants grow horizontally from the branches, and with the weight of the thick leaves, often bend downward. Short racemes of brownish flowers are produced upon the leaves. Of the other Panamanian species, *Pleurothallis citrophila* is allied to *P. pubescens* Lindl., but the flower of the former is distinguished by its smaller size, absence of pubescence, and a lip lacking lateral lobes and basal auricles. It is more closely allied to *P. geminicaulina* Ames, but the flowers of the latter are shortly pubescent, the petals are acuminate, and the calli of the lip are not denticulate. It seems most closely allied to *P. brunnescens* Schltr., which also has glabrous flowers, but the lip lacks the denticulate calli.

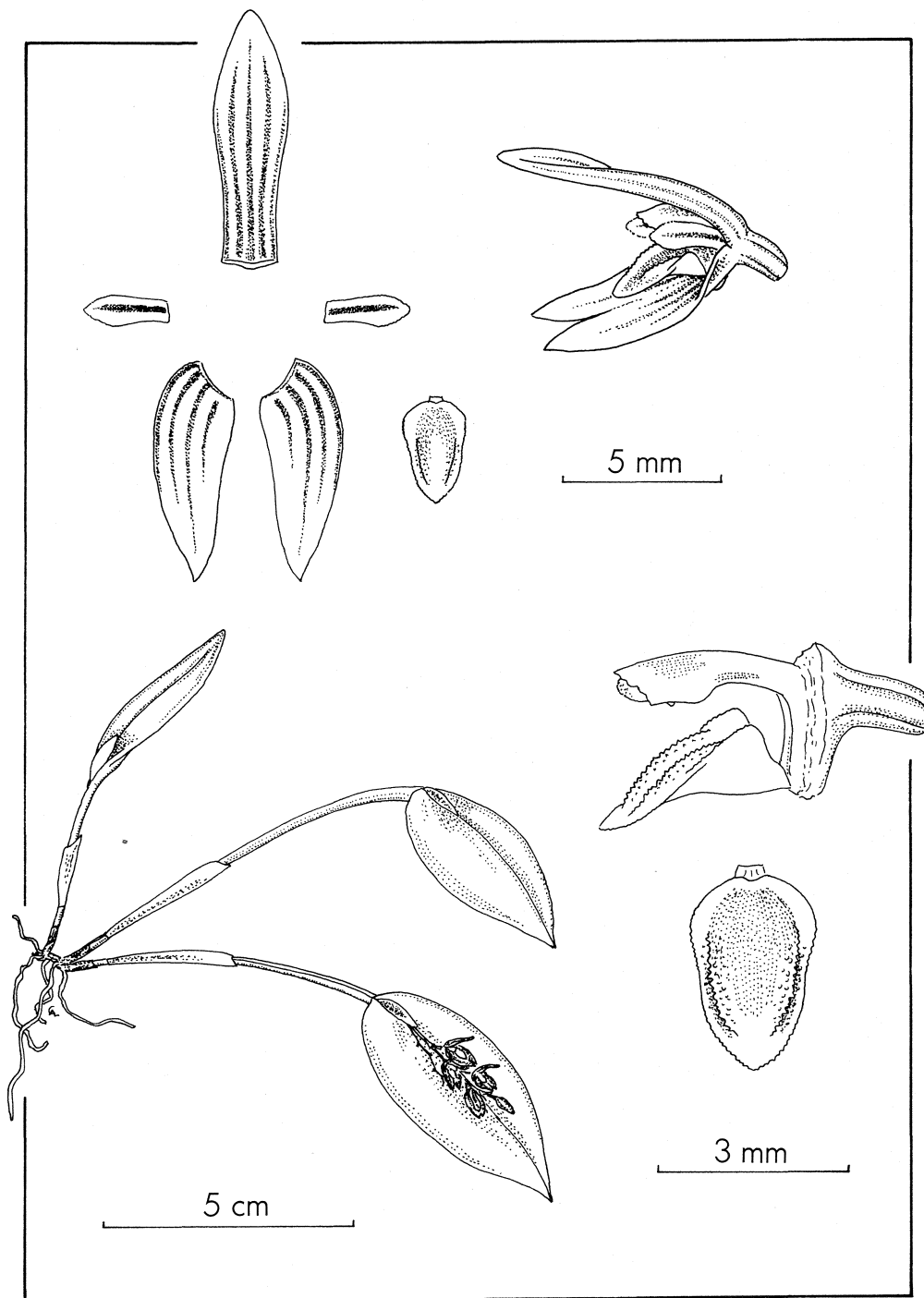


Figure 234. *PLEUROTHALLIS CITROPHILA* Luer



**Pleurothallis clavigera** Luer, sp. nov.

Planta parva epiphytica dense caespitosa, caulibus secundariis brevibus unifoliatis, foliis coriaceis anguste ellipticis acutis base anguste petiolatis, floribus singularibus successivis fasciculatis ad apicem pedunculi filiformis folia superantibus, sepalis purpureo guttatis sparsim spiculatis caudatis clavel-latis, sepalo dorsali ovato tricarinato, sepalis lateralibus anguste triangularibus ad basim connatis, petalis anguste ellipticis apiculatis sparsim brevicilia-tis, labello caroso punctato convexo rotundato brevifimbriato infra medium angulato unguiculato.

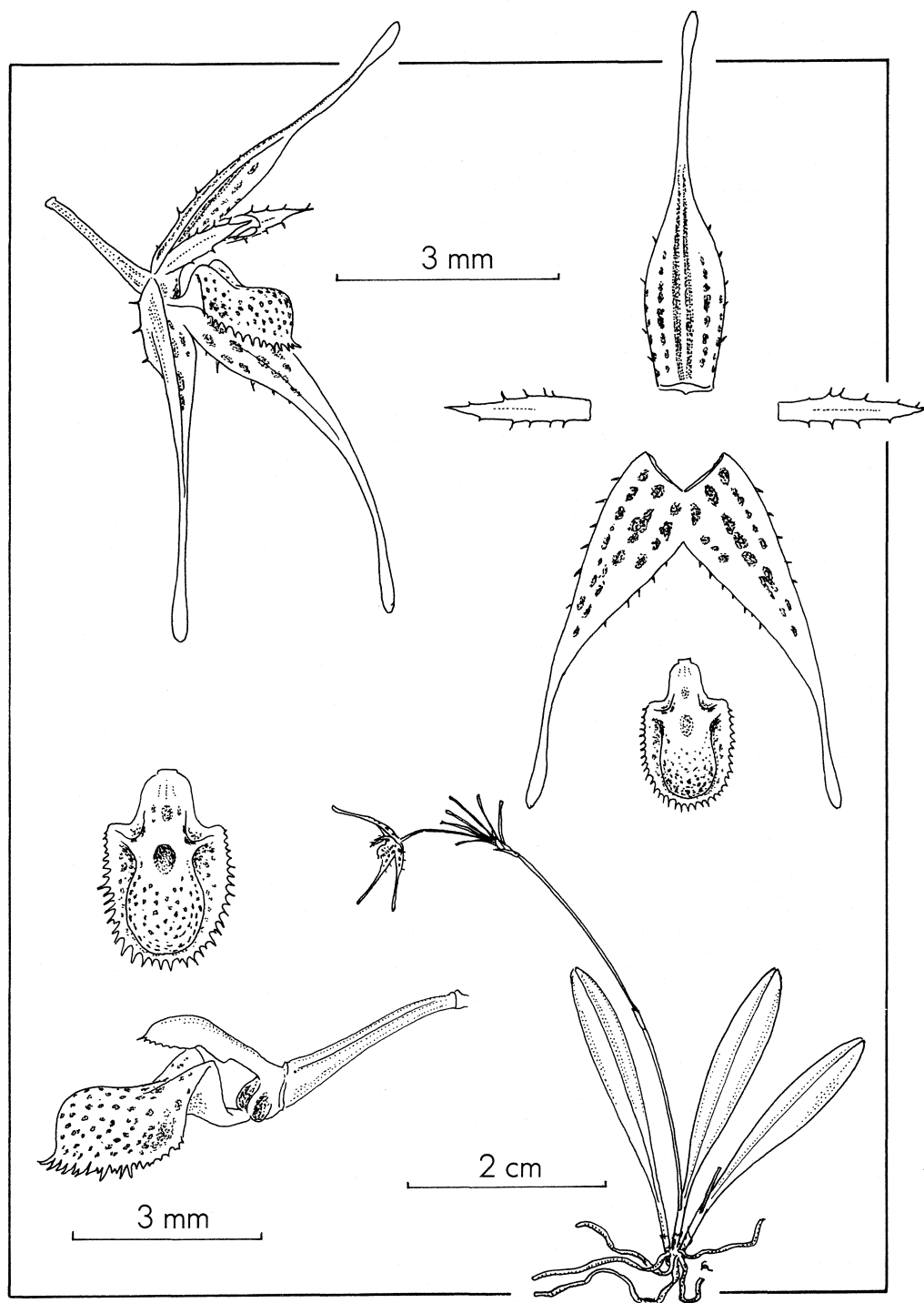
Plant small, epiphytic, densely caespitose, roots numerous, fine, flexu-ous. Secondary stems short, terete, 4-7 mm long, with 1-2 thin, tubular sheaths, unifoliate. Leaves coriaceous, narrowly elliptical, acute, tridenticu-late, the base narrowly cuneate-petiolate, 2-3.5 cm long, 3-4 mm wide. Inflo-rescence a fascicle of flowers borne at the apex of a filiform, more or less erect peduncle, to 4 cm long, from a node on the secondary stem, the flow-ers produced singly and successively; floral bracts translucent, 2-3 mm long; pedicel 4-8 mm long; ovary 3 mm long; sepals translucent yellow, spotted with red-purple, sparsely spiculate externally, especially along the veins, the dorsal sepal ovate, tricarinate, 8 mm long, 2 mm wide, the lateral sepals nar-rowly triangular, connate basally, each bicarinate, 8 mm long, 1.75 mm wide, all 3 sepals attenuated into slender tails with yellow-green clavate-thickened apices; petals narrowly elliptical, acute, apiculate, sparsely and shortly ciliate, 3 mm long, 0.4 mm wide; lip light green with dark purple dots, fleshy, suborbicular, convex, the margins shortly fimbriate, angled be-low the middle, the apex rounded, the base unguiculate, the disc with a small, central, oval, glistening spot, 3 mm long, 2 mm wide; column slender, 2 mm long, foot short, bilobed.

ETYMOLOGY: From the Latin *claviger*, "club bearing" (*clava*, "club"), in al-lusion to clavate sepals.

TYPE: *ECUADOR*: MANABI(?): purchased by Roberto Estrada from a col-lector who probably obtained the plant in Manabi, cult. in Guayaquil, 24 Feb. 1977, *C. Luer 1468* (HOLOTYPE: SEL).

DISTRIBUTION: Coastal Ecuador.

This floriferous little, caespitose plant, similar to many closely allied species, is distinguished by the fascicle of singly appearing flowers at the apex of a hair-like peduncle. The slender, purple-spotted sepals of the com-paratively large flowers are widely spread. Minute spicules are borne exter-nally. The thin petals are sparsely ciliate and the thick, rounded, convex lip, generously speckled with dark purple, is surrounded by a flared, fringed margin. *Pleurothallis clavigera* is similar to *P. aristata* Hook. which bears its flowers in racemes and lacks the clavellate apices of the sepals.

Figure 235. *PLEUROTHALLIS CLAVIGERA* Luer

*Pleurothallis cogniauxiana* Schltr., Repert. Spec. Nov. Regni Veg. 3:246. 1907.

Plant medium in size, epiphytic, shortly repent; roots slender, flexuous. Secondary stems stout, suberect, sharply triquetrous, canaliculate, monophyllous, 5-16 cm long, with 2-3 loose basal sheaths. Leaf coriaceous, suberect to spreading, ovate, acuminate, acute, tridenticulate, the base shallowly to deeply cordate, sessile, 5-11 cm long, 3-6.5 cm wide. Inflorescence 1-2, several-flowered (6-8), short (3 cm), distichous racemes, from a spathe, about 1 cm long, at the base of the leaf; floral bract infundibular, acute, 4 mm long; pedicel and ovary each 2 mm long; sepals green, spotted with dark purple, fleshy, microscopically short-pubescent externally toward the bases, minimally to considerably verruculose within, the dorsal sepal obovate-spatulate, subacute to obtuse, 8-12 mm long, 3-5 mm wide, the lateral sepals falciform, connate to the apex, but easily separable, into a transversely obovate to suborbicular lamina, with a mentum basally, the apex rounded to obtusely acuminate, sometimes bifid, 6-8 mm long, 6-8 mm wide; petals rhomboid, slightly oblique, acuminate, acute, serrulate, 3.5-4.5 mm long; 2-3 mm wide; lip fleshy, ovate, the apex obtuse to rounded, the margins denticulate, more or less dilated near the middle, with a small pair of erect, rounded lobes below the middle, the base broadly hinged to the column-foot, with a minute pair of basal auricles, the disc verrucose, with a low pair of dentate calli near the middle, 3-4 mm long, 2.5-3 mm wide; column broadly winged, 3 mm long, with a short, thick foot.

ETYMOLOGY: Named in honor of Alfred Cogniaux (1841-1916), noted Belgian botanist, and a contemporary of Schlechter.

TYPE: *COSTA RICA*: GUANACASTE: between La Palma and Curillo, collector not stated (HOLOTYPE: CR).

DISTRIBUTION: Nicaragua, Costa Rica, Panama, and Ecuador.

*NICARAGUA*: MATAGALPA: Bavaria Finca, alt. 1300 m, Feb. 1962, A. H. Heller 4082 (SEL).

*PANAMA*: CHIRIQUI: epiphytic along Rio Machomonte near Volcán, alt. ca. 1300 m, 14 Sept. 1976, C. Luer & H. Butcher 1289 (SEL), greenhouse acc. no 123-76-13, flowered in cult. Dec. 1976; cloud forest on Cerro Hornito, alt. ca. 1700 m, 14 Dec. 1976, C. Luer, A. Luer, R. L. Dressler, N. H. Williams & F. L. Stevenson 1367 (SEL); cloud forest above Boquete, alt. ca. 1700 m, 18 Dec. 1976, C. Luer, A. Luer & R. L. Dressler 1368 (SEL); *COLON*: epiphytic along the Santa Rita lumber road, 28 Jan. 1968, R. L. Dressler 3362 (SEL); Rio Iguanita, March 1976, N. H. Williams s.n. (SEL), flowered in cult. 9 May 1976; *PANAMA*: epiphytic along the El Llano-Carti road, alt. 300 m, 3 March 1976, C. Luer, J. Luer, P. Taylor & R. L. Dressler 987 (SEL).

*ECUADOR*: LOS RIOS: epiphytic in cloud forest 12 km from Patricia Pilar on road to 24 de Mayo, Montañas de Ila, alt. 540 m, 30 May 1976, C. H. Dodson 6096 (SEL).

Schlechter's illustration of this species in Fedde's Repert. Spec. Nov. Regni Veg. Beih. 59:t. 30, no. 117, 1931, is deceiving. Small plants of *Pleurothallis cogniauxiana* were erroneously identified as *P. coffeicola* Schltr. in Selbyana 3:78, figure 142, 1976. *Pleurothallis coffeicola* has not yet been identified from Ecuador nor Panama, but the range of *P. cogniauxiana* can now be extended to Ecuador and Nicaragua (Heller).

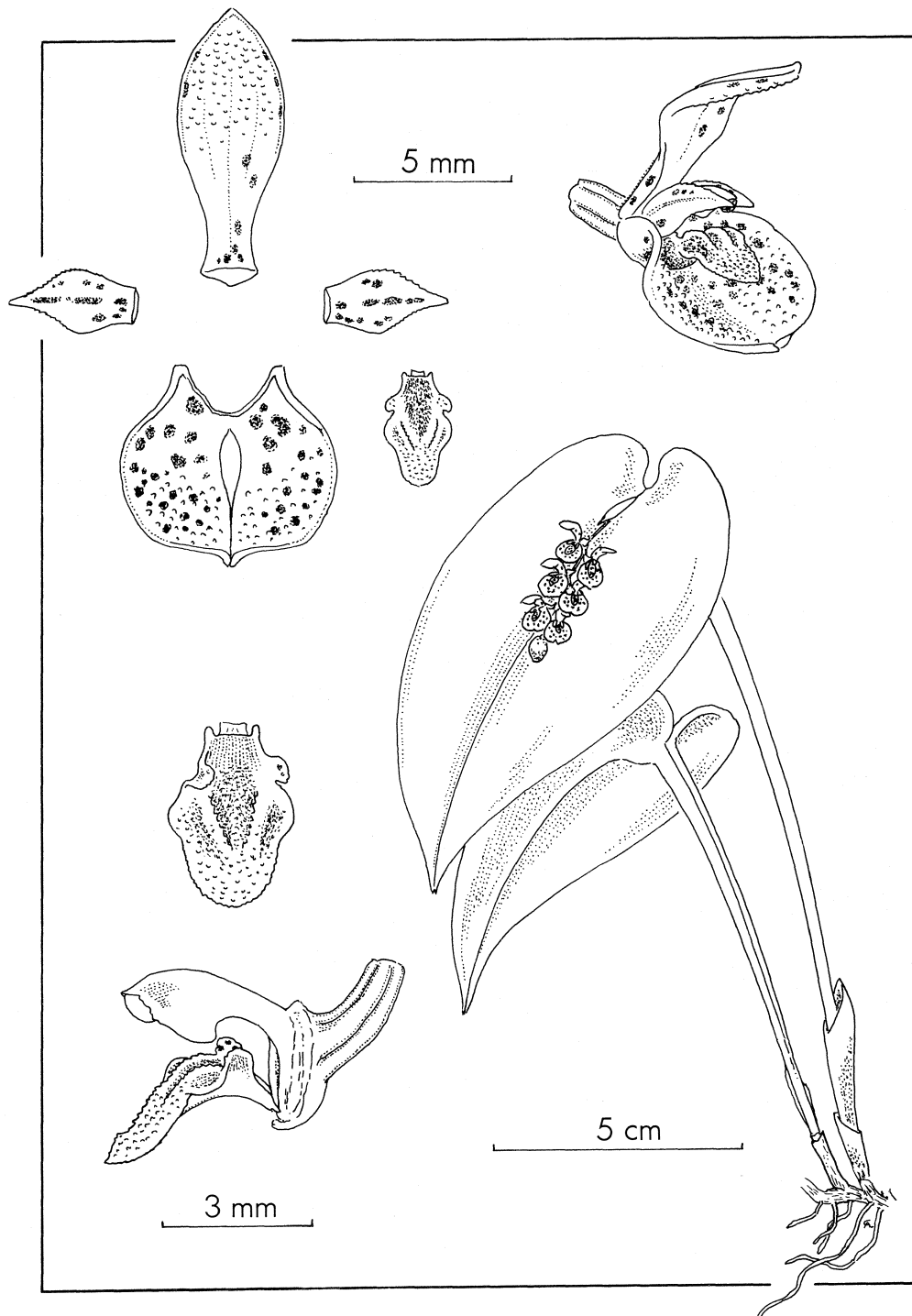


Figure 142. *PLEUROTHALLIS COGNIAUXIANA* Schltr.

This species may be recognized by its cordate leaves borne by sharply compressed, grooved stems. The raceme of gaping, green flowers spotted with purple, lies upon the leaf like rows of beetles. The thick, minutely warty lip is dilated near the middle with small, erect, rounded lobes just below the middle.

***Pleurothallis concaviflora*** C. Schweinf., Bot. Mus. Leafl. 4:114. 1937.

Plant small, epiphytic, caespitose; roots filamentous, flexuous. Secondary stems slender, terete, 2-6 cm long, with a closely fitting tubular sheath below the middle and another at the base, unifoliate. Leaf thick, coriaceous, elliptical, subacute, tridenticulate, the base rounded, sessile, 2-3.5 cm long, 8-15 mm wide. Inflorescence a fascicle of single, successive flowers from a spathe 7-10 mm long at the base of the leaf; the flower small, bilabiate, maroon, non-resupinate; floral bract tubular, 4-5 mm long, pedicel 7-8 mm long; ovary flecked with purple, 2 mm long; middle sepal suborbicular, obtuse to rounded, papillose within, 4 mm long, 3 mm wide, 3-veined; lateral sepals connate into a transversely ovate lamina, the apex shortly acuminate, emarginate, tuberculose within, 2.5-3.5 mm long, 4 mm wide, 4-veined; petals oblong, slightly dilated near the shortly acuminate apex, carinate externally above the middle, 2 mm long, 0.8 mm wide; lip uppermost, ovate, deeply concave, the margins lightly tuberculose, the apex subacute with an elongated apiculum, the base with a pair of erect, blunt, uncinatate lobes embracing the column, the disc with a transverse thickening between the basal lobes, 2-2.5 mm long, 1.25 mm wide; column stout, 1 mm long, 1 mm wide.

ETYMOLOGY: From the Latin *concavus*, "concave," and *-florus*, "flowered," in reference to the concave lip.

TYPE: COSTA RICA: ALAJUELA: hills of San Pedro de San Ramon, 14 Nov. 1927, A. M. Brenes (134) 1668 (HOLOTYPE: Ames).

DISTRIBUTION: Costa Rica and Panama.

PANAMA: CHIRIQUI: epiphytic at the Fortuna dam site, Camp Hornito, alt. 1000-1200 m, 13 Aug. 1976, R. L. Dressler 5369 (SEL); same area, R. L. Dressler s.n. (SEL), flowered in cult. 31 Oct. 1976; epiphytic in elfin forest on Cerro Hornito, alt. 1700 m, 15 Dec. 1976, C. Luer, A. Luer, R. L. Dressler, N. H. Williams & F. L. Stevenson 1382, 1386 (SEL), greenhouse acc. nos. 155-76-57 and 67.

The description of this little species falls mostly within that of the larger *Pleurothallis excavata* Schltr., but without an illustration, differentiation between the two is nebulous. *Pleurothallis concaviflora* is a considerably smaller plant; the thick, elliptical leaves are small and narrow. The inverted flower is maroon-black and half the size of that of *P. excavata*. The petals of *P. concaviflora* are more carinate, and the concavity of the lip is proportionately larger.

This species is also very similar to the broader leaved, yellow-flowered *P. imago* Luer from eastern Panama.

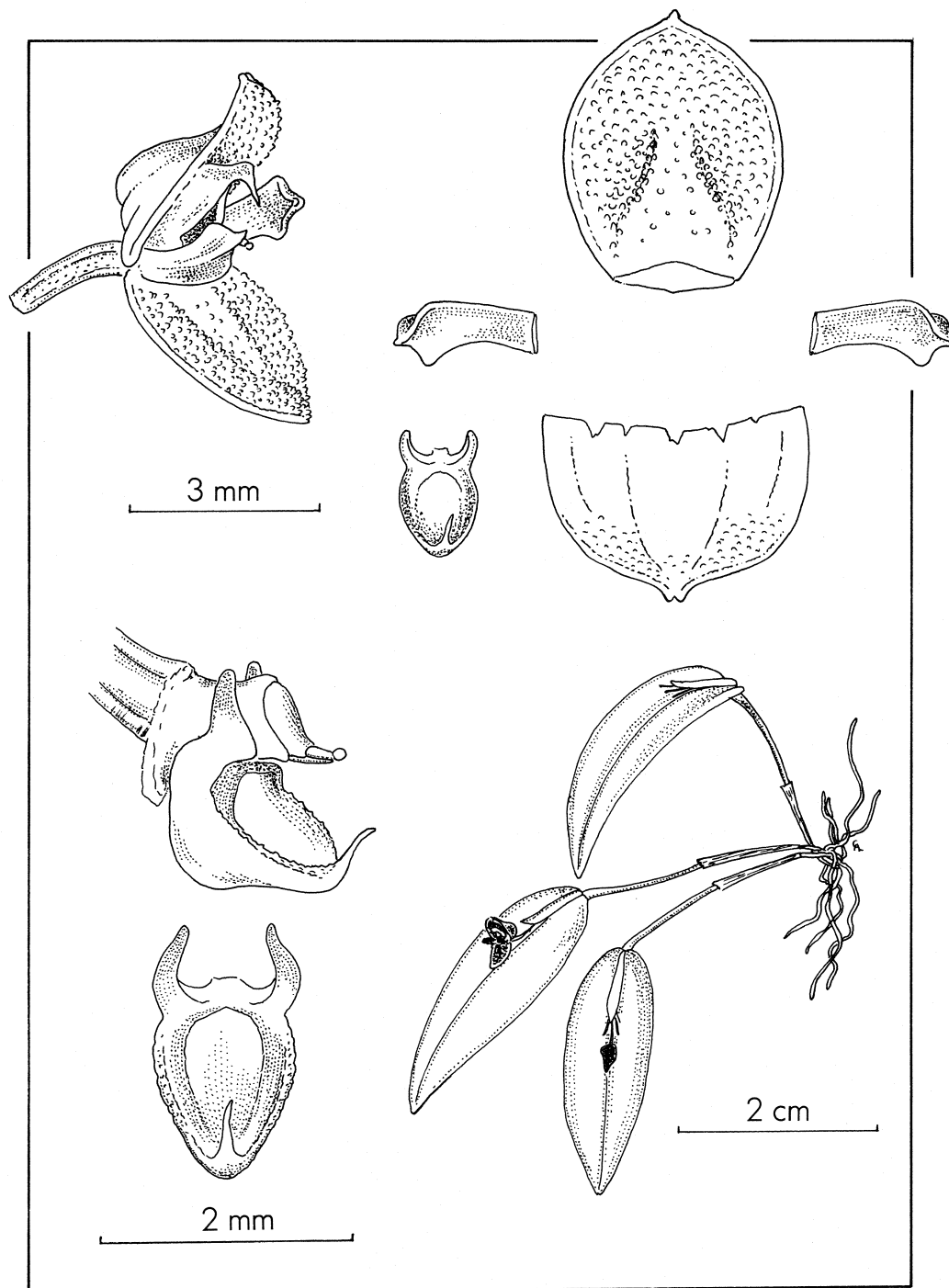


Figure 236. *PLEUROTHALLIS CONCAVIFLORA* C. Schweinf.

**Pleurothallis convallaria** Schltr., Repert. Spec. Nov. Regni Veg. Beih. 19:185. 1923.

Plant medium to large, epiphytic, caespitose; roots slender, flexuous. Secondary stems stout, terete, purplish, 5-15 cm long, mostly enclosed by a loose, brown, tubular sheath, and 1-2 shorter ones basally, unifoliate. Leaf coriaceous, erect, elliptical, subacute to obtuse, tridentate, the base cuneate, conduplicate, enfolding the base of the peduncle of the inflorescence in a channel, sessile 9-18 cm long, 4-6 cm wide. Inflorescence a loosely-, many-flowered, erect secund raceme, to 30 cm in length; peduncle slender, from a spathe, about 1 cm long, at the base of the leaf and held within the folded portion of the blade; flowers nodding, not widely spread, occasionally cleistogamous; floral bract tubular, 3-4 mm long; pedicel 5 mm long; ovary 4-5 mm long; sepals reddish brown to purple and glabrous externally, with white, villous hairs within; dorsal sepal elliptical, subacute, unicarinate, the margins revolute, 10 mm long, 6 mm wide; lateral sepals connate to above the middle into a suborbicular lamina, the apices subacute or abruptly acuminate, concave below the middle, 8 mm long, 7.5 mm wide; petals maroon, glabrous, cuneiform, the angles rounded, with an apiculum in the retuse apex, 6 mm long, 4 mm wide; lip maroon, transversely oblong, bilobed, the lateral lobes ovate, oblique, obtuse, the base prominently unguiculate, with a small pair of basal auricles, the disc with 3 smooth, converging calli, one on each lateral lobe, the central callus protruding in an apiculum between the apices of the lateral lobes, 3.5 mm long, 4 mm wide; column 5 mm long, the clinandrium cucullate, with a foot 2.5 mm long.

ETYMOLOGY: Named for a resemblance to the genus *Convallaria*. *Convallaria* from the Latin *convallis*, "an enclosed valley," possibly in allusion to the habitat.

TYPE: COSTA RICA: ALAJUELA: humid forest, San Pedro de San Ramon, alt. 1100 m, July 1921, A. M. Brenes 84.

DISTRIBUTION: Nicaragua, Costa Rica, and Panama.

NICARAGUA: GRANADA: epiphytic on Mombacho Volcano, alt. 1000-1500 m, A. H. Heller 2930 (SEL).

PANAMA: VERAGUAS: epiphytic in cloud forest near the continental divide above Santa Fe, alt. ca. 700 m, 4 Sept. 1976, C. Luer & R. L. Dressler 1133 (SEL).

Although Endres sent specimens of this species with excellent sketches to Reichenbach in 1868, it awaited a formal description until that of Schlechter in 1923. Previously known only from Costa Rica, this is the first report of *Pleurothallis convallaria* from Nicaragua, where Heller found it frequent, and from Panama, where it is locally abundant in the cloud forests of the central part of the country.

The large leaves, usually longer than the loosely sheathed secondary stems, are deeply folded near their articulation with the stem, and this fold snugly clasps the lower part of the peduncle. The relatively large flowers are produced several at a time in a one-sided, elongating raceme. Long white hairs are seen protruding from within the purplish sepals. The petals are broadly cuneate and the lip is broadly bilobed and furnished with three smooth, converging calli.

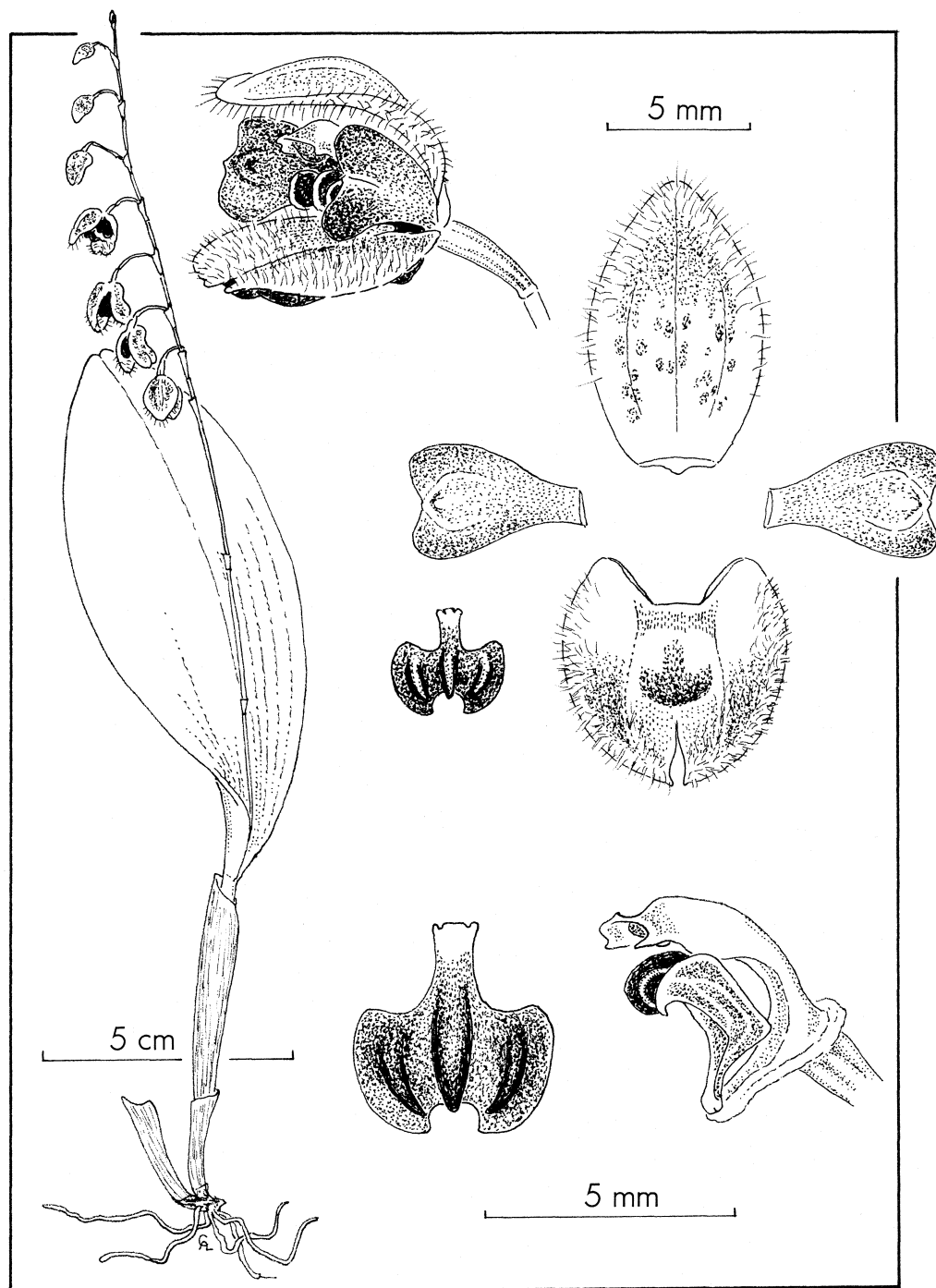


Figure 237. *PLEUROTHALLIS CONVALLARIA* Schltr.



**Pleurothallis corralensis** Garay, Arch. Jard. Bot. Rio de Janeiro 13-42. 1955.

*Pleurothallis leontoglossa* Schltr., Repert. Spec. Nov. Regni Veg. Beih.

7:106. 1920; not Rchb. f., 1849.

Plant medium in size, epiphytic, caespitose; roots filiform, flexuous. Secondary stems slender, terete, to 15 cm long in the plants collected, with a close-fitting tubular sheath below the middle and another 1-2 at the base, unifoliate. Leaf ovate, acuminate, acute, tridenticulate, base deeply cordate, sessile, 4-7 X 3-3.5 cm. Inflorescence fasciculate; flowers widely spread, produced singly and successively from an evanescent spathe at the base of the leaf; floral bract tubular, 5-10 mm long; pedicel slender 5-8 mm long; ovary 3 mm long; sepals pale watery purple in yellowish; dorsal sepal narrowly ovate, acute, 10 X 2.75 mm, 3-veined; lateral sepals connate into an ovate, acute lamina, 9 X 4.5 mm, 6-veined, margins revolute; petals light purple, narrowly linear-triangular, acute, slightly falcate, 6.5 X 1 mm, margins dentate; lip yellow-orange, ovate, obtuse, covered overall with a glandular pubescence, margins ciliate-denticulate, disc bicallose at the concave base, 4 X 2 mm; column stout 1 X 1.5 mm.

ETYMOLOGY: Named for Corrales, Colombia, where the species was discovered.

TYPE: COLOMBIA: CAUCA: on trees and rocks in dense woods around Corrales, eastern slopes of the central Andes of Popayan, alt. 2000-2800 m, F. C. Lehmann 8207.

DISTRIBUTION: Colombia and Ecuador.

ECUADOR: NAPO: epiphytic in felled trees about 14 km north of Archidona, alt 600 m, 27 July 1975, C. A. Luer, G. M. Luer, & S. Wilhelm 516 (SEL).

Schlechter's specific epithet for this species, *leontoglossa*, was already occupied by a different species in the genus from Brazil described by Reichenbach. *Pleurothallis leontoglossa* Schltr. has been reduced by later workers to the synonymy of *P. linguifera* Lindl. The lip of the widespread *P. linguifera* is certainly variable, but Lindley characterized the labellum in his type description as "tongue-shaped . . . and not at all scabrous." Although unquestionably closely allied, I believe specific differences exist. The plant figured on the opposite page was collected on the eastern slope of the Andes at a relatively low elevation. Schlechter's type specimen was collected on the eastern slopes of the Central Andes farther north in Colombia and at a higher elevation. The stem is described as longer and the leaves proportionately somewhat larger, but otherwise the description and drawings of the flowers apply very well to the Ecuadorian plant.

*Pleurothallis corralensis* may be recognized by its slender stem bearing a deeply cordate, ovate leaf, and a medium-sized flower with widely spreading, narrow floral parts. The petals are falcate with serrated margins, and the oval lip, with a finely fringed margin, is covered by a dense mat of a short, glandular pubescence.

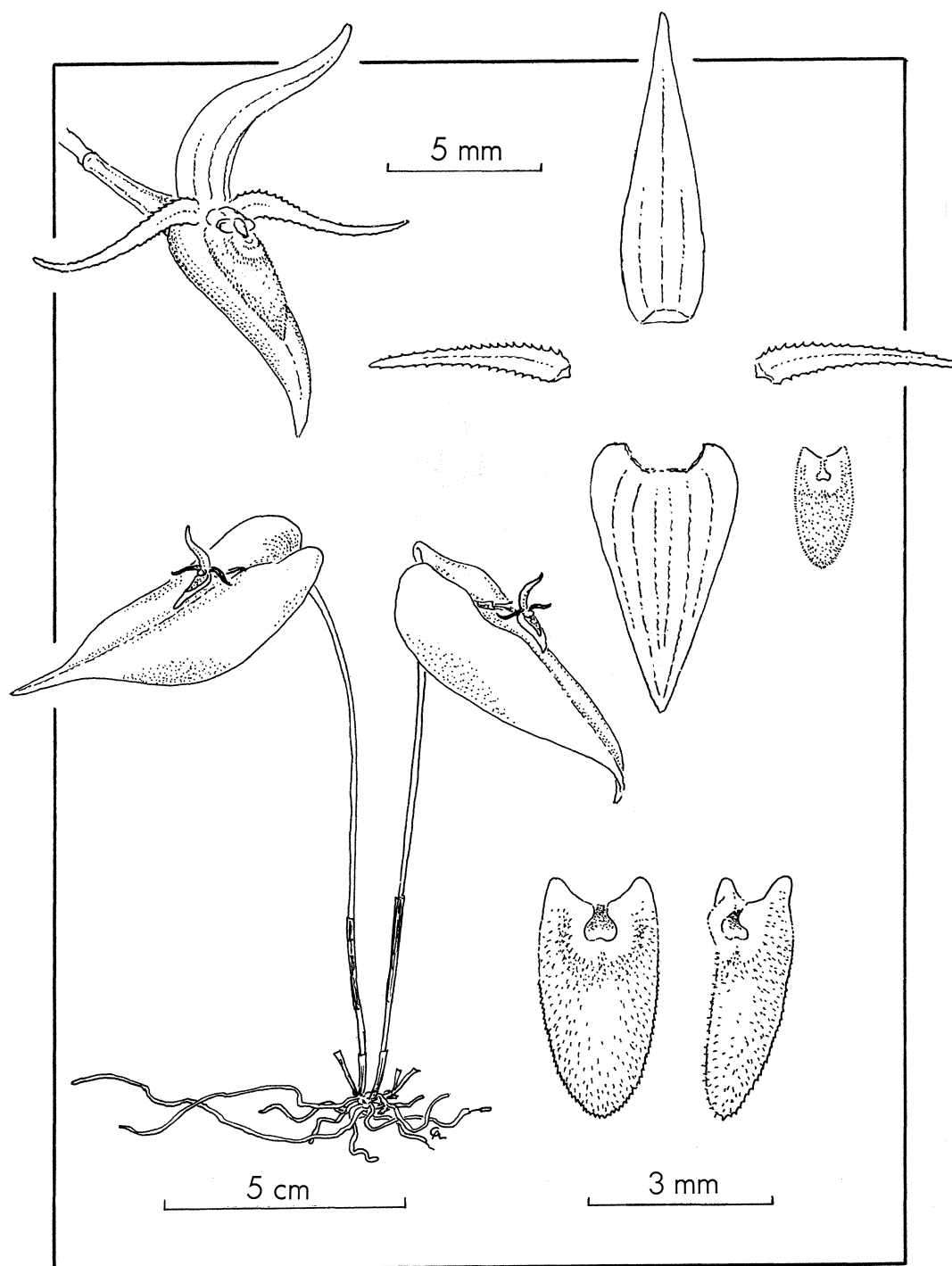


Figure 238. *PLEUROTHALLIS CORRAEENSIS* Garay

*Pleurothallis costaricensis* Rolfe, Kew Bull. 80. 1917; not Schltr.

*Pleurothallis ehrhartiifolia* Schltr., Repert. Spec. Nov. Regni Veg. Beih. 19:187. 1923.

Plant small, epiphytic, caespitose; roots slender, flexuous. Secondary stems fasciculate, short, 0.5-2 cm long, concealed by 2-3 thin, white, ribbed sheaths, unifoliate. Leaf coriaceous, narrowly obovate, the apex subacute to obtuse, tridenticulate, the base narrowly cuneate into an indistinct, channelled petiole, 2-8.5 cm long, 0.5-1.3 cm wide. Inflorescence a densely several-to many-flowered (8-14), distichous raceme, 8-23 cm long including the peduncle, the peduncle thin and laterally compressed, from a node on the secondary stem; floral bract dilated, acute, 2 mm long; pedicel 1-2 mm long; ovary about 1 mm long; flowers membranous, light yellow or green; dorsal sepal narrowly ovate, acute to acuminate, 4.5-7 mm long, 1.5-2.5 mm wide, 3-veined, the mid-vein prominent dorsally; lateral sepals connate into a narrowly ovate, acute to acuminate synsepal, bidentate, forming a shallow mentum below the column-foot, 4.5-7 mm long, 2.5-3 mm wide, 4-veined, lightly bicarinate; petals obovate, subacute to obtuse, 1.75-2 mm long, 1 mm wide, 1-veined; lip yellow, oblong-ligulate, the apex rounded, the base truncate, delicately hinged to the column-foot, disc with low, ill-defined, parallel calli near the middle, 2-2.5 mm long, 0.75-1 mm wide; column stout, broadly winged, 1.5 mm long, with a short, curved foot with a pair of rounded tuberosities near the middle.

ETYMOLOGY: Named for the country of origin, Costa Rica.

TYPE: *COSTA RICA*: CARTAGO: near Cachi, *C. H. Lankester 21* (HOLOTYPE: K).

DISTRIBUTION: Costa Rica, Panama, Colombia, and Ecuador.

*COSTA RICA*: HEREDIA: Vara Blanca de Sarapiquí, north slope of Central Cordillera, alt. 1500-1750 m, July-Sept. 1937, *A. F. Skutch 3170* (SEL).

*PANAMA*: VERAGUAS: epiphytic in cloud forest above Santa Fe, alt. ca. 750 m, 5 Sept. 1976, *C. Luer & R. L. Dressler 1243* (SEL).

*COLOMBIA*: CAUCA: Popayan, km 70 Inza Road, alt. ca. 3000 m, *G. Kennedy s.n.* (SEL), greenhouse acc. no. 77-705, flowered in cult. 24 March 1977.

*ECUADOR*: BOLIVAR: epiphytic in orange and coffee trees near Balzapamba, alt. 730 m, 21 May 1960, *C. H. Dodson 65* (SEL); COTOPAXI: epiphytic in cloud forest, ca. km 64 between Quevedo and Latacunga, alt. 200 m, 23 Aug. 1959, *C. H. Dodson 48* (SEL); PICHINCHA: epiphytic in orange grove near Santo Domingo, alt. 671 m, 5 Nov. 1961, *C. H. Dodson & L. B. Thien 1241* (SEL); epiphytic in cloud forest about 15 km east of Santo Domingo, alt. ca. 1000 m, 15 Aug. 1975, *C. Luer, G. Luer & S. Wilhelm 1045* (SEL).

This freely flowering little species, heretofore reported only from Costa Rica, is widespread and common in western Ecuador. It has also recently been found in Panama and Colombia. The short tightly packed, secondary stems produce a slowly climbing fascicle. The light yellow or yellow-green flowers open nearly simultaneously in racemes which arch beyond the leaves. *Pleurothallis costaricensis* is similar to some forms of *P. grobyi* Batem. ex Lindl., but the former may be identified by its flattened, two-edged peduncle, similar to that of *P. gracillima* Lindl. The floral parts also bespeak a close

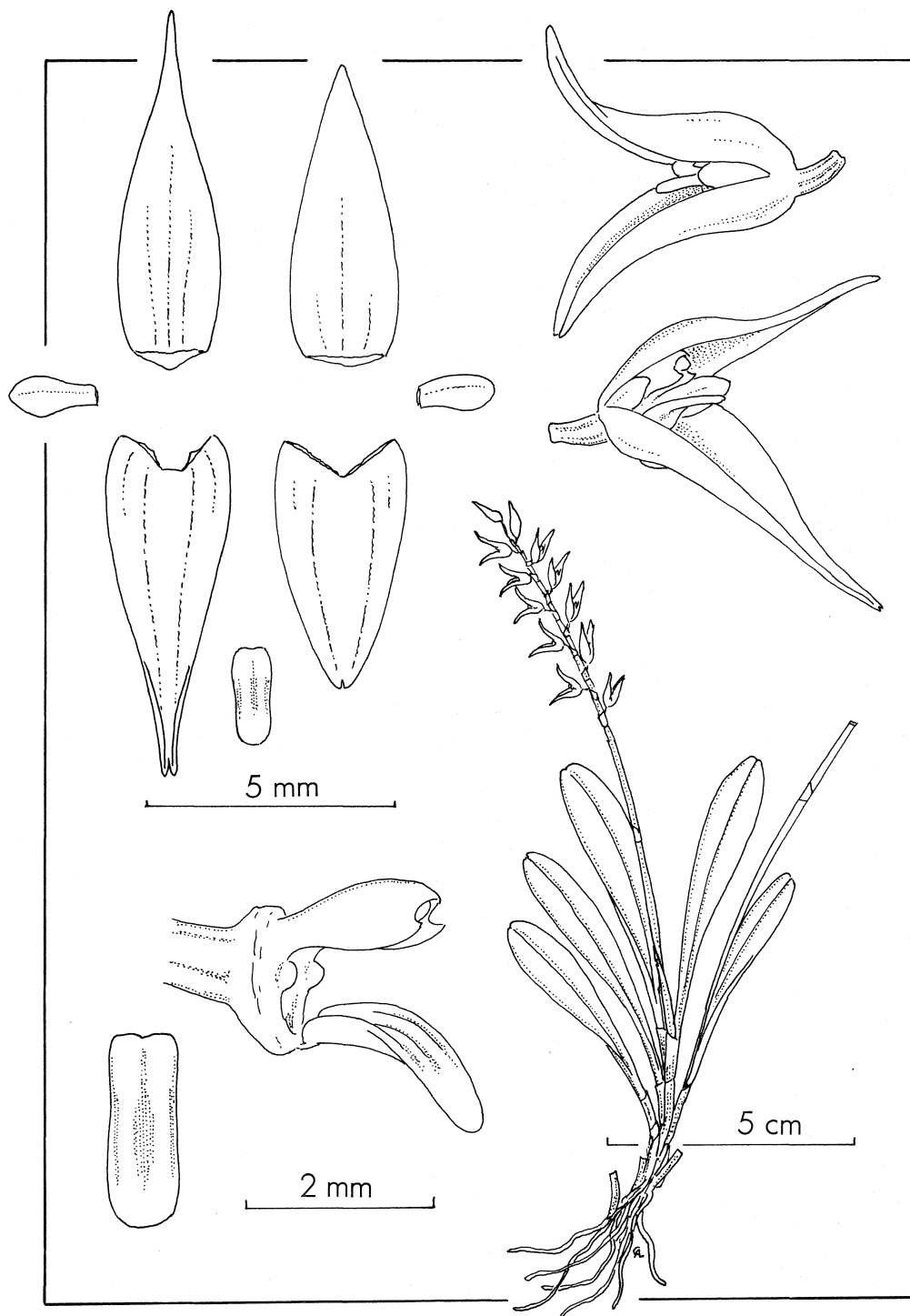


Figure 239. *PLEUROTHALLIS COSTARICENSIS* Rolfe

relationship to the two, including a simple, ligulate lip, and a broadly winged column with a short foot bearing a small tuberosity near the middle of each side.

**Pleurothallis crinita** Barb, Rodr., Gen. Sp. Orchid. Nov. 1:16. 1877.

*Lepanthes crinita* (Barb. Rodr.) Barb. Rodr., l. c. 2:66. 1882.

*Lepanthes renipetala* Barb. Rodr., l. c. 2:66. 1882.

*Pleurothallis renipetala* (Barb. Rodr.) Cogn., Flora Brasiliensis 3(4):504. 1896.

Plant small, epiphytic, repent; primary stem creeping, branching, producing a secondary stem about every 1-3 mm, invested by short, tubular, papery sheaths; roots stout, flexuous. Secondary stem stout, terete, grooved, 1-2 mm long, clothed by an oblique, infundibular sheath, unifoliate. Leaf green, minutely spotted with purple, thick, broadly obovate to suborbicular, apex rounded to obtuse, sulcate with a mucro, base broadly cuneate, sessile, 15-35 × 12-20 mm. Inflorescence a short, few-flowered (2-5) raceme, nearly as long as the leaf; peduncle villous, from a node on the secondary stem, clothed by glabrous, white, papery sheaths, up to 7 × 5 mm; floral bract; white, papery, villous, oblique, obtuse, 3 mm long; pedicel and ovary hirsute, each about 1 mm long; flowers incompletely opening, densely long-pilose; sepals yellow-green with purple spots and covered externally with long white hairs; dorsal sepal linear-elliptic, obtuse, 7 × 2 mm; lateral sepals united into a suborbicular, concave synsepal, 5 × 5 mm; petals glabrous, hastate, long-unguiculate, apex subacute to acute, with acute, triangular lateral lobes; translucent yellow-green marked with purple, 2 × 1 mm; lip fleshy, elliptical, apex obtuse to subacute, with elevated, rounded lateral lobes, disc with a pair of low, rounded, serrated lamellae, base concave and broadly articulated with the column-foot; column yellow-orange, spotted with purple, winged, 3 mm long with a foot about 1 mm long.

ETYMOLOGY: From the Latin *crinitus*, "covered with hairs" (from *crinis*, "hair"), referring to the pilose flower.

TYPE: BRAZIL: MINAS GERAIS: *Barbosa Rodrigues s.n.*

DISTRIBUTION: Southern Brazil and Bolivia.

BOLIVIA: SANTA CRUZ: epiphytic near Zamapata, alt. 1000 m. *Fred Fuchs, Jr. s.n.* (SEL), greenhouse acc. no. 26-74-87, flowered in cult. May 1975.

This species has been known from southern Brazil, but this is the first report of its occurrence in Bolivia where it was recently found by Fred Fuchs.

The plant is small and creeping with its fleshy rounded leaves appressed to the bark upon which it grows. The leaves are minutely and diffusely spotted with purple. The little fuzzy raceme, wrapped mostly in white papery sheaths, is shorter than the leaf. The flowers are covered with long white hairs which obscure the color until the sepals are forcibly parted. Within they are glabrous and vividly spotted with red-purple. The arrow-shaped petals are semi-transparent and tipped with purple. G.F.J. Pabst believes that the petals of Rodrigues' *renipetala* were drawn with the tips bent back to produce the retuse appearance. The lip is fleshy with upturned sides with a pair of denticulate lamellae near the middle.

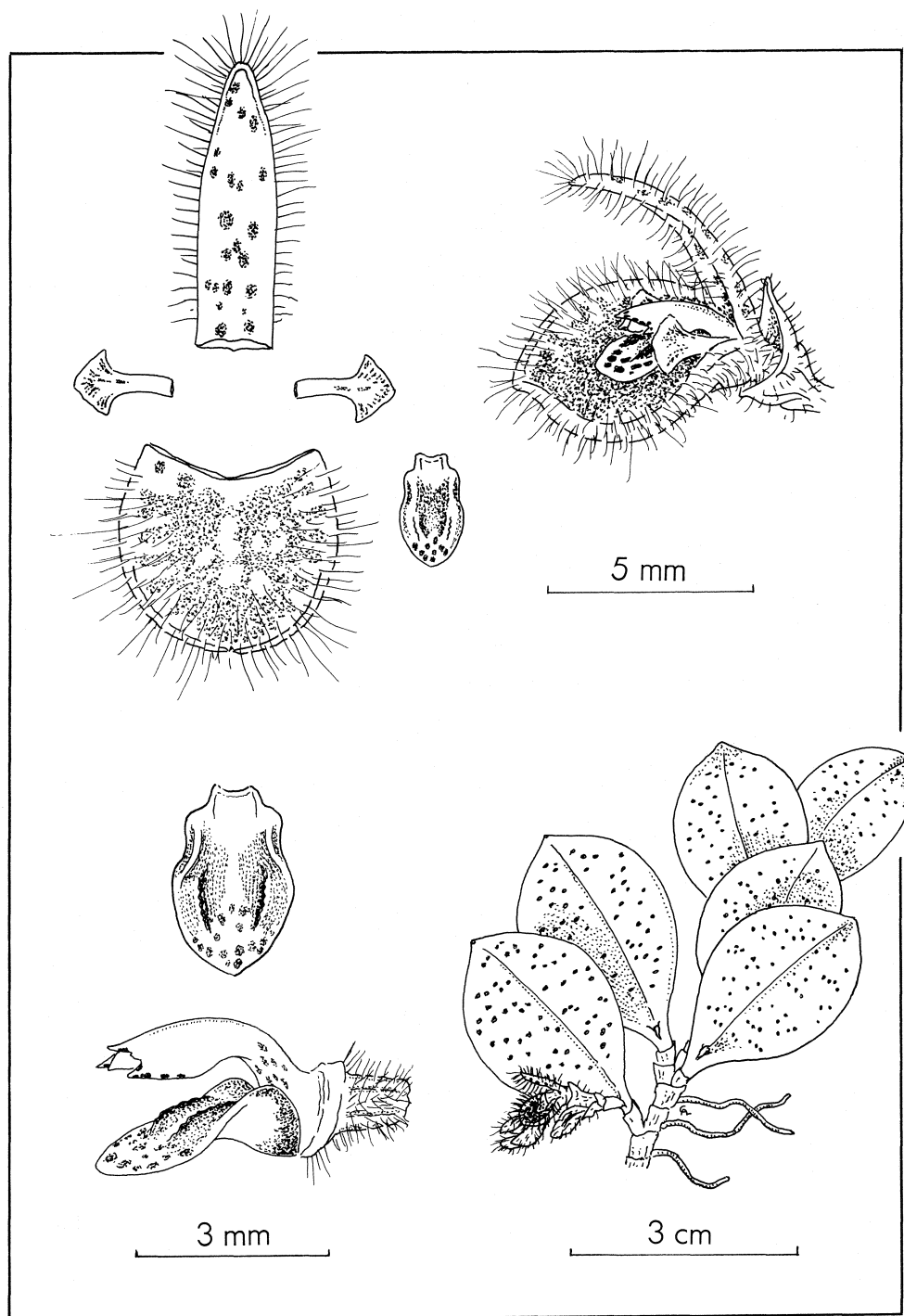


Figure 240. *PLEUROTHALLIS CRINITA* Barb. Rodr.

***Pleurothallis cuspidata* Luer, sp. nov.**

Planta parva epiphytica caespitosa, caulibus secundariis abbreviatis vaginatis unifoliatis, foliis coriaceis obovatis obtusis petiolatis, racemo filiformi quam foliis longiore fractiflexo paucifloro, floribus atropurpureis successivis, sepalo dorsali ovato acuminato attenuato, synsepalo ovato base pubescenti bidentato, petalis glabris base ovatis apice acuminatis anguste cuspidatis, labello subpanduriformi ciliato apice rotundato base biauriculato disco carinato.

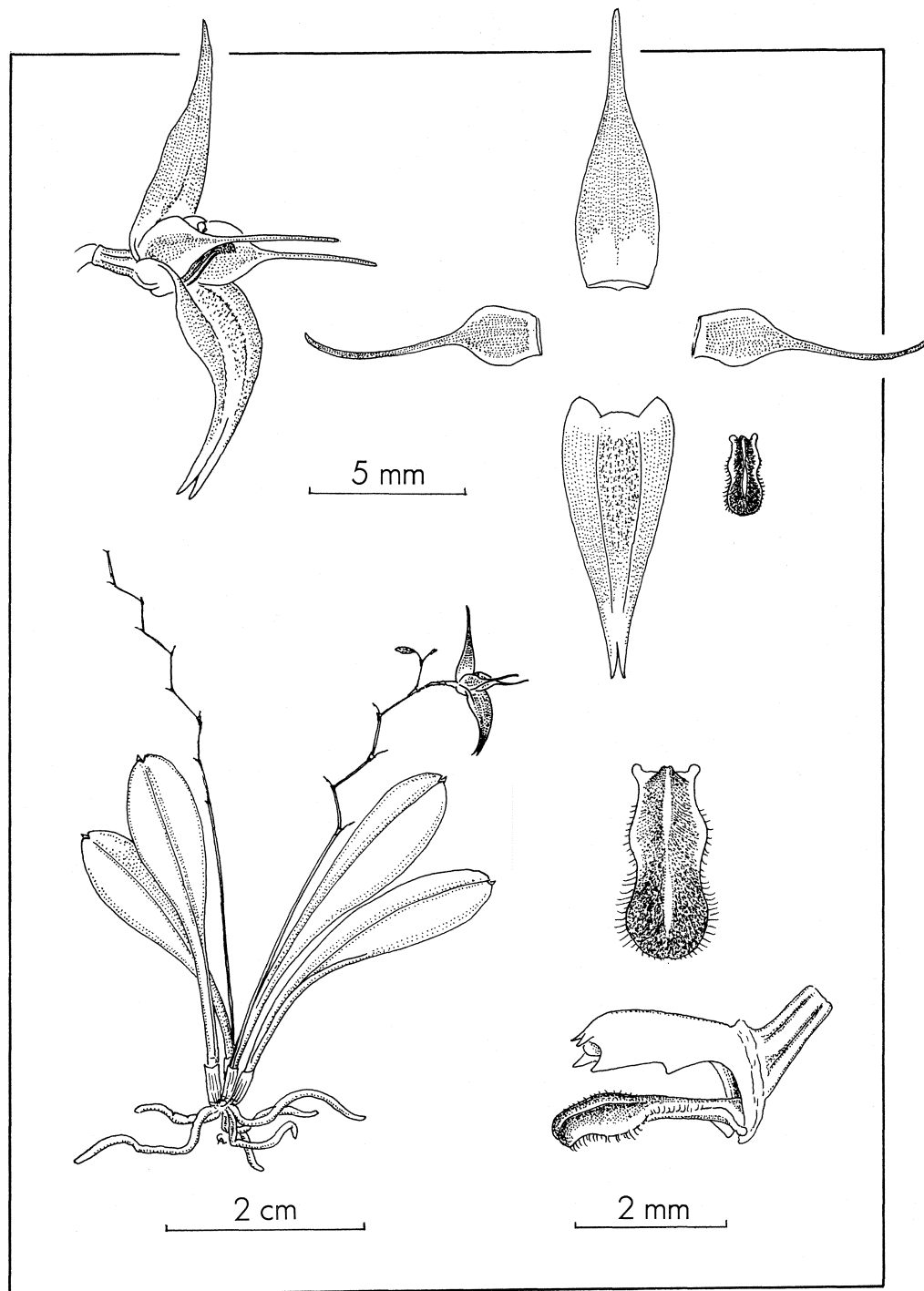
Plant small, epiphytic, densely caespitose, roots slender, flexuous. Secondary stems abbreviated, 3-7 mm long, enclosed by 2 ribbed sheaths, unifoliate. Leaf coriaceous, obovate, subacute to obtuse, tridenticulate, the middle tooth prominent, the base narrowly cuneate into a channeled petiole, 2-3.5 cm long including the petiole, 7-9 mm wide. Inflorescence a few-flowered (6-8), fractiflex raceme to 5 cm long, the maroon flowers produced singly and successively; peduncle filiform, from a node on the secondary stem; floral bract oblique, acute, 1-2 mm long; pedicel slender, 2-3 mm long; ovary 1.5 mm long; dorsal sepal ovate, acuminate, the apex long-attenuate, glabrous, 9 mm long, 2.5 mm wide; lateral sepals connate to near the attenuated apices into an ovate, bidentate synsepal, forming a mentum below the column-foot, pubescent centrally, 9 mm long, 3.5 mm wide, bicarinate; petals ovate in the basal third, 1.75 mm broad, the upper two-thirds narrowly attenuate-filiform, total length 7.5 mm, glabrous; lip subpandurate, the margins ciliate, the apex rounded and recurved, the base delicately hinged to the column-foot, minutely biauriculate, the disc with a longitudinal callus from the base, becoming grooved as it courses toward the apex, 2.5 mm long, 1.25 mm wide; column stout, 2.5 mm long, with a concave foot.

ETYMOLOGY: From the Latin *cuspidatus*, "pointed" (*cuspis*, "point"), in reference to the long-pointed petals.

TYPE: PANAMA: CHIRIQUI: epiphytic in elfin cloud forest on Cerro Hornito, alt. ca. 1700 m, 15 Dec. 1976, C. Luer, A. Luer, R. L. Dressler, N. H. Williams & F. L. Stevenson 1335 (HOLOTYPE: SEL).

DISTRIBUTION: Panama.

This little species of the cloud forest belongs to the large group of small species characterized by densely caespitose, abbreviated secondary stems bearing obovate leaves. The sepals and petals of the relatively large, widely spread flowers are attenuated, the petals remarkably so. The lip bespeaks an alliance with *Pleurothallis abjecta* Ames and *P. barbulata* Lindl., both of which produce minute flowers in compact racemes or fascicles. *Pleurothallis cuspidata* is apparently more closely allied to the racemose *P. abbreviata* Schltr. and *P. fractiflexa* Ames & Schweinf. The former is a much smaller plant with less attenuate petals, and the latter is distinguished by pubescent petals.

Figure 241. *PLEUROTHALLIS CUSPIDATA* Luer



***Pleurothallis cutucuensis* Luer, sp. nov.**

Planta epiphytica mediocris caespitosa, caulibus secundariis erectis teretibus gracilibus unifoliatis, foliis coriaceis ovatis acuminatis acutis basi profunde cordatis, floribus glabris bilabiatis singularibus fasciculatis, sepalo dorsali ellipticis subacutis quinquevenoso vinaceo, synsepal similari albo roseo suffuso, petalis subulatis glabris, labello oblongo obtuso albo cellulis vinaceis.

Plant epiphytic, medium in size, caespitose; roots slender, flexuous. Secondary stems erect, slender, terete, 10-22 cm long, with a close-fitting tubular sheath below the middle and 1-2 others at the base, unifoliate. Leaf coriaceous, ovate, acuminate, acute, tridenticulate, the base deeply cordate, sessile, 6-9.5 cm long, 3.5-6 cm wide. Inflorescence fasciculate, the flowers bilabiate, glabrous, produced 1-4 at a time, from a narrow spathe 12-15 mm long at the base of the leaf; pedicel about 10 mm long; floral bract 5-8 mm long; ovary 5-6 mm long; dorsal sepal elliptical, subacute, wine-red, 13-14 mm long, 7-8 mm wide, 5-veined; lateral sepals connate into an ovate synsepal, subacute, white, suffused with rose, 12-14 mm long, 7-9 mm wide, 6-veined; petals narrowly triangular, oblique, acute, glabrous, deep wine-red, 6.5-7 mm long, 1-1.3 mm wide; lip oblong, obtuse, the base shallowly concave on the end, the margins microscopically denticulate with prominent cells, the disc white, studded with wine-red cells, the glenion well formed, 5.5-6 mm long, 3.5 mm wide; column red, stout, 1 mm long, 2 mm wide, with a short, thick foot.

ETYMOLOGY: Named for the Cordillera de Cutucú where the species was discovered.

TYPE: *ECUADOR*: MORONA-SANTIAGO: epiphytic in wet montane forest, Cordillera de Cutucú, 25 km SE. of Longrono, alt. 1000 m, Jan. 1976, *M. Madison 3130* (HOLOTYPE: SEL), greenhouse acc. no. 23-76-16, flowered in cult. 28 April 1976, 15 Jan. 1977; same area, Nov. 1976, *M. Madison 3640* (SEL).

DISTRIBUTION: Eastern Ecuador.

The long-stemmed, deeply cordate, ovate leaves of this very pretty species are indistinguishable from those of a host of others in this perplexing section. A description of the medium-sized flowers also is not impressively distinct from those of many other closely related species. However, a combination of several features sets this species apart. The elliptical, deep wine-red dorsal sepal is 5-veined, and the similarly shaped synsepal is white, suffused with rose. The subulate, glabrous petals are deep wine-red and widely spread. The oblong lip is basically white, but generously dotted with deep red cells.

This species is apparently endemic in the isolated Cordillera de Cutucú, just east of the eastern slopes of the Andes.

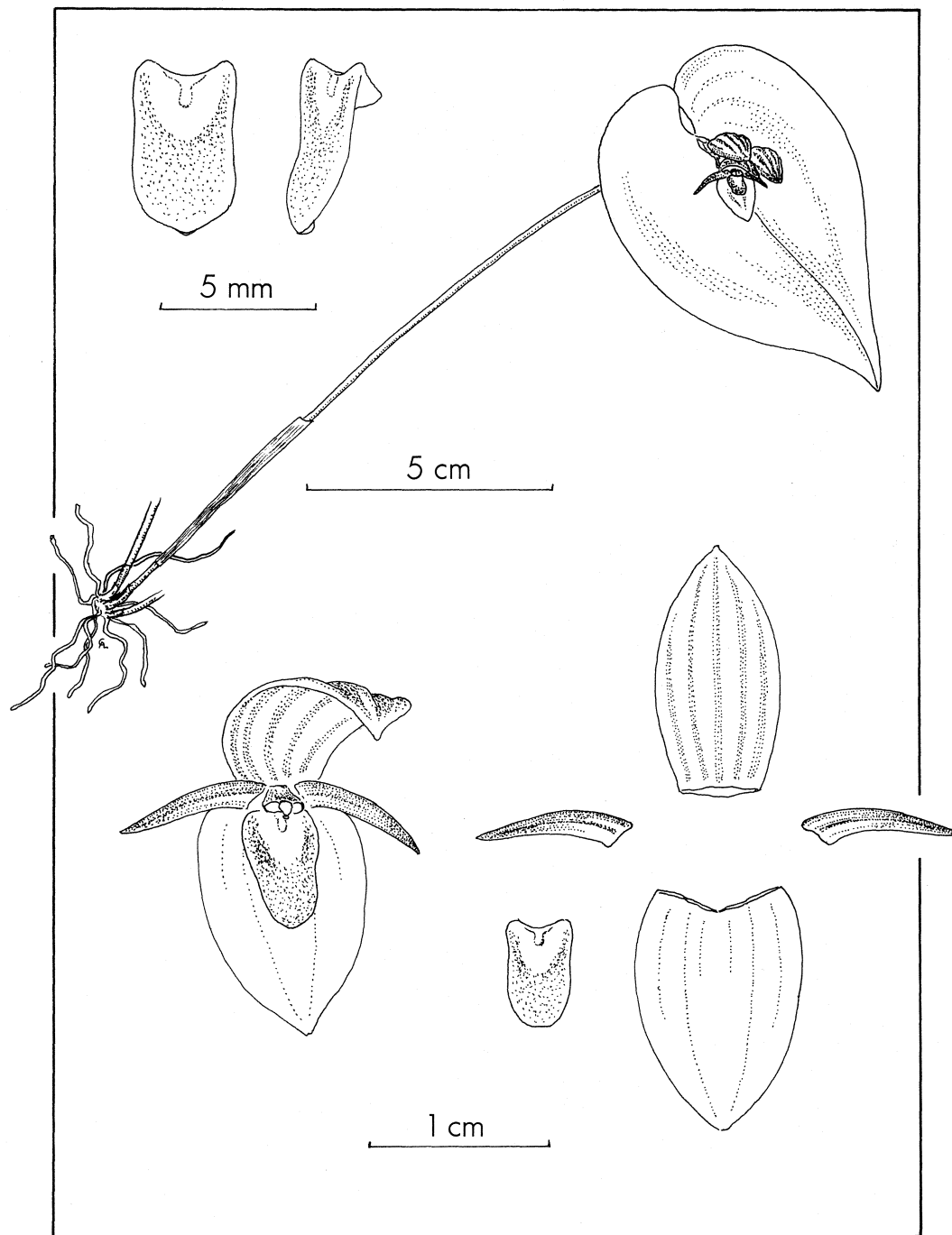


Figure 242. *PLEUROTHALLIS CUTUCUENSIS* Luer

***Pleurothallis dasychila* Luer, sp. nov.**

Planta mediocris terrestris (epiphytica?) repens, rhizomate crasso, caulibus secundariis erectis crassis plurivaginatibus unifoliatis, folio rigido crasso anguste ovato acuto apiculato base conduplicato cuneato subpetiolato, flore carnosio breviter pedicellato successivo ex axilla folii, sepalis flavovirentibus extus scaberulis intus glabris, sepalo dorsali obovato, synsepalo ovato, petalis oblongis obtusis, labello trilobato, lobo antico rubro retuso dense spiculato, lobis lateralibus erectis obliquis obtusis.

Plant medium in size, terrestrial to epiphytic?, repent, the rhizome thick, producing a secondary stem about every 1-2 cm; roots coarse, flexuous. Secondary stems erect, stout, terete, 8-23 cm long, with 5-6 thin, evenly spaced, tight fitting, tubular sheaths, unifoliate. Leaf suberect, rigid, coriaceous, narrowly ovate, often somewhat recurved toward the acute apex, apiculate, the cuneate base conduplicate, subpetiolate, 10-14 cm long, 3-3.5 cm wide. Inflorescence fasciculate, the fleshy, bilabiate, short-pedicellate flowers produced singly and successively from a fugacious spathe 5-7 mm long, in the axil of the leaf; floral bract thin, brown, 6-7 mm long; pedicel thick, 3 mm long; ovary scabrous, 3 mm long; sepals yellow-green, thick, scabrous to shortly pubescent externally, glabrous with visible cells internally, the dorsal sepal obovate-oblong, subacute, 10 mm long, 3.5 mm wide, the lateral sepals connate into an ovate, obtuse synsepal mottled with red within, 8-9 mm long, 3.5 mm wide; petals oblong, slightly curved, abruptly obtuse, thickened centrally externally, translucent yellow edged in red and with a few red dots, 4.5 mm long, 2 mm wide; lip fleshy, 3-lobed, the mid-lobe oblong rounded, retuse, 2 mm long, densely covered with red spicules, the lateral lobes erect, rounded, oblique, obtuse, directed forward, sparsely pubescent, red-orange to brown, the base rounded and shortly hinged, the disc with a smooth, glabrous strip down the center, 4.5 mm long, 2.5 mm wide spread; column terete, curved, yellow, 4 mm long, with an obsolescent foot.

ETYMOLOGY: From the Greek *dasys*, "thickly hairy or shaggy," and *cheilos*, "lip," in allusion to the appearance of the labellum of the species.

TYPE: *ECUADOR*: LOJA: terrestrial on the road embankment about 25 km north of Loja, alt. ca. 2000 m, 5 March 1977, C. Luer, J. Luer & K. Cordoba 1545 (HOLOTYPE: SEL); same area, 4 Oct. 1961, C. H. Dodson & L. B. Thien 1144 (SEL).

DISTRIBUTION: Southern Ecuador.

This robust species may be recognized by its tough rhizome with erect, stout stems provided with about six rather evenly spaced sheaths. The rigid leaf is folded at the base where a short-pedicellate flower is produced at prolonged intervals. The sepals are fleshy and scabrous, the obtuse petals are membranous but thick through the center, and the three-lobed lip is fleshy with a red, shaggy middle lobe which is shallowly cleft.

*Pleurothallis dasychila* appears to be related to the smaller *P. wagneriana* Kl. from Colombia and Venezuela.

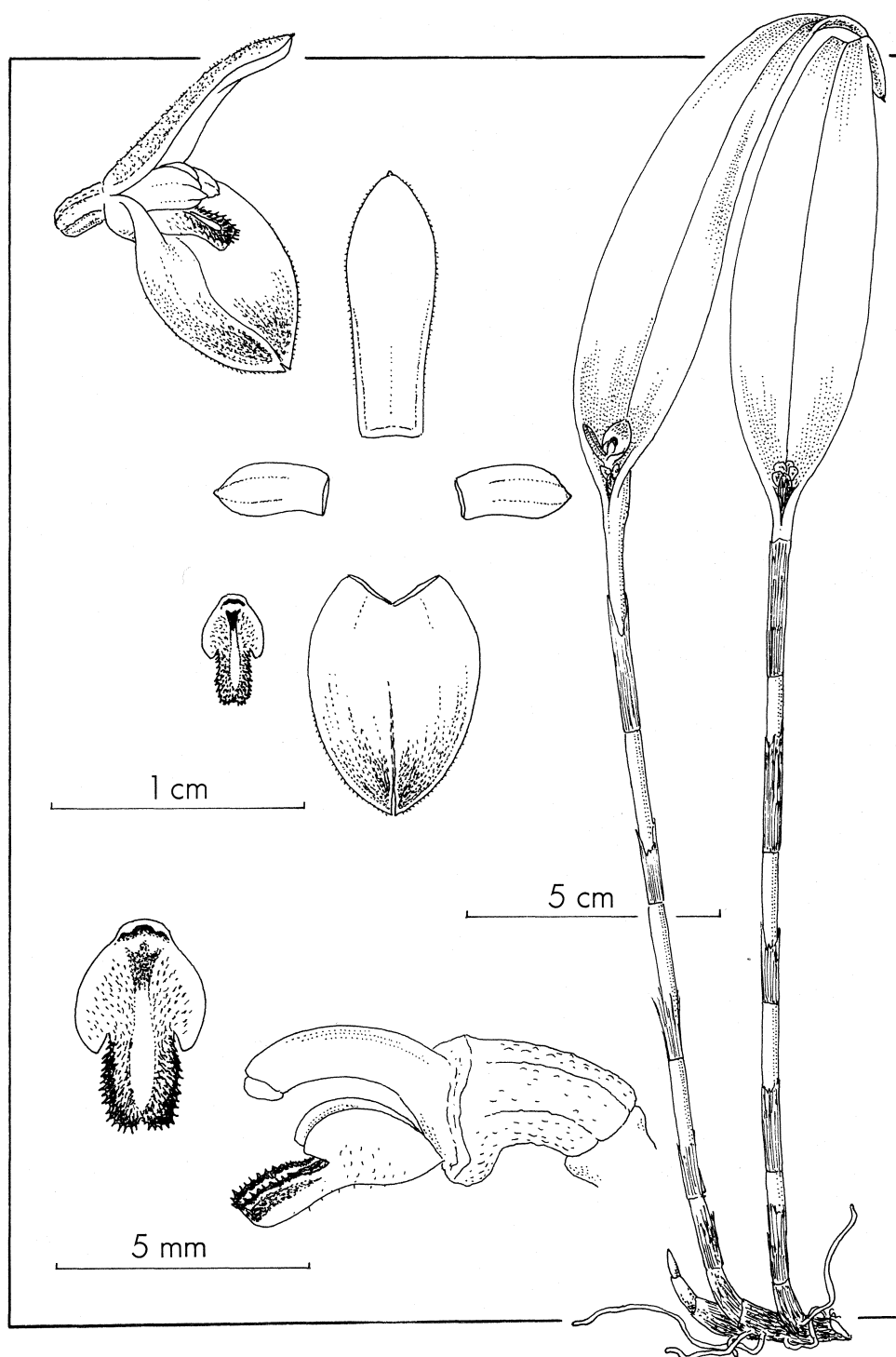


Figure 243. *PLEUROTHALLIS DASYCHILA* Luer

*Pleurothallis decipiens* Ames & Schweinf., Sched. Orchid. 8:26. 1925.

*Pleurothallis pterocaulis* L. O. Wms., Ann. Missouri Bot. Gard. 27:280, t. 32. 1940.

Plant medium sized, epiphytic, repent, the rhizome stout, producing a secondary stem about every 5 to 10 mm; roots few, flexuous. Secondary stems slender, terete, lightly channeled, suffused with purple, 5-12 cm long, with 2 basal sheaths, unifoliate. Leaf thick, coriaceous, narrowly elliptical, subacute, tridenticulate, the base cuneate to rounded, sessile, 7-10 cm long, 1.5-2.8 cm wide. Inflorescence a short (2 cm), few-flowered (2-3) raceme of fleshy, purplish flowers; peduncle 7-10 mm long, from a narrow spathe, about 1 cm long at the base of the leaf; floral bract oblique, 2.5 mm long; pedicel 2 mm long; ovary 1.5-2.25 mm long; sepals dull yellow, suffused with red-purple, or red-brown within, the outer surface, and the inner surface, near the apex slightly verrucose, but this may be absent in some flowers, fleshy thickened above the middle, subcarinate along the veins, dorsal sepal oblong to obovate, obtuse, 6-7.5 mm long, 2.5 mm wide, united basally to the lateral sepals for 1.5 mm; lateral sepals similar to the dorsal sepal, united to above the middle into a broadly obovate, bifid synsepal, the apices shortly acuminate, the base forming a mentum with the column-foot, together 5-6 mm long, 5 mm wide; petals obovate, rounded to obtuse, serrulate above the middle, the mid-vein prominent externally, 2.5-3 mm long, 1.75 mm wide; lip fleshy, oblong, obovate, the apex red-purple, rounded, microscopically ciliate, with a pair of low, rounded orange lateral lobes below the middle, the base pink, biauriculate, the disc with a pair of low, thick, longitudinal calli, 3.75-4 mm long, 1.75 mm wide; column red, 2.5 mm long, with a stout foot 1.5 mm long.

ETYMOLOGY: From the Latin *decipiens*, "deceiving," apparently in allusion to the similarity of the plant to other related species.

TYPE: COSTA RICA: GUANACASTE: Arenal, alt. 600 m, 13 July 1923, *Juvenal Valerio 68* (HOLOTYPE: US).

DISTRIBUTION: Costa Rica, Panama, Venezuela, and Ecuador.

PANAMA: COCLÉ: epiphytic in old orange trees in the hills above El Valle, alt. 1000 m, 2 Sept. 1976, *C. Luer & H. Butcher 1124, 1125* (SEL);

PANAMA: epiphytic on Cerro Campana, Sept. 1976, *R. L. Dressler s.n.* (SEL), cultivated at SEL, greenhouse acc. no. 123-76-92, flowered in cult. 24 Oct. 1976.

ECUADOR: without specific locality, *Janet Kuhn s.n.* (SEL), flowered in cult. 25 Nov. 1976.

The secondary stems of this species are slender, purplish, and terete with a shallow, longitudinal groove extending down from the axil of the leaf. The thick, elliptical leaf is often similarly suffused with purple. When dry, longitudinal wrinkles develop in the stems, an artefact commonly seen in otherwise terete stems of dried specimens. This is clearly illustrated by Dillon in the drawing used to accompany the description of *Pleurothallis pterocaulis*.

The flowers are produced on very short racemes of only two or three flowers. The verrucose character of the sepals varies considerably, the roughness being practically absent in some flowers. The broad petals are minutely toothed. The lip is basically similar to many allied species (e.g. *P. hondurensis* Ames and *P. verecunda* Schltr.).

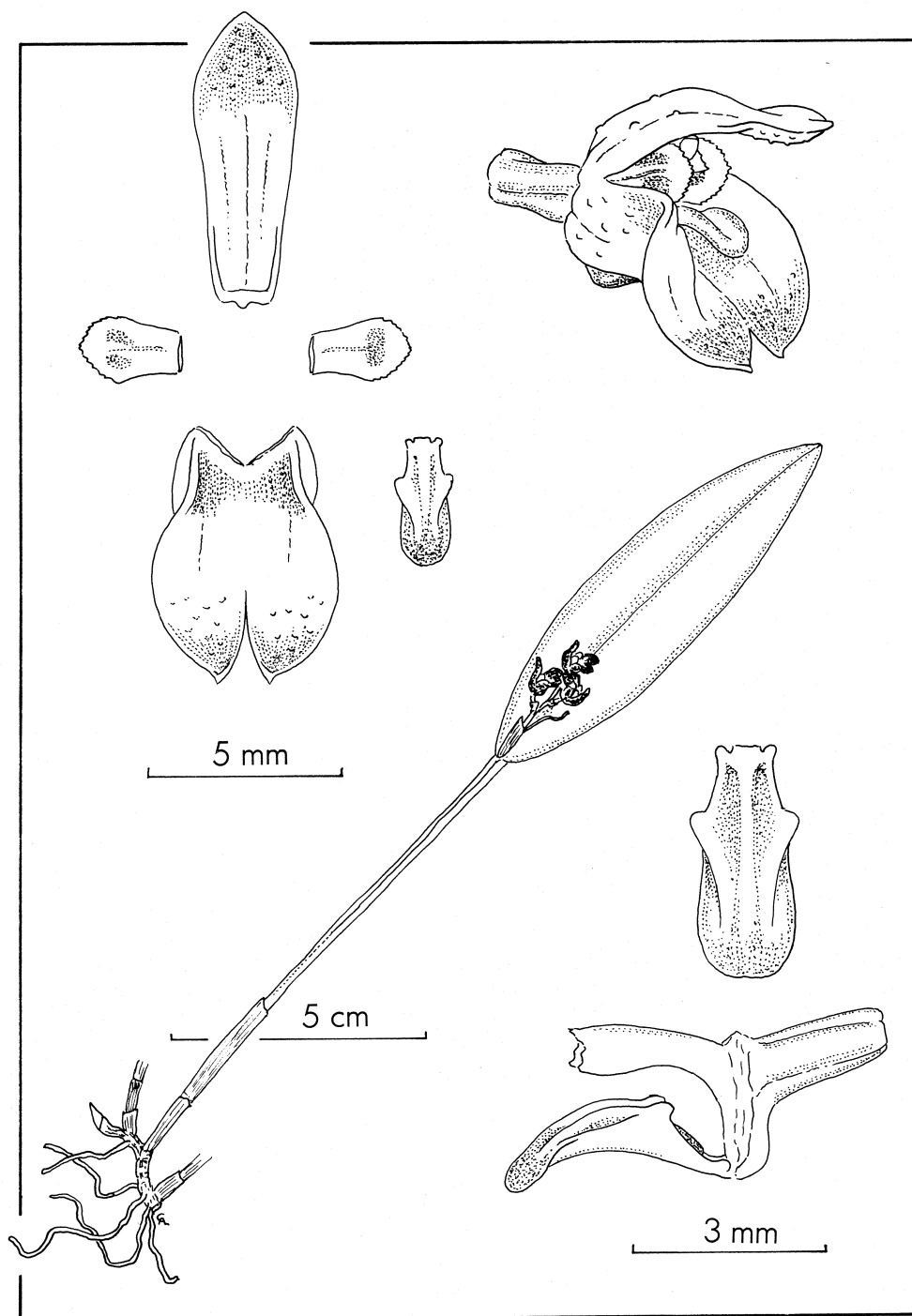


Figure 244. *PLEUROTHALLIS DECIPIENS* Ames & Scheinf.

*Pleurothallis dentipetala* Rolfe ex Ames, Sched. Orchid. 3:7. Jan. 1923.

*Pleurothallis stelidiformis* Schltr., Repert. Spec. Nov. Regni Veg. Beih. 19:195. Nov. 1923.

*Pleurothallis cooperi* Schltr., l. c. 19:286. Nov. 1923.

Plant medium to large, epiphytic, caespitose; roots slender, flexuous. Secondary stems slender, terete, 8-28 cm long, with a tightly fitting tubular sheath below the middle and 1-2 others at the base, unifoliate. Leaf thin, coriaceous, ovate, acuminate, acute, tridenticulate, the base rounded to cordate, sessile, 7-14 cm long, 3.5-7 cm wide. Inflorescence a densely, many-flowered, arching raceme, 12-20 cm long, the purplish flowers short-pedicellate, the peduncle slender, from a spathe 1-2 cm long, at the base of the leaf; floral bract oblique, acute, 1.5-2 mm long; pedicel 1 mm long; ovary 1.5 mm long; dorsal sepal deeply concave, broadly ovate to suborbicular, obtuse, 4-5 mm long, 4-5 mm wide, 3-veined; lateral sepals connate into a deeply concave, broadly ovate synsepal, 4 mm long, 4.5 mm wide, 4-veined; petals elliptical, subacute, with an irregularly fringed margin, 5 mm long, 3.5 mm wide including the fimbria; lip fleshy, subsagittate, deflexed above the concave base, the basal angles incurved, the apex subacute, apiculate, the margins minutely irregular, the margins of the glenion well-developed and elevated, 3 mm long, 2.25 mm wide; column stout, broad, 2 mm long, with a short, bulbous foot.

ETYMOLOGY: From the Latin *dens*, *dentis*, "tooth," and *petalum*, "petal," in reference to the toothed petals.

TYPE: *COSTA RICA*: without locality, cultivated at Kew, Sept. 1918, *C. H. Lankester s.n.* (HOLOTYPE: K).

DISTRIBUTION: Costa Rica and Panama.

*COSTA RICA*: CARTAGO: Sylvestre, alt. 1325 m, 25 Aug. 1963, *C. H. Dodson 2511* (SEL).

*PANAMA*: CHIRIQUI: epiphytic at the Fortuna dam site, Camp Hornito, 1000-1200 m, 12 Aug. 1976, *R. L. Dressler 5324* (SEL); same area, *R. L. Dressler s.n.* (SEL), greenhouse acc. no. 114-76-12, flowered in cult. 21 Dec. 1976.

This pretty species, with its long, crowded spike of short-pedicellate flowers, does indeed resemble a *Stelis*, as suggested by Schlechter when he described the species during the same year as Rolfe. Heretofore, it has not been reported outside Costa Rica. Vegetatively the plant is similar to *Pleurothallis longipedicellata* Ames & Schweinf. and its relatives. The flowers are also basically similar, but easily distinguished by their short pedicels and conspicuously denticulate petals.

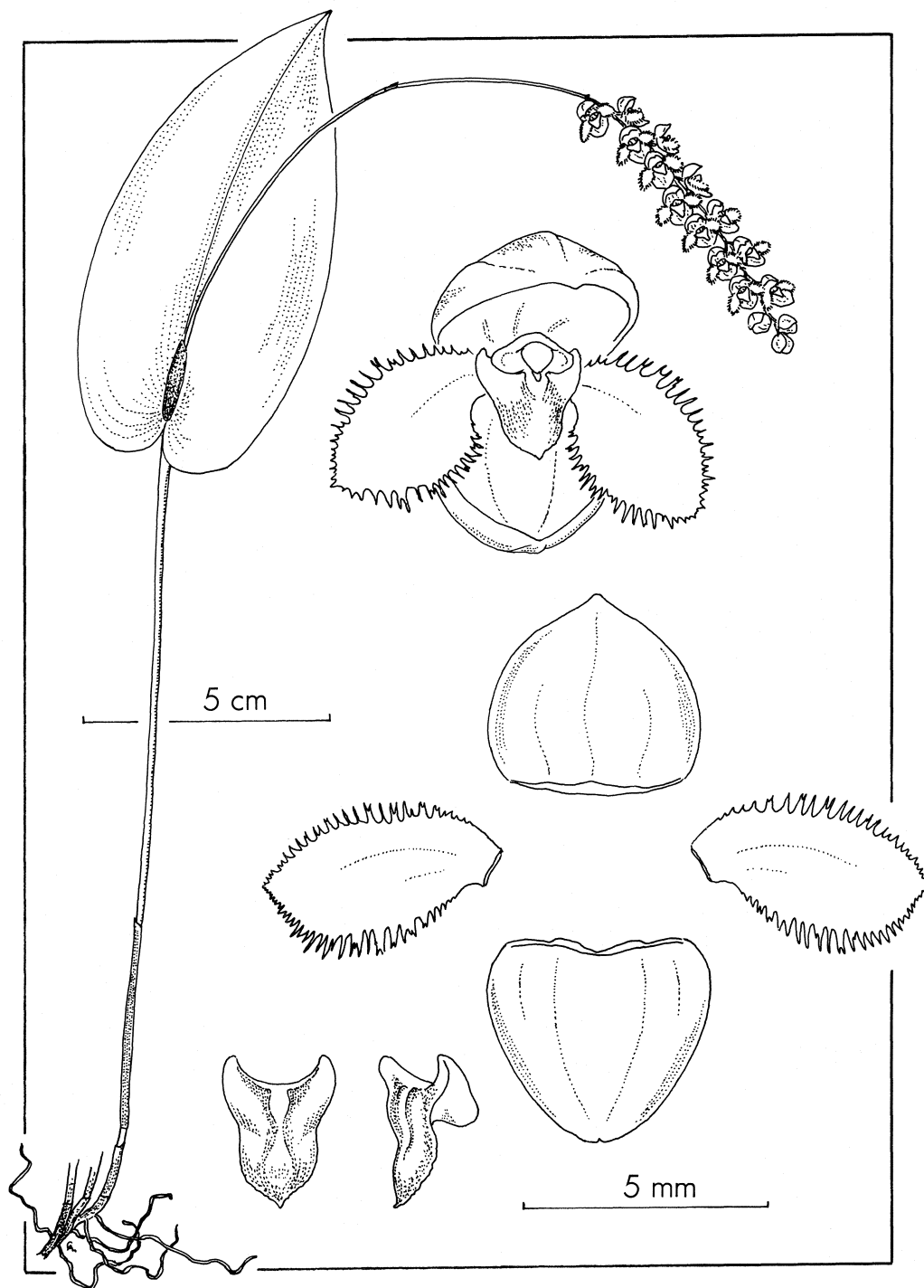


Figure 245. *PLEUROTHALLIS DENTIPETALA* Rolfe ex Ames



**Pleurothallis dirhamphis** Luer, sp. nov.

Planta parva epiphytica caespitosa, caulibus secundariis gracilibus unifoliatis vaginis lepanthiformibus, foliis coriaceis ellipticis subacutis vel obtusis base cuneatis breviter petiolatis, racemo multifloro folio multo longiore pedunculo filiformi, floribus flavescentibus, sepalis libris anguste ovatis acuminatis acutis subcarinatis sepalis lateralibus obliquis, petalis obovatis apice obtusis minute erosis vel praemorsis, labello oblongo obtuso lobis basalibus hamulatis incurvis disco bicalloso.

Plant small, epiphytic, caespitose; roots filamentous, flexuous. Secondary stems very slender, 3-9 cm long, concealed by 2-7 tightly fitting, tubular, costate, scabrous, imbricating sheaths with oblique, dilated, ciliated ostia, unifoliate, occasionally prolific. Leaf dark green, often suffused with purple, coriaceous, elliptical to narrowly elliptical, subacute to obtuse, tridentate, the base cuneate, shortly petiolate, 2-4 cm long (including the 1-5 mm petiole) and 7-16 mm broad. Inflorescence racemose, solitary, laxly few- to many-flowered, to 18 cm long, the peduncle slender, from the apex of the stem; floral bract acute, 2-3 mm long; pedicel 2-4 mm long; ovary 0.5-1 mm long; flowers glabrous, pale yellow-green to bright yellow; sepals free, narrowly ovate, acuminate, acute, subcarinate, the lateral sepals oblique, 8-15 mm long, 2-4 mm wide, 3-veined; petals broadly obovate, the apex obtuse to rounded, erose, 2.75-3 mm long, 1.25-2.25 mm wide; lip yellow, suffused with rose, with 3 red veins beneath, oblong, the apex obtuse to rounded, convex, the margins upcurved near or below the middle, the base folded and incurved to form a pair of hook-shaped lobes, the disc with a pair of low parallel calli running forward from the basal lobes, 4 mm long, 2 mm wide; column stout, 1.5 mm long, the foot bulbous.

ETYMOLOGY: From the Greek *di-*, "two-," and *rhamphis*, "hook, or barb," referring to the pair of hook-like basal lobes of the lip.

TYPE: *ECUADOR*: NAPO: epiphytic in felled trees about 14 km north of Archidona, alt. 600 m, Aug. 1975, *C. Luer, G. Luer & S. Wilhelm 661* (HOLOTYPE: SEL), greenhouse acc. no. 44-75-120, flowered in cult. 25 March 1976.

DISTRIBUTION: Ecuador.

ADDITIONAL MATERIAL EXAMINED: *ECUADOR*: AZUAY: west of Cuenca, May 1973, *Janet Kuhn 16* (SEL), flowered in cult. 16 Feb. 1976, epiphytic in cloud forest, alt. ca. 2500 m, between Cuenca and Guayaquil, 1 March 1977, *C. Luer, J. Luer & K. Cordoba 1479* (SEL); *PICHINCHA*: epiphytic in mossy tree near km 80 between Quito and Santo Domingo, alt. ca. 1500 m, 17 Aug. 1976, *C. H. Dodson 5959* (SEL).

This species, a member of the section characterized by lepanthiform cauline sheaths, is distinguished by a laxly many-flowered raceme twice to several times as long as the elliptical leaf. The larger-flowered specimens are very showy. The sepals of the yellow flowers are free and acuminate. The rounded apex of the petals is erose. The lip is entire except at the base where a pair of incurved, hooked lobes are formed by the infolding of the margins.

*Pleurothallis dirhamphis* is probably closely allied to the smaller *P. chamaelepanthes* Rchb. f. which is characterized by short, few-flowered racemes. The lips of the two species are probably very similar.

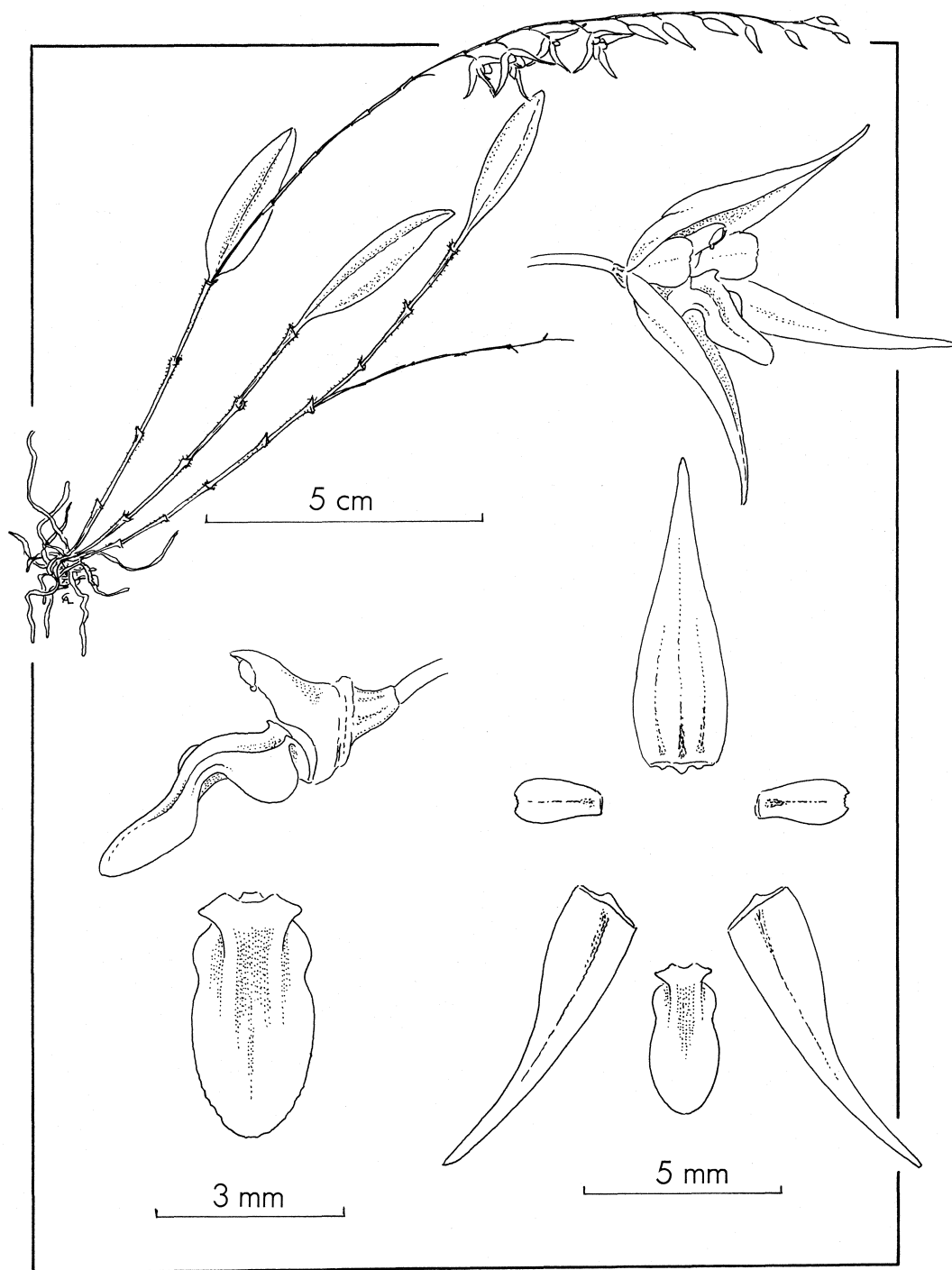


Figure 246. *PLEUROTHALLIS DIRHAMPHIS* Luer

**Pleurothallis ellipsophylla** L. O. Wms., Ann. Missouri Bot. Gard. 29:344. 1942.

Plant medium in size, epiphytic, shortly repent, the primary stem stout, producing a secondary stem about every 1 cm; roots few, flexuous. Secondary stems stout, terete, 5-8 cm long, with 2-3 close-fitting tubular sheaths at the base, unifoliate. Leaf coriaceous, erect, elliptical, the apex obtuse, minutely notched, the base rounded, sessile, 5-9 cm long, 2.5-3.5 cm wide. Inflorescence a short (about 3 cm), few-flowered (about 5), erect raceme, from a 6-7 mm spathe at the base of the leaf; flowers light green gaping, minutely pubescent externally; floral bract acute, 5 mm long; pedicel puberulent, 3 mm long; ovary puberulent, 2.5 mm long; dorsal sepal linear-obovate, acute, acuminate, 14 mm long, 2.5 mm wide; lateral sepals united into a bidentate, narrowly ovate, subpanduriform lamina, 14 mm long, 5.5 mm wide; petals translucent pale green, narrowly elliptical, slightly oblique, the apex narrowly acuminate, the margins denticulate, 7 mm long, 1.5 mm wide; lip pale yellow-green, thick, more or less linear, the apex acute, apiculate, minutely erose, the margins toward the base produced into smooth, erect lamellae which cannot be spread without fracturing, the base biauriculate, 5 mm long, 1.5 mm wide; column terete, the apex denticulate, 4 mm long, with a short foot.

ETYMOLOGY: From the Greek *ellipsis*, "in geometry, elliptical," and *phylon*, "leaf," in reference to the shape of the leaf.

TYPE: PANAMA: BOCAS DEL TORO: Maccaw Hill, Isla Colón, Alt. 0-125 m, 25 Aug. 1940, *von Wedel 560* (HOLOTYPE: AMES).

DISTRIBUTION: Panama.

PANAMA: PANAMA: epiphytic along the El Llano-Carti road, alt. ca. 350 m, collected 3 March 1976, *C. Luer, J. Luer, P. Taylor & R. L. Dressler 1081* (SEL), greenhouse acc. no. 43-76-223, flowered in cult. 18 Sept. 1976; Cerro Campana, 14 Jan. 1972, *R. L. Dressler 4153* (SEL).

*Pleurothallis ellipsophylla* is related to *P. lanceana* Lodd. and its host of allies. It is very similar to *P. geminicaulina* Ames and may be little more than a geographical variation. I included it in the synonymy of the latter in SELBYANA 1:72 because the drawing and description of the plant seemed to fit so well.

*Pleurothallis ellipsophylla* shares the elliptical shape of the leaf with its relatives. The short raceme bears a few, comparatively large, pale green flowers. The sepals and lip are proportionately narrower than those of the allied species. The erect, smooth, rigid, marginal lamellae near the base of the lip are distinctive.

Previously known only from western Panama, it has now been discovered in two localities in eastern Panama.

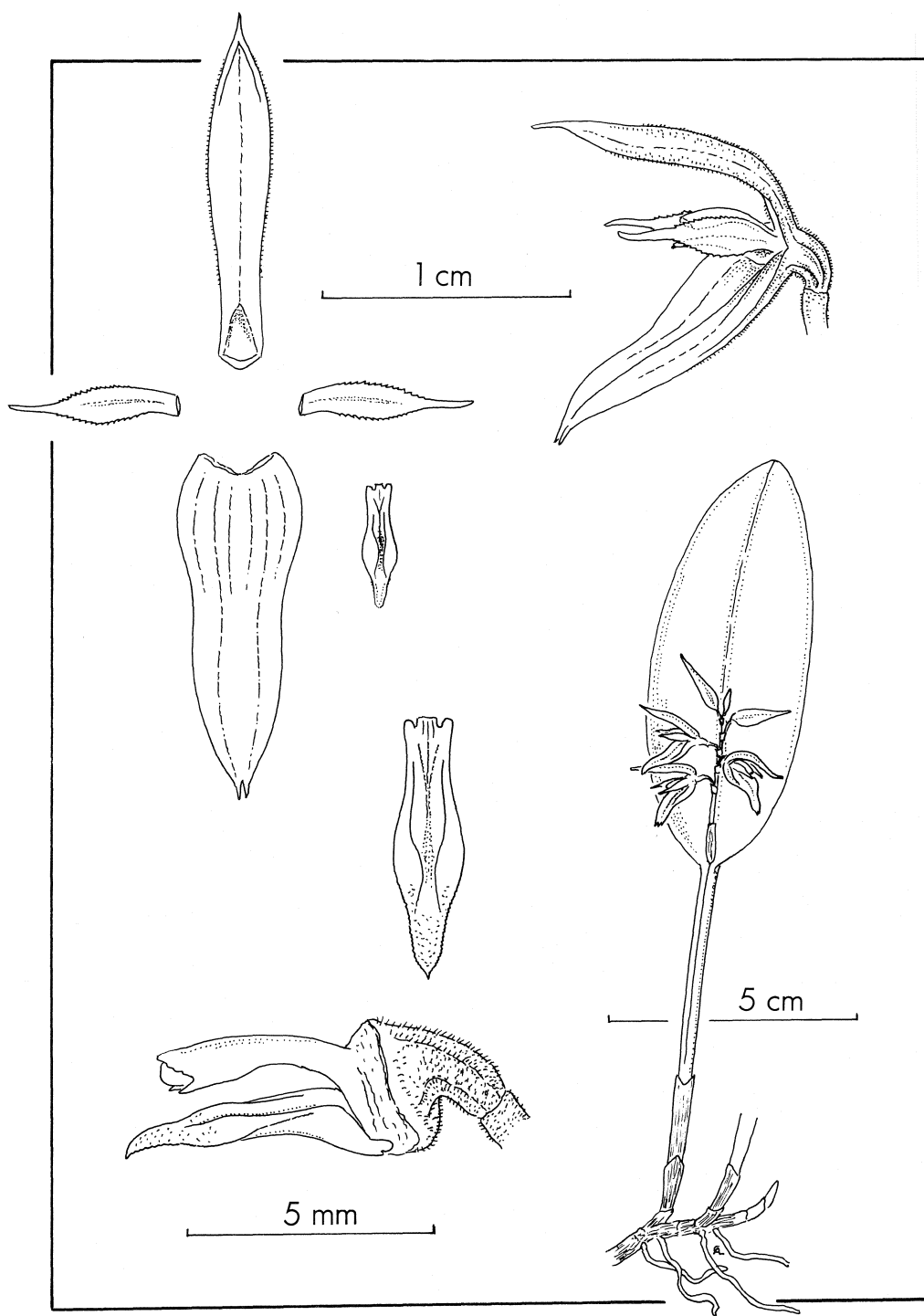


Figure 247. *PLEUROTHALLIS ELLIPSOPHYLLA* L. O. Wms.

***Pleurothallis ephemera*** Lindl., Companion Bot. Mag. 2:356. 1836.

*Pleurothallis longirostris* Focke, Bot. Zeitung (Berlin) 11:340. 1853.

*Pleurothallis rostriflora* Rchb. f., Ann. Bot. Syst. 4:175. 1861; not Rchb. f.,  
Linnaea 22:827. 1849.

*Humboldtia ephemera* (Lindl.) O. Ktze., Rev. Gen. Pl. 2:667. 1891.

*Humboldtia longirostris* (Focke) O. Ktze., Rev. Gen. Pl. 2:667. 1891.

*Pleurothallis ochracea* Porsch, Oesterr. Bot. Z. 55:156. 1905.

*Pleurothallis ornithorrhyncha* Hoehne, Arch. Inst. Biol. (Sao Paulo) 2:34.  
1929.

Plant epiphytic, small, caespitose to shortly creeping; roots slender, flexuous. Secondary stem terete, slender, 2-5 cm long, with 1-2 basal tubular sheaths, unifoliate. Leaf coriaceous, narrowly elliptical, acute, tridentate, base narrowly cuneate, subpetiolate, 4-8 cm X 7-21 mm. Inflorescence 1-3 loosely-, few-flowered racemes, shorter than to nearly as long as the leaf the flowers produced singly and successively; peduncle filiform, from a 3-4 mm spathe at the base of the leaf; flower yellow-orange, bilabiate; floral bract 2-3 mm long; pedicel 3 mm long; ovary tri-lobate, also 3 mm long; dorsal sepal thick and fleshy, very narrowly ovate, 10-15 X 1.5-2.5 mm, navicular, glabrous and carinate externally, velutinous internally, 3-nerved, apex attenuate, sometimes recurved; lateral sepals firmly united into a fleshy, narrowly ovate, bicarinate synsepal 9.5-14 X 2-3 mm, apex acuminate, bifid, velutinous within; petals ovate, apex acute, acuminate, 3-3.5 X 1.25-1.5 mm, 3-nerved; lip yellow, oblong, narrowed below the rounded apex, the apex purple and papillose, base broadly attached to the column-foot, 2.25 X 1 mm, disc with a parallel pair of verrucose keels above the middle; column cylindrical, 2 mm long, anther purple.

ETYMOLOGY: From the Greek *ephemeros*, "short-lived," or "for a day," apparently in allusion to Lindley's opinion of the flowers, which has not been our experience.

TYPE: BRAZIL: *Descourtilz s.n.* (HOLOTYPE: K).

DISTRIBUTION: Surinam, Brazil, and Bolivia.

BOLIVIA: SANTA CRUZ: 5 km north of Zamapata, *Fred Fuchs, Jr. s.n.* (SEL), greenhouse acc. no. 23-74-77, flowered in cult. 5 Nov. 1974 and May 1975; Without specific location, *Fred Fuchs, Jr. s.n.* (SEL), greenhouse acc. no. 23-74-131, flowered in cult. June 1975.

*Pleurothallis ephemera* is apparently variable in its wide distribution from Surinam to southern Brazil and Bolivia. It may be identified by its slender stem, as long as or shorter than the narrowly elliptical leaf, and a few slender flowering stems, shorter than to about as long as the leaf. One, or occasionally two, yellow flowers are produced successively over a long period, and they persist in a fresh condition for several days. The long and narrow, but thick and keeled, dorsal sepal and synsepal recurve opposite each other, and between them the minute ligulate lip is visible.

The shape of the petals varies from short- to long-acuminate (*P. longirostris* and *P. rostriflora*), and the size of the flowers also varies (small in *P. ochracea*). The apex of the obtuse lip is not mentioned in some descriptions, but it is described as papillose in others. This condition is most remarkable in the specimens from Bolivia. This is the first report of the species from that country.