

Figure 279. PLEUROTHALLIS PALLIDA Luer

Pleurothallis pan Luer, sp. nov.

Planta mediocris epiphytica breviter repens, caulibus secundariis brevibus vaginis tomentosissimis unifoliatis, foliis erectis anguste ovatis acuminatis, flore solitarii rictu laterali e caule secundario, sepalis carnosissimis crassis extus echinatis intus scabris guttatis late ellipticis obtusis, sepalis lateralibus semiconnatis, petalis subrhomboidibus carnosissimis obtusis verrucosis lobis lateralibus tenuibus, labello maronino crasso geniculato supra medium ovato rotundato, lobis basalibus uncinatis, disco supra basin in callum hippocrepiformem incrassato.

Plant medium in size, epiphytic, shortly repent to caespitose; roots coarse, fibrous, flexuous. Secondary stems terete, lightly channeled, 4-8 cm long, unifoliate, enclosed by 3-4 imbricating, tubular, tomentose sheaths which are shed or fragmented with age; leaf erect, coriaceous, narrowly ovate, acuminate, acute, apiculate, the base cuneate, sessile, 13-20 cm long, 2-2.8 cm wide. Inflorescence a solitary, short-pedicellate, bilabiate flower produced laterally from one of the lower nodes of the secondary stem; floral bracts thick, infundibular, hirsute, 5-7 mm long; peduncle pubescent stout, 6-7 mm long; pedicle pubescent, 2 mm long; ovary thick, villous, 4-5 mm long; sepals thick, fleshy, dull-green, spotted with purple, densely echinate externally, scabrous within, the dorsal sepal broadly elliptical, obtuse, 15-20 mm long, 10-13 mm wide, the lateral sepals connate to above the middle into a broadly elliptical, obtuse, bifid lamina, 13-17 mm long, 11-14 mm wide; petals subrhomboid, thick, with thin lateral lobes, the apex rounded, verrucose, dotted with purple, 5-6 mm long, 4 mm wide; lip maroon, thick, geniculate, broadly ovate and convex above the middle, the sides minutely denticulate, with a pair of uncinuate lobes above the base, curved up and forward, the base broadly attached to the column-foot, the disc with a horseshoe-shaped callus at the base, continuing forward in a shallow loop around the apex, filled with a droplet of clear fluid, also with a pair of pyramidal calli above the bases of the basal lobes, 6 mm long, 4 mm wide; column stout, obtusely winged, white, dotted with pink, the anther cap ciliated along the upper margin, with a thick foot 3 mm long.

ETYMOLOGY: Named for Pan, the short-horned, bristly-haired, Greek god of the forest and leader of the satyrs.

TYPE: PANAMA: VERAGUAS: epiphytic in cloud forest NW of Santa Fe, alt. ca. 750 m, *R. L. Dressler s.n.* (HOLOTYPE: SEL); greenhouse acc. no. 43-76-3, flowered in cult. 25 Jan. 1977.

ADDITIONAL MATERIAL EXAMINED: PANAMA: PANAMA: epiphytic along the Altos de Pacora Road, alt. ca. 750 m, 4 March 1976, *C. Luer, J. Luer, P. Taylor & R. L. Dressler*, plant sterile, greenhouse acc. no. 43-76-45; VERAGUAS: epiphytic NW of Santa Fe, alt. ca. 750 m, 5 Sept. 1976, *C. Luer & R. L. Dressler 1588* (SEL), greenhouse acc. no. 123-76-1, flowered in cult. 20 March 1977.

This plant may be recognized by the short secondary stem clothed by pubescent, tubular sheaths. The pubescence of the lower sheaths is particularly dense and dark purple. The narrow, acuminate leaf is longer than the stem. The single, short-pedicellate, gaping flower is borne low on the secondary stem from the second or third node below the apex. The fleshy sepals, covered by a dense mat of short, coarse hairs, are studded with short prickles within. The petals are also thick and warty, but each has a pair of thin, trian-

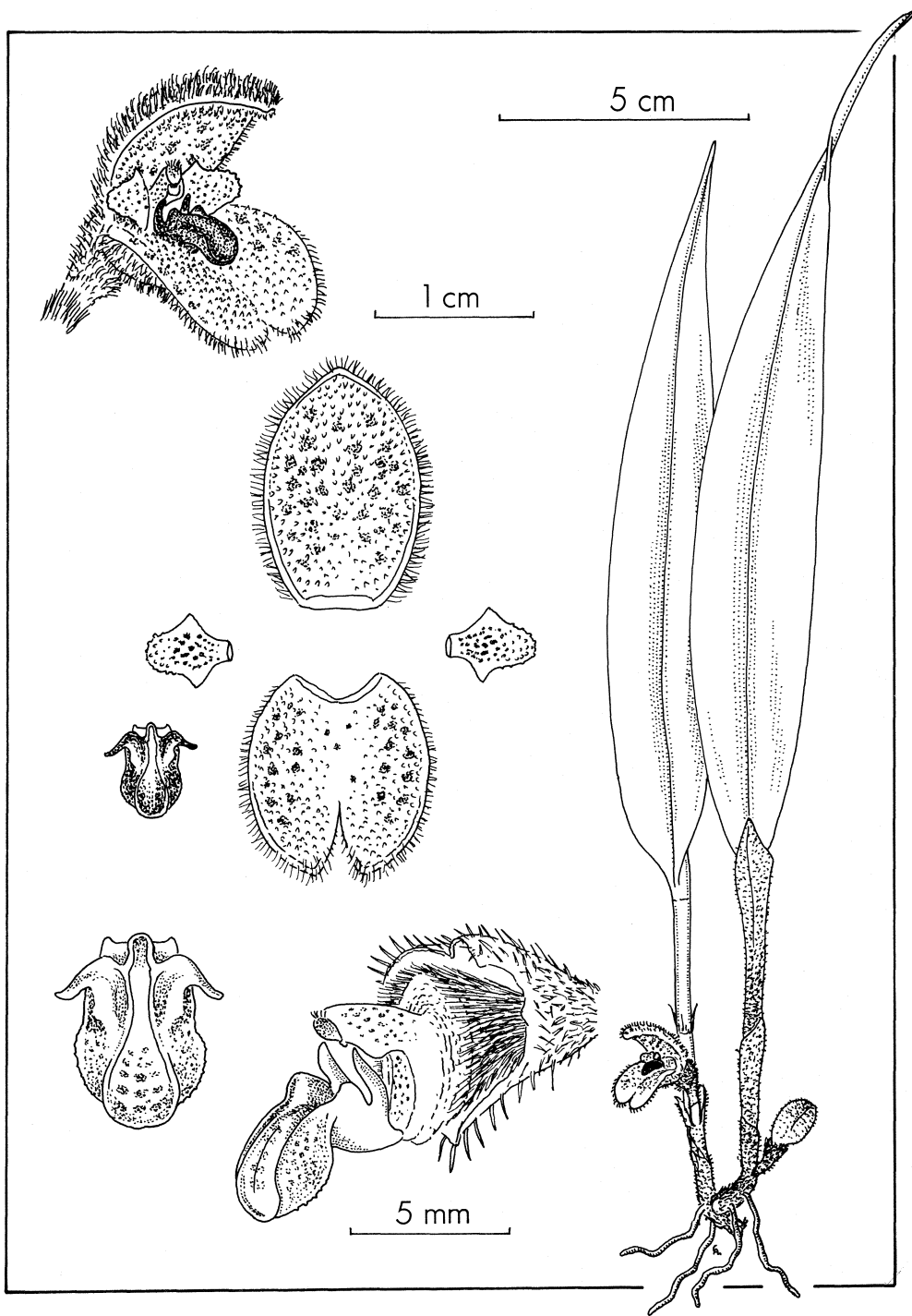


Figure 280. PLEUROTHALLIS PAN Luer.

gular lateral lobes. The small, maroon, nectar-laden lip betrays a relationship with *Pleurothallis alexandrae* Schltr. A "U"-shaped callus extends its rami forward between an erect pair of uncinat lobes.

Although unusual, the lateral emergence of the inflorescence is not unique in the genus *Pleurothallis*. The raceme of *P. johnsonii* Ames may be borne either from the apex of the secondary stem or from the primary stem. The solitary flower of *P. lappiformis* Heller & L. O. Wms. is produced low on the secondary stem as well as from the rhizome. The hairy flower with warty petals and a lip with curved lateral lobes possibly indicates a distant affinity with *P. pan*. *Pleurothallis pan* seems to link *P. lappiformis* with *P. alexandrae* and its relatives. The anther caps of all these species are ciliate along the upper margin.

Pleurothallis pansamalae Schltr., Repert. Spec. Nov. Regni Veg. 10:354. 1912.

Plant small, epiphytic, caespitose; roots capillary, flexuous. Secondary stems slender, terete, 5-17 cm long, with a tight-fitting tubular sheath below the middle and 1-2 others at the base, unifoliate. Leaf spreading, narrowly ovate, acuminate to acute, tridenticulate, shallowly cordate at the base, sessile, 5-8.5 cm long, 1.5-2.4 cm wide. Inflorescence fasciculate, the flowers produced singly (sometimes 2-3) and successively from a 1 cm spathe at the base of the leaf; flowers light greenish brown to yellow-brown; floral bract tubular, 3-4 mm long; pedicel 5 mm long; ovary 3 mm long; dorsal sepal elliptical, subacute, 3.5 mm long, 2 mm wide, 3-veined, the veins brown on yellowish green; lateral sepals united into a broadly ovate synsepal, subacute to obtuse, 3.5 mm long, 3 mm wide, 4-veined; petals linear acute, 2.5 mm long, 0.6 mm wide, 1-veined, the margins microscopically irregular; lip yellow with brown suffusion, fleshy, broadly ovate to cordate, subacute, apiculate, the basal angles rounded, the base shallowly concave to accommodate the column-foot, 1.75 mm long, 1.75 mm wide, thickened centrally, the margins finely crenulate; column stout, about 1 mm long, 1 mm wide, with a thick foot.

ETYMOLOGY: Named for Pansamala where the species was first collected.

TYPE: GUATEMALA: ALTA VERAPAZ: epiphytic in Pansamala, alt. 1270 m, Feb. 1886, *H. von Tuerckheim* 797.

DISTRIBUTION: Mexico, Guatemala, Belize, Honduras, and Nicaragua.

GUATEMALA: BAJA VERAPAZ: epiphytic near Purulha, alt. 1500 m, 5 March 1976, *H. Wiehler* 7594 (SEL), greenhouse acc. no. 14-75-35, flowered in cult. 24 May 1975; epiphytic near km 60 toward Coban, alt. 1800 m, Nov. 1972, *R. McCullough* 1878 (SEL), flowered in cult. 20 July 1976.

NICARAGUA: MATAGALPA: Bavaria Finca, alt. 1300 m, *A. H. Heller* 4183 (SEL).

This species may be recognized by its narrow, heart-shaped leaves, supported by very fine, slender, secondary stems, and very small, yellowish green flowers tinged with pink or brown. The three veins of the dorsal sepal are often marked a darker brown and the petals are often suffused with pink as well. The fleshy, ovate-cordate lip, held snugly under the column, is about as broad as it is long, the apex is minutely apiculate, and the margins are minutely irregular.

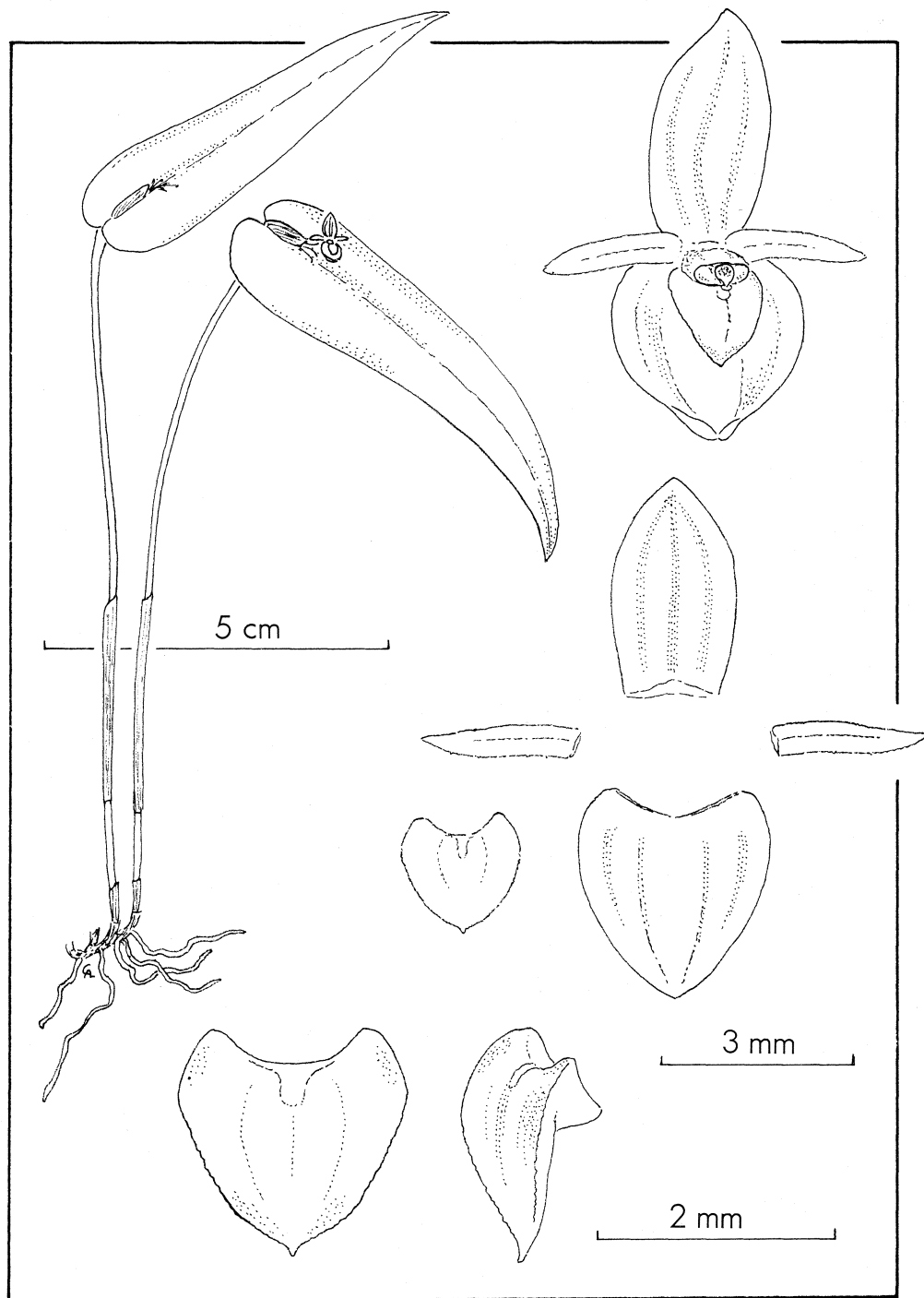


Figure 281. *PLEUROTHALLIS PANSAMALAE* Schltr.

Pleurothallis pichincae Rchb. f., *Linnaea* 41:47. 1877; not Schltr.

Plant epiphytic, medium to large in size, caespitose; roots coarse, flexuous. Secondary stems slender, terete, fasciculate, 10-23 cm long, with a closely fitting tubular sheath near the middle and 1-2 others at the base, some including more than one secondary stem, unifoliate. Leaf coriaceous, erect, narrowly elliptical, obtuse, tridenticulate, the base cuneate into a petiole 1.5-2.5 cm long, the blade 8-16 cm long, 1-2.5 cm wide. Inflorescence a solitary (occasionally 2), slender, densely many-flowered raceme, 5-18 cm long, the peduncle slender, from a spathe about 1.5 cm long at the apex of the stem; flowers small, pale yellow-green; floral bract oblique, acute, 2 mm long; pedicel and ovary each about 1.5 mm long; sepals ovate, acute, the margins ciliate above the middle, the dorsal sepal 4-5 mm long, 2-3 mm wide, 3-veined, the lateral sepals connate to near the middle, forming a shallow mentum below the column-foot, 3.5-5.5 mm long, 2.75-3.25 mm wide together; petals translucent yellow-green, marked with purple, obovate, obtuse, oblique, 2.5-3 mm long, 1-1.5 mm wide; lip subrhomboid, 3-lobed, the mid-lobe triangular, obtuse to rounded, the lateral lobes broadly triangular, rounded, with a flat, rounded callus along or overhanging the anterior margins, the base shortly unguiculate and concave behind a short, transverse elevation, yellow-green, marked with purple, 1.5-2 mm long 1.5 mm wide; column stout, 1.5 mm long, with a short, bulbous foot.

ETYMOLOGY: Named for the Province of Pichincha where the species was first collected.

TYPE: *ECUADOR*: PICHINCHA: *Jameson, s.n.* (HOLOTYPE: W).

DISTRIBUTION: Western Ecuador.

ECUADOR: PICHINCHA: terrestrial on the road bank of the new road between Quito and Santo Domingo, alt. ca. 2000 m, 13 March 1976, *C. Luer, J. Luer & P. Taylor 1077* (SEL); same area, Nov. 1974, *G. Kennedy s.n.* (SEL), greenhouse acc. no. 30-74-259 and 30-74-262.

This species, apparently endemic in western Ecuador, is closely allied to *Pleurothallis pluriracemosa* Garay, and *P. velaticaulis* Rchb. f. and their relatives. All these species have fasciculated secondary stems, more than one commonly enclosed in a single, large, papery, basal sheath. *Pleurothallis pichincae*, however, produces but one or two slender racemes that equal or exceed the leaf in length. The flowers are very similar. The lateral lobes of the tiny, rhomboid, three-lobed lips are thickened with a smooth, flattened callus which often overhangs the margins.

Pleurothallis pluriracemosa Garay, *Arch. Jard. Bot. Rio de Janeiro* 12:174. 1952.

Plant large, epiphytic to terrestrial, densely caespitose; roots numerous, coarse, flexuous. Secondary stems stout, terete, fasciculate, 15-40 cm tall, mostly enclosed by a large, loose, tubular sheath, often fragmented or shed, and 2-3 other imbricating sheaths at the base, often including 2 or more stems, unifoliate. Leaf erect, coriaceous, ovate-elliptic, subacute to obtuse, tridenticulate, the base cuneate into a channeled petiole 2-4 cm long, the blade 10-28 cm long, 4-9 cm wide. Inflorescence a fascicle of 5-20 densely many-flowered racemes, 5-15 cm long, shorter than the leaf, from a foliaceous spathe about 2 cm long at the apex of the stem; flowers small, yellow-

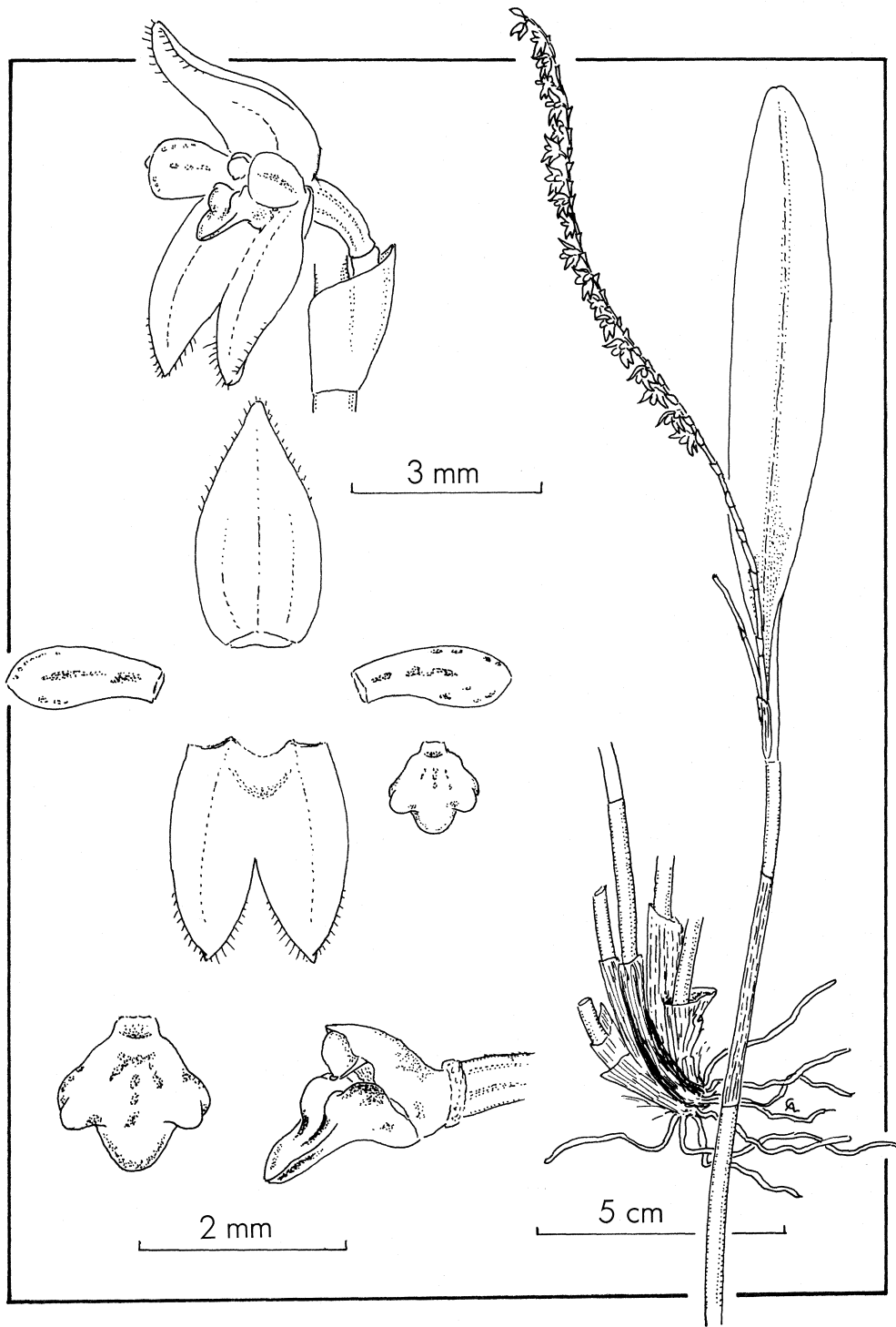


Figure 282. PLEUROTHALLIS PICHINCHAE Rchb. f.

green, commonly veined with purple, fragrant; floral bract oblique, 2 mm long; pedicel and ovary each about 1.5 mm long; sepals ovate, subacute to acute, lightly carinate externally, lightly pubescent within, 4-5 mm long, 2.5-3 mm wide, 3-veined, the lateral sepals connate below the middle; petals obovate, acute to obtuse, 2.5 mm long, 1 mm wide, 1-veined, translucent yellow, marked with purple; lip rhomboid-ovate, 3-lobed, the mid-lobe subacute to obtuse, the lateral lobes broadly triangular, obtuse, thickened along the anterior margins, the base broadly unguiculate and concave behind a short, transverse elevation, yellow, marked with purple, 2 mm long, 1.5 mm wide; column stout, terete, 1.5 mm long, with a short, bulbous foot.

ETYMOLOGY: From the Latin *plures*, "many" (comp. of *multi*), and *racemosus*, "with racemes," referring to the numerous racemes produced by the species.

TYPE: *ECUADOR*: TUNGURAHUA: Baños, on steep slopes of Rio Pastaza, alt. ca. 1800 m, *I. Holmgren 340* (HOLOTYPE: S).

DISTRIBUTION: Ecuador, Colombia, and Venezuela.

ECUADOR: NAPO: epiphytic 14 km N of Archidona, alt. 600 m, 27 July 1975, *C. Luer, G. Luer & S. Wilhelm 521, 522* (SEL); TUNGURAHUA: terrestrial in old lava fields above Baños, alt. 2000 m, 10 March 1975, *C. Luer & R. Kent 336* (SEL); same area 23 July 1975, *C. Luer, G. Luer & S. Wilhelm 489* (SEL); same area 29 July 1971, *H. Wiehler 7143b* (SEL).

In certain areas of the ancient, sun-bathed lava flows on the slopes of Volcán Tunguragua, *Pleurothallis pluriracemosa* constitutes the dominant species of vegetation. Huge clumps that crowd each other make walking on the rough terrain even more difficult. The erect, leathery leaves, yellowed from exposure to the tropical sun, are borne by stout stems clothed by long, thin, papery sheaths. Numerous, short racemes of little yellowish flowers are borne from a thick spathe at the base of the petiolate leaf. Some plants can be found in flower at all times.

Pleurothallis polygonoides Griseb., *Flora Brit. West Ind. Isl.* 609. 1864.

Humboldtia polygonodes (Griseb.) Kuntze, *Rev. Gen. Pl.* 2:667. 1891.

Plant small, epiphytic, repent, the primary stem slender, branching, producing a secondary stem every 2-8 mm; roots slender, flexuous. Secondary stems abbreviated, terete, 3-10 mm long, enclosed by a few tubular sheaths, unifoliate. Leaf elliptical, the apex obtuse to acute, tridenticulate, the base cuneate to narrowly cuneate, 1-4 cm long, 4-5 mm wide. Inflorescence subracemose, a single flower, occasionally followed by a second, borne on a peduncle 2-10 mm long, from a node on the secondary stem; floral bract with or without a few hairs, 1 mm long; pedicel 1.5-2.5 mm long; ovary 1 mm long; sepals free, glabrous, translucent yellow-orange, elliptical, acuminate, acute, the lateral sepals oblique, 4 mm long, 1.25-1.5 mm wide; petals red, elliptical, acuminate, acute, 3 mm long, 1 mm wide; lip oblong-ovate, purple except for the yellow apex, the apex shortly obtuse, convex, with a pair of small, rounded, oblique, erect lateral lobes just below the middle, the base shortly hinged to the column-foot, with a pair of membranous, peduncled appendages, the disc with a low, parallel pair of glandular pubescent calli below the middle, 2.5-3 mm long, 0.8 mm wide; column 2 mm long, the clinandrium denticulate.

ETYMOLOGY: Named for a similarity of the plant to the genus *Polygonum* in the buckwheat family. (From the Greek *poly*, "many," and *gonia*, "angle.")

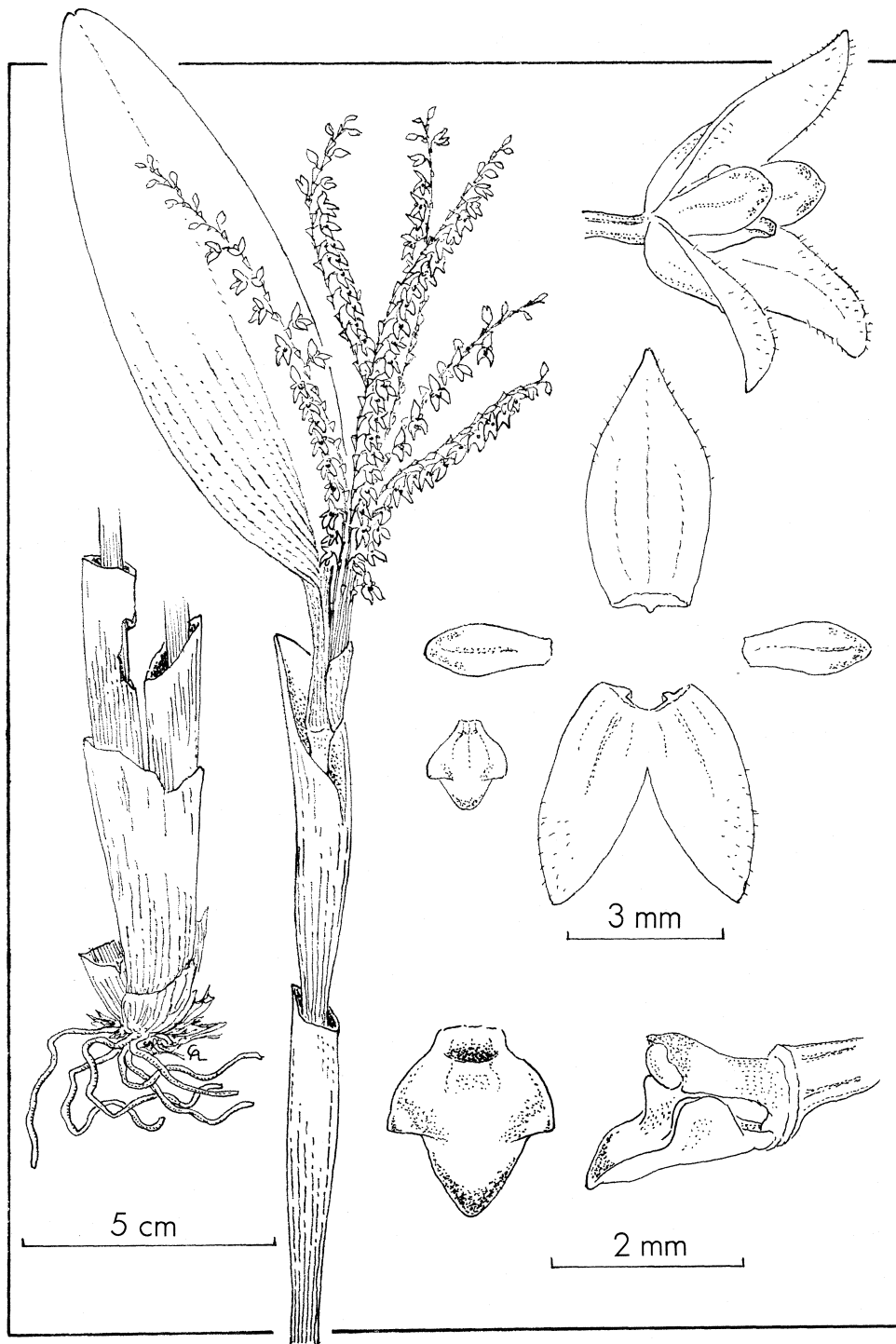


Figure 283. *PLEUROTHALLIS PLURIRACEMOSA* Garay

TYPE: *TRINIDAD*: on trees near Arima, *Crueger & Bradford s.n.*

DISTRIBUTION: Trinidad, Venezuela, Panama, and Peru.

PANAMA: *CHIRIQUI*: epiphytic along a stream near San Vicente between Concepción and Volcán, alt. 500 m, 12 Sept. 1976, *C. Luer & H. Butcher 1253* (SEL); *PANAMA*: in coffee plantation on Cerro Jefe, alt. ca. 700 m, 17 July 1969, *R. L. Dressler 3673* (SEL).

PERU: *LORETO*: epiphytic near Iquitos, *F. Fuchs, Jr. s.n.* (SEL), greenhouse acc. no. 26-74-110, flowered in cult. 1 Dec. 1975.

Reported here for the first time from Central America, this little species grows abundantly along a rocky stream in western Panama where thousands of the creeping, branching plants commonly engulf the trunks of trees. Apparently many of the leaves of these plants are longer (up to 4 cm), but no wider, than those encountered in Venezuela and Peru, but the flowers are identical. The floral bracts are glabrous as they are in Venezuela, but they are sparsely pubescent in the plants from Peru, whence this species is also reported for the first time. The semi-transparent orangish sepals are pointed and widely spread. The similarly pointed petals and the ligulate lip, furnished with two little lateral lobes and a pair of basal lobules, are dark red.

***Pleurothallis prolaticollaris* Luer, sp. nov.**

Planta parva epiphytica caespitosa, caulibus secundariis teretibus gracilimimis, unifoliatis, foliis patentibus ovatis acuminatis acutis base profunde cordatis, spatha erecta, floribus solitariis successivis longipedicellatis parvis flavis, sepalo dorsali synsepaloque ovatis acutis, petalis proportione grandibus oblongis acutis minute erosis, labello oblongo-cordato obtuso minutissime ciliolato.

Plant small to medium in size, epiphytic to terrestrial, caespitose; roots slender, flexuous. Secondary stems slender, terete, 8-20 cm long, with a tubular sheath below the middle and 1-2 at the base, unifoliate. Leaf spreading, convex, coriaceous, ovate, acuminate, acute, tridenticulate, the base deeply cordate, sessile, 3-8 cm long, 2-4.5 cm broad. Inflorescence a fascicle of small, yellow, bilabiate, long-pedicellate flowers produced singly, successively, continuously, from an erect spathe 13-15 mm long from the base of the leaf; floral bract 2-3 mm long; pedicel 10-20 mm long; ovary 3 mm long; dorsal sepal ovate, acute 5-7 mm long, 3-5 mm wide, 3-veined, the veins prominent externally; lateral sepals united into an ovate, acute synsepal, 5-7 mm long, 4-5 mm wide, 4-veined; petals elliptical, acute, 4-5 mm long, 1.3-2 mm wide, 1-veined, the margins entire to microscopically erose; lip oblong to very broadly and bluntly triangular, the apex obtuse to rounded, the base shallowly cordate, the margins microscopically ciliate, the disc featureless, 2.25-2.5 mm long, 1.6-2 mm wide; column stout, about 1 mm long.

ETYMOLOGY: From the Latin *prolatus*, "elongated," and *collaris* (*collum*, "neck"), hence "with a long neck," in allusion to the long-pedicellate flowers.

TYPE: *ECUADOR*: *PICHINCHA*: terrestrial on the road cut near km 85 between Quito and Santo Domingo, alt. ca. 1500 m, 28 Feb. 1975, *C. Luer & R. Kent 334* (HOLOTYPE: SEL), greenhouse acc. no. 15-75-213, flowering continuously in cult.

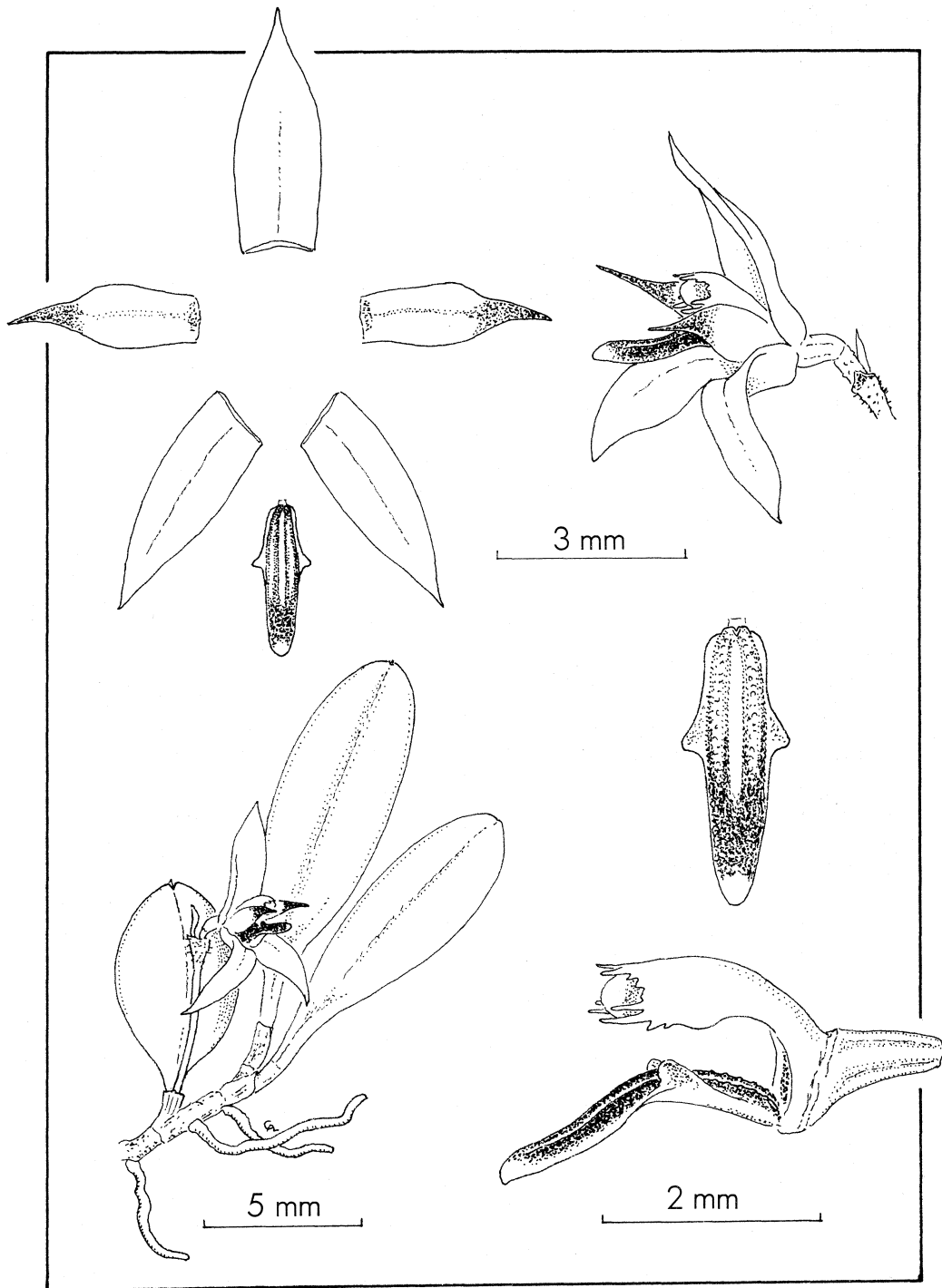


Figure 284. PLEUROTHALLIS POLYGONOIDES Griseb.

ADDITIONAL MATERIAL EXAMINED: *ECUADOR*: COTOPAXI: epiphytic in old guava grove between Quevedo and Latacunga, alt. 600 m, 5 March 1975, C. Luer & R. Kent 308 (SEL), greenhouse acc. no. 15-75-278, flowering continuously in cult.

DISTRIBUTION: Western Ecuador.

This species was attributed to *Pleurothallis magnipetala* C. Schweinf. in SELBYANA 1:254, 1975. After reconsideration, I am convinced that this attribution was erroneous, and that the species illustrated in Figure 62 was undescribed. Although closely allied, *P. prolaticollaris* may be distinguished by the broader leaves, the rather conspicuous, erect spathe, the long, erect pedicels, larger flowers, and the broad, obtuse lip. The flowers of the two species are similar in possessing proportionately large petals. The caption on page 255 should read: Figure 62. PLEUROTHALLIS PROLATICOLLARIS Luer.

Pleurothallis quadrata C. Schweinf., Bot. Mus. Leafl. 10:184, t. 19. 1942.

Plant epiphytic, small, caespitose; roots slender, flexuous. Secondary stems fasciculate, slender, terete, 4-8 cm long, largely concealed by a tubular sheath from near the middle, and another 1-2 near the base, unifoliate. Leaf coriaceous, erect, elliptical, subacute to obtuse, retuse, the base broadly cuneate, petiolate, the petiole 1-1.5 cm long, the leaf 4-6 cm long, 1.5-2 cm wide. Inflorescence a slender, erect, densely many-flowered, distichous raceme, to 12 cm long, from a spathe 12-15 mm long at the base of the leaf-petiole; floral bract oblique, acute, 2.5 mm long; pedicel 1 mm long; ovary curved, 1.5 mm long; flowers very small, subglobose, translucent yellow-green, speckled with brown; dorsal sepal suborbicular, rounded, concave, 2 mm long, 2 mm wide, 3-veined; lateral sepals ovate obtuse, connate below the middle, each 2 mm long, 1.5 mm wide, 3-veined; petals subquadrate, the apex broadly rounded, retuse, 1.5 mm long, 1.5 mm wide, 1-veined; lip green, orbicular-subquadrate, concave, 3-lobed, 1.5 mm long, 1.5 mm wide, the anterior lobe broadly rounded-truncate, the lateral lobes broadly rounded, each with a smooth, rounded, marginal callus, the base broadly adherent to the column-foot; column clavicate, 1 mm long, with a short foot.

ETYMOLOGY: From the Latin *quadratus*, "quadrate," in reference to the shape of the lip.

TYPE: *PERU*: JUNIN: epiphytic above San Ramón, alt. 1400-1700 m, 8-12 June 1929, E. P. Killip & A. C. Smith 24856 (HOLOTYPE: US).

DISTRIBUTION: Peru and Ecuador.

ECUADOR: PASTAZA: epiphytic in felled trees about 20 km east of Puyo, alt. ca. 600 m, 19 March 1976, C. Luer, J. Luer & P. Taylor 1292 (SEL), greenhouse acc. no. 43-76-226, flowered in cult. 31 Dec. 1976.

This little species closely resembles a *Stelis*. The elliptical leaves are distinctly petiolate and obtuse; the minute, globose, short-pedicellate flowers are borne in a slender, two-ranked raceme. *Pleurothallis quadrata* is apparently allied to *P. divaricans* Schltr., and without the aid of a strong lens, the flowers are indistinguishable. The identical dorsal sepal is orbicular and deeply concave, but the lateral sepals are free to below the middle. The petals are retuse instead of merely obtuse. The lip is the same minuscule size, but apically it is terminated by a broadly rounded middle lobe with a pair of minute rounded swellings at the junctions with the broad side lobes.

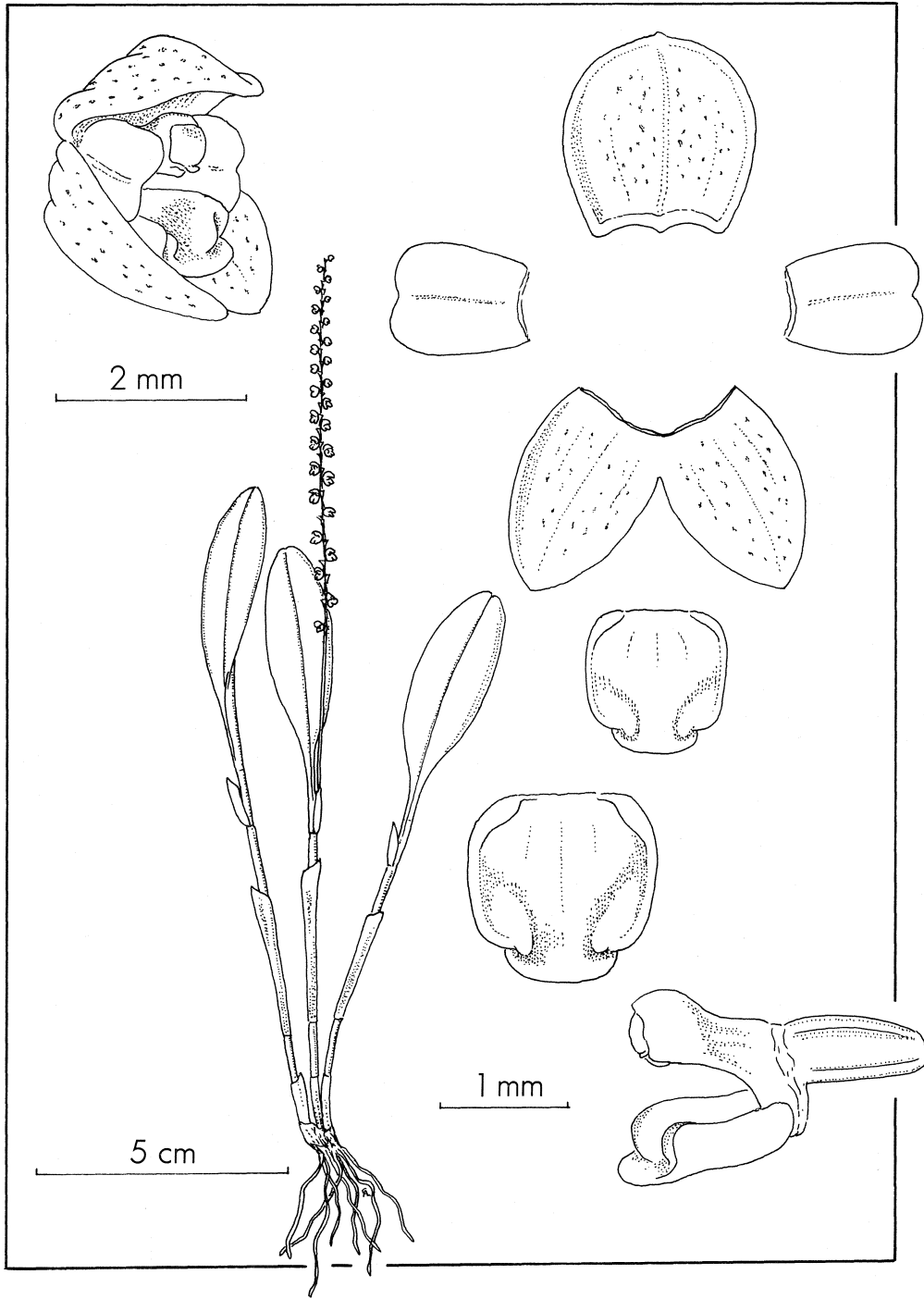


Figure 285. PLEUROTHALLIS QUADRATA C. Schweinf.

Pleurothallis ramonensis Schltr., Repert. Spec. Nov. Regni Veg. Beih. 19: 193. 1923.

Plant small to medium in size, epiphytic, caespitose; roots slender, flexuous. Secondary stems slender, terete, blackish purple, 4-13 cm long, with a tubular sheath below the middle and another at the base, unifoliate. Leaf erect, coriaceous, rigid, elliptical, subacute to obtuse, tridenticulate, the base cuneate, sessile, 3.5-8.5 cm long, 1.5-2 cm wide. Inflorescence a loosely few-flowered (5-12), fractiflex raceme, to 20 cm long, the flowers large, narrow, maroon, bilabiate; peduncle slender, from a narrow spathe about 1 cm long, at the base of the leaf; floral bracts infundibular, oblique, acute, 3-5 mm long; pedicel 5-7 mm long; ovary 3-4 mm long; sepals linear, subacute, tubular, the sides involute, ciliate within above the middle; dorsal sepal 19-24 mm long, 3.5 mm wide, minutely denticulate along the mid-vein externally; lateral sepals connate to near the apex, 19-24 mm long, 5 mm wide spread; petals obovate, the apex rounded to obtuse, tuberculose externally, tricarinate along the 3 veins within, purple on yellow, 4-8 mm long, 2.5-4 mm wide; lip thick, subcylindrical, slightly flattened, the apex acute, the apical half hidden within the tubular synsepal, the base with a pair of erect, rounded lobes, the disc bicarinate below the middle between the lobes, yellow marked with purple, 5-8 mm long, 1.5-2.5 mm wide; column stout, red, 2 mm long, the foot concave.

ETYMOLOGY: Named for San Ramón, Costa Rica, where the species was first discovered.

TYPE: *COSTA RICA*: ALAJUELA: humid forest, San Pedro de San Ramón, alt. 1150 m, July 1921, *A. M. Brenes 88*.

DISTRIBUTION: Costa Rica and Panama.

COSTA RICA: CARTAGO: epiphytic in cloud forest near "El Jardín," Cerro de la Muerte, Cordillera de Tolamanca, alt. 2800 m, 20 May 1956, *L. O. Williams 20203* (SEL).

PANAMA: CHIRIQUI: epiphytic above the Fortuna dam camp site, alt. ca. 1000 m, Aug. 1976, *R. L. Dressler s.n.* (SEL), greenhouse acc. no. 114-76-4, flowered in cult. 13 Nov. 1976; epiphytic in the cloud forest along the continental divide above Camp Escopeta, Cerro Colorado, alt. 1700 m, 17 Aug. 1975, *R. L. Dressler 5089* (SEL); same area, 16 Feb. 1977, *C. Luer, J. Luer & R. L. Dressler 1610* (SEL), greenhouse acc. no. 77-1747, flowered in cult. 30 April 1977.

Previously identified only from Costa Rica, *Pleurothallis ramonensis* recently has been found to be locally abundant in two areas in western Panama.

Vegetatively the plant is similar to *P. pachyglossa* Lindl., but the slender, deep purple flowers are similar to those of *P. tuerckheimii* Schltr. A flowering plant looks like a small, spatheless specimen of the latter. The narrow tubes formed by the rolled-in sides of the dorsal sepal and the synsepal are lined with long hairs. Like a cork in a bottle, the lip is tucked snugly into the tube formed by the synsepal so that the featureless apical half is hidden from view, isolated, at least in fresh flowers, from the bilobed basal half and the column.

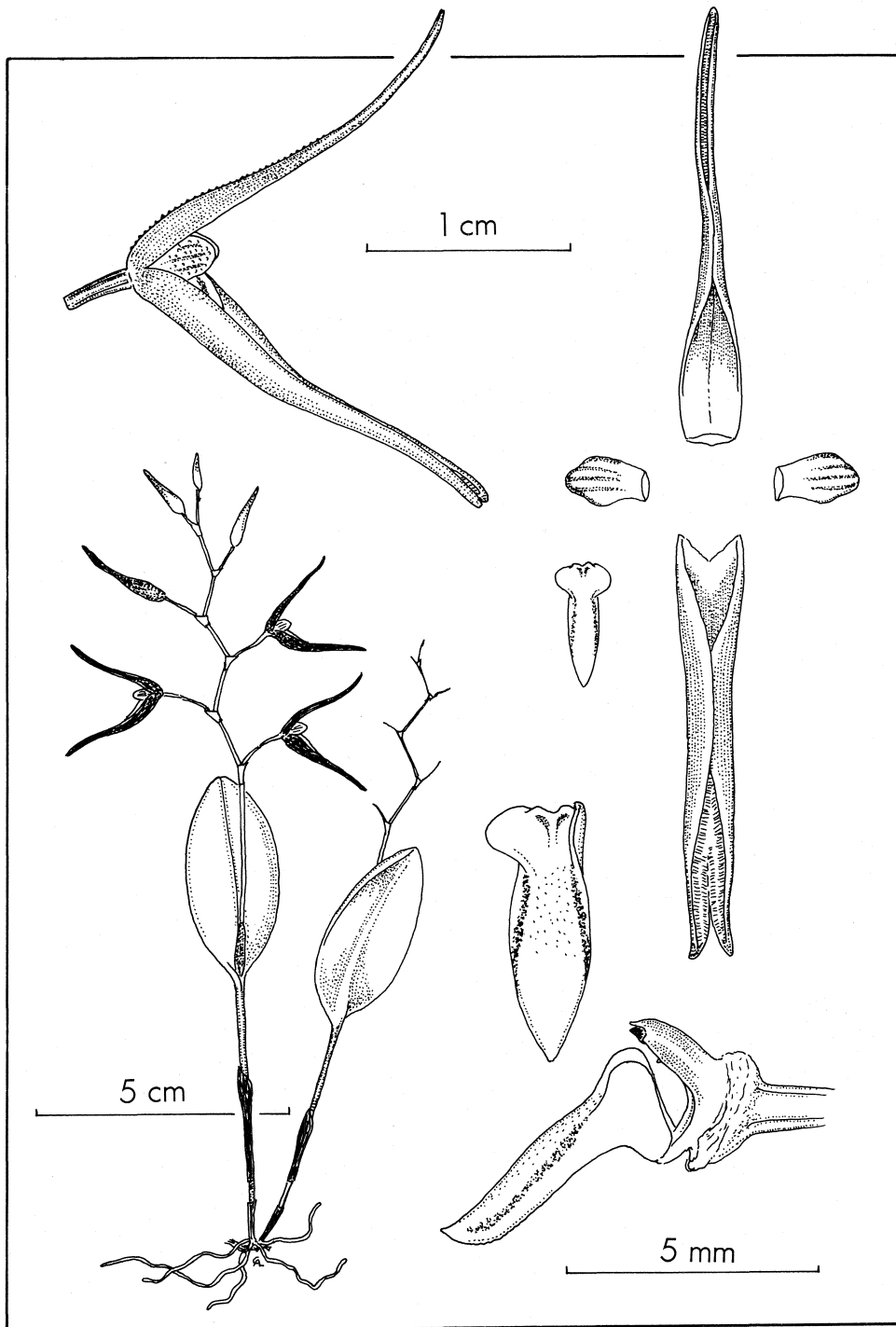


Figure 286. PLEUROTHALLIS RAMONENSIS Schltr.

- Pleurothallis recurva* Lindl., Edward's Bot. Reg. 27:misc. 1. 1841.
Pleurothallis lilacina Barb. Rodr., Gen. Sp. Orchid. Nov. 1:18. 1877.
Pleurothallis lilacina var. *albipetala* Barb. Rodr., Rev. de. Engenh. 3:109. 1881 ex Barb. Rodr., Gen. Sp. Orchid. Nov. 2:34. 1882.
Pleurothallis lilacina var. *microphylla* Barb. Rodr., Gen. Sp. Orchid. Nov. 2:35. 1882.
Pleurothallis bistuberculata Barb. Rodr., Rev. dr. Engenh. 3:109. 1881 ex Barb. Rodr., l. c. 2:35. 1882.
Pleurothallis regeliana Rchb. F., Gartenflora 35:51. 1886.
Humboldtia recurva (Lindl.) Kuntze, Rev. Gen. Pl. 2:668. 1891.
Pleurothallis maculata Rolfe, Kew Bull. 334. 1892; not N. E. Brown.
Pleurothallis albipetala (Barb. Rodr.) Hoehne & Schltr., Anexos Mem. Inst. Butantan, Secc. Bot. 1(2):32. 1921.
Pleurothallis curitybensis Krzl., Ark. Bot. 16(8):8. 1921; not Schltr.

Plant small, epiphytic, repent; primary stem stout, creeping, branching, with short sheaths, producing a secondary stem every 5-6 mm; roots fibrous, flexuous. Secondary stem stout, terete, 3-6 mm long, with a fugacious sheath, unifoliate. Leaf thick, coriaceous, broadly elliptical, obtuse, base broadly rounded, sessile, 15-25 mm long, 9-15 mm wide. Inflorescence a short, few-flowered (2-5) raceme, about as long as the leaf; peduncle from a papery spathe at the base of the leaf; floral bract infundibular, 2 mm long; pedicel thick, 1 mm long; ovary pubescent, 1 mm long; sepals yellow-green marked with purple, pubescent externally, dorsal sepal fleshy, obovate, subacute, 8 mm long, 3 mm wide; lateral sepals united into a fleshy, broadly elliptical, concave lamina, obtuse to rounded, 7 mm long, 5 mm wide, bicarinate; petals translucent white, rhombic to cuneate, subacute to obtuse, margins erose above the middle, 2.5 mm long, 1.75 mm wide; lip white marked with purple, fleshy, surface slightly granular, ovate, apex obtuse, with indistinct lateral lobes, thickened and elevated, base shortly unguiculate, 3.5 mm long, 2 mm wide; column winged, terete, 2.5 mm long, with a 1 mm foot.

ETYMOLOGY: From the Latin *recurvus*, "curved back," in reference to the short, curved inflorescences.

TYPE: BRAZIL: hort., communicated by Mr. Geo. Graves from the garden of Mrs. Cannon of Stratford (HOLOTYPE: K).

DISTRIBUTION: Southern Brazil and Bolivia.

BOLIVIA: SANTA CRUZ: epiphytic near Buena Vista, *Fred Fuchs, Jr. s.n.* (SEL), greenhouse acc. no. 26-74-100, flowered in cult. Dec. 1974; Quebrada Espero, *Fred Fuchs, Jr. s.n.* (SEL), flowered in cult. 18 Aug 1976.

Although widely distributed in southern Brazil, this is the first report of *Pleurothallis recurva* from neighboring Bolivia. The leaves are commonly spotted in Brazil, but those examined from plants from Bolivia are dark green and unspotted.

The plant consists of a stout, woody-like, rambling rhizome which alternately produces thick oval leaves, and these recline or are held against the substratum. Vegetatively the plant resembles somewhat the Caribbean *Pleurothallis testaeifolia* (Sw.) Lindl. The flowers are produced on a short distichous raceme which lies upon the center of the leaf. The bilabiate flowers are shortly pubescent and yellow-green, conspicuously marked with purple. The petals within are semi-transparent; the lip is colorfully marked with purple. Near the base of the lip the sulcus between the thickened, ill-defined lateral lobes contains a shiny sticky substance.

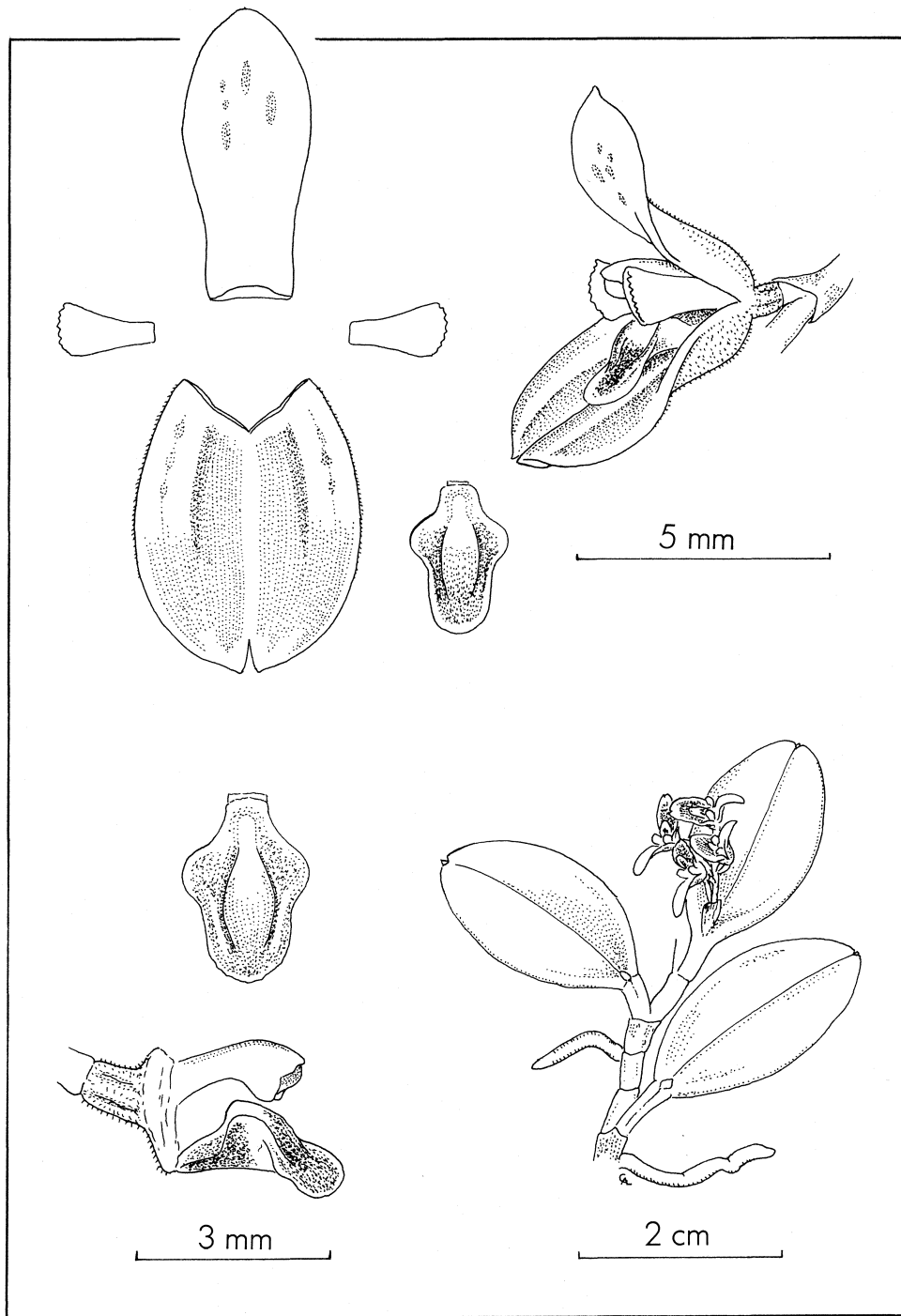


Figure 287. PLEUROTHALLIS RECURVA Lindl.

Pleurothallis rowleei Ames, Sched. Orchid. 1:11. 1922.

Pleurothallis cucullata Ames, Sched. Orchid. 3:5. 1923.

Plant medium in size, epiphytic, caespitose; roots slender, flexuous. Secondary stems slender, terete, 5-25 cm long, with a closely fitting tubular sheath below the middle and 1-2 others at the base, unifoliate. Leaf thin, coriaceous, ovate, acuminate, acute, tridenticulate, the base rounded, sessile, 6-13 cm long, 2-3.5 cm wide. Inflorescences racemose, 1-2 laxly several-flowered (5-10) racemes to 10 cm long; peduncle slender, from a slender spathe, 1-1.5 cm long, at the base of the leaf; flowers bilabiate, deep red-purple to pale green; floral bract infundibular, 3 mm long; pedicel 3-6 mm long; ovary about 2 mm long; dorsal sepal ovate, acuminate, acute, concave, 8-13 mm long, 4-5 mm wide, 3-veined, the mid-vein subcarinate; lateral sepals connate into an ovate synsepal, subacute, minutely bidentate, 7-12 mm long, 4.5-6 mm wide, 4-veined, the veins subcarinate externally; petals sigmoid-oblong, acute, serrulate, 6-10 mm long, 1.5-2 mm wide; lip fleshy, subsagittate-3-lobed, deflexed near the middle, the apical lobe triangular, subacute, the lateral lobes rounded to subquadrate, incurved, the base broadly concave, the disc transversely thickened with a fairly well developed glenion, 2-4 mm long, 2-2.5 mm wide; column stout, 2 mm long, the base bulbous-swollen.

ETYMOLOGY: Named in honor of W. W. and H. E. Rowlee, who discovered the species.

TYPE: COSTA RICA: GUANACASTE: La Palma, 8 July 1918, W. W. & H. E. Rowlee 236 (HOLOTYPE: AMES, ISOTYPE: SEL).

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

COSTA RICA: GUANACASTE: La Palma, F. L. Stevenson 1-1575 (SEL), flowered in cult. 5 Jan. 1976.

PANAMA: VERAGUAS: vicinity of the continental divide, 12-15 km NW of Santa Fé, alt. 650-750 m, 16 Nov. 1974, R. L. Dressler 4833 (SEL); same area, 5 Sept. 1976, C. Luer & R. L. Dressler 1271, 1275 (SEL), flowered in cult. 9 Nov. 1976; trail to Buenos Aires, east of Cerro Tute, 6-7 km NW of Santa Fé, 22 Dec. 1975, R. L. Dressler 5253 (SEL).

ECUADOR: without specific locality, Janet Kuhn s.n. (SEL), greenhouse acc. no. 25-75-71, flowered in cult. 15 Sept. 1976, 2 Nov. 1976.

Pleurothallis rowleei may be recognized by its ovate, acuminate leaf borne by a slender stem, and one or two loosely flowered racemes about as long as the blade. The color of the widely spread flowers varies from greenish white to pale brownish green and to deep purple. The large, gently S-curved petals with minutely toothed margins are held down to either side of the lip. The lip varies in size and length; the form with a small lip was originally described by Ames as *P. cucullata*. The lip is thick and deflexed near the middle with upturned basal lobes, and a thickened, triangular mid-lobe.

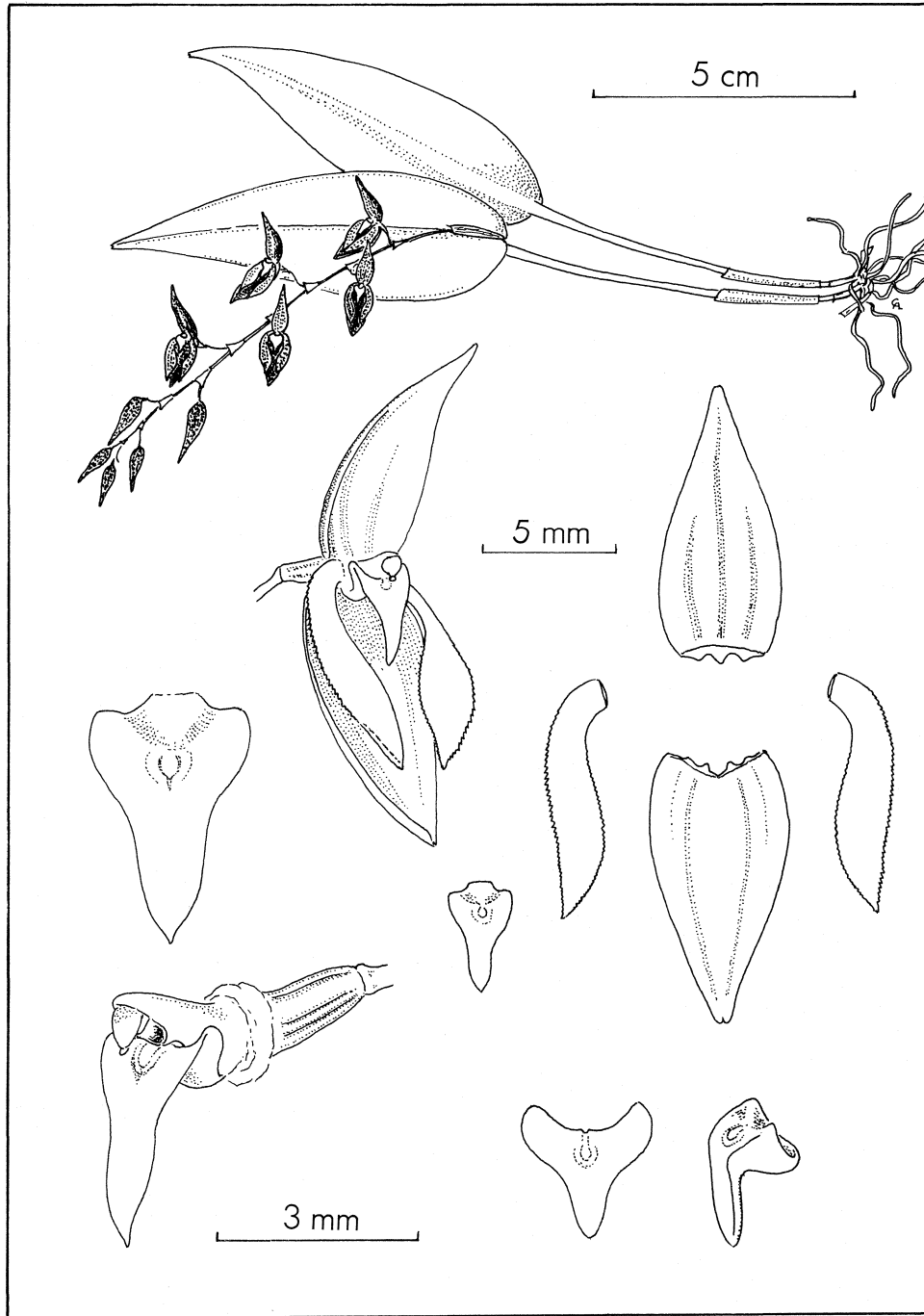


Figure 288. PLEUROTHALLIS ROWLEEI Ames

Pleurothallis rubella Luer, sp. nov.

Planta perparva epiphytica caespitosa, caulibus secundariis gracilibus abbreviatis unifoliatis, foliis angustissime ellipticis sensim longipedicellatis, racemo gracillimo flexuoso folio aequilongo, floribus pusillis rubellis solitariis successivis, sepalis ovatis acutis, petalis ovatis apice anguste linearibus obtusis, labello anguste ligulato ciliato supra basin concavo pubescenti.

Plant very small, epiphytic, caespitose; roots slender, flexuous. Secondary stems slender, terete, abbreviated, 5-15 mm long, enclosed by 2 thin, ribbed, tubular sheaths, unifoliate. Leaf coriaceous, very narrowly elliptical, subacute, tridenticulate, the base narrowly cuneate, gradually long-pedicellate, 2-4 cm long including the petiole, 4-6 mm broad. Inflorescence a slender, fractiflex raceme, to 5 cm long, the peduncle capillary, from a node on the secondary stem, the small, red flowers produced singly, slowly, successively; floral bract 0.5 mm long; pedicel 2-3.5 mm long; ovary green with red stripes, 1 mm long; dorsal sepal ovate, acute, concave, rose-red with darker red veins, 3×1.5 mm, the 3 veins prominent externally; lateral sepals elliptical, acute, connate to above the middle, each unicarinate, 3.25×2 mm together; petals ovate, contracted near the middle into a narrowly linear, obtuse, maroon apex, the apical cells prominent, 2.5×1 mm; lip maroon, narrowly oblong-ligulate, the apex obtuse, the margins ciliate, the base with a rounded, red-pubescent concavity just above the concave end which is adherent to the column-foot, the disc superficially channeled, the cells prominent, 2.75×0.75 mm; column stout 0.5 mm long, with a very short, broad foot.

ETYMOLOGY: From the Latin *rubellus*, "reddish" (dim. of *ruber*), in reference to the little red flowers.

TYPE: PANAMA: CHIRIQUI: epiphytic, Fortuna dam site, alt. ca. 1000 m, Oct. 1976, *R. L. Dressler s.n.* (HOLOTYPE: SEL), cultivated at SEL, greenhouse acc. no. 131-76-4, flowered in cult. 8 Nov. 1976.

DISTRIBUTION: Panama.

This small species is characterized by its clump of short-stemmed, long, narrow leaves. The inflorescence with its hair-like peduncle and fractiflex rachis barely tops the leaves. The little, red flowers are produced singly in a slow succession. The narrowed apices of the petals are studded with prominent, maroon cells, as is also the surface of the ciliated lip. The base of the lip is broadly and tightly adherent to the column-foot, and immediately in front there is a rounded concavity lined by short, red hairs.

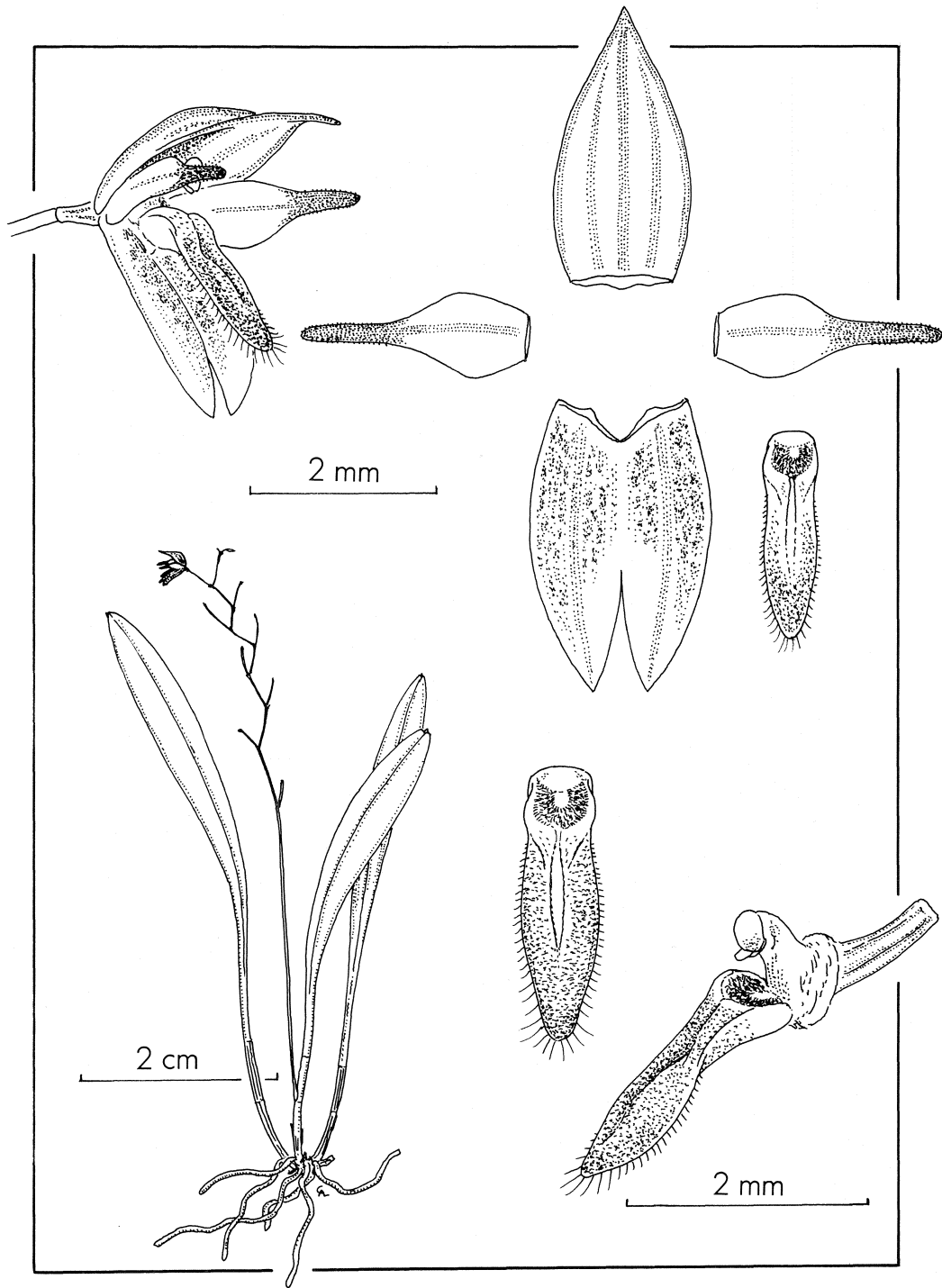


Figure 289. PLEUROTHALLIS RUBELLA Luer

Pleurothallis sanchoi Ames, Sched. Orchid. 4:26. 1923.

Pleurothallis gonioglossa Schltr., Repert. Spec. Nov. Regni Veg. Beih. 19: 189. 1923.

Plant small, epiphytic, caespitose; roots fine, flexuous. Secondary stems slender, terete, 3-5 cm long, unifoliate, with a tubular sheath below the middle and 1-2 others at the base. Leaf spreading, curved, thick, coriaceous, dark green, shiny, elliptical, acute, tridenticulate, the base rounded to very shallowly cordate, 20-28 mm long, 8-11 mm wide. Inflorescence a fascicle of single, successive flowers, from a fugacious spathe, 3-4 mm long, at the base of the leaf; floral bract 3 mm long; pedicel 4-6 mm long; ovary 3-4 mm long; dorsal sepal ovate, subacute, concave, 5 mm long, 3.25 mm wide, 3-veined, yellow, faintly mottled with purple; lateral sepals completely connate into a suborbicular, obtuse, convex lamina, 4.5 mm long, 4 mm wide, 4-veined, pale yellow-green; petals narrowly triangular, oblique, acute, the margins minutely subserrate, 4.5 mm long, 1 mm wide, 1-veined, purple; lip thick, purple with white center, ovate-cordate, the apex abruptly acuminate, genuflexed near the middle, concave centrally between thickened margins, the basal lobes embracing the column, 2.25 mm long, 2.25 mm wide; column stout, 1 mm long, foot obsolescent.

ETYMOLOGY: Names in honor of Alfredo Sancho, one of the discoverers of the species.

TYPE: COSTA RICA: CARTAGO: La Estrella, 9 Jan. 1923, C. H. Lankester & Alfredo Sancho 394 (HOLOTYPE: AMES).

DISTRIBUTION: Costa Rica and Panama.

PANAMA: CHIRIQUI: epiphytic in the cloud forest along the continental divide above Camp Escopeta, Cerro Colorado, alt. 1700 m, 16 Feb. 1977, C. Luer, J. Luer & R. L. Dressler 1597 (SEL), greenhouse acc. no. 77-1923, flowered in cult. 22 April 1977.

This distinctive little species was reduced to the synonymy of the Guatemalan *Pleurothallis leucantha* Schltr. by Schweinfurth (Bot. Mus. Leaflet 14:52. 1949), but the leaves of the latter are longer and narrower, and the lip of the whitish flower is not deeply cordate.

Vegetatively, *P. sanchoi* is similar to *P. concaviflora* C. Schweinf. and *P. nitida* Luer. The small, dark green, elliptical leaves are thick, convex, and shiny. The sepals are light yellow-green and the petals and lip are purple. The base of the deeply cordate lip is deflexed, with the upturned lobes enclosing the column.

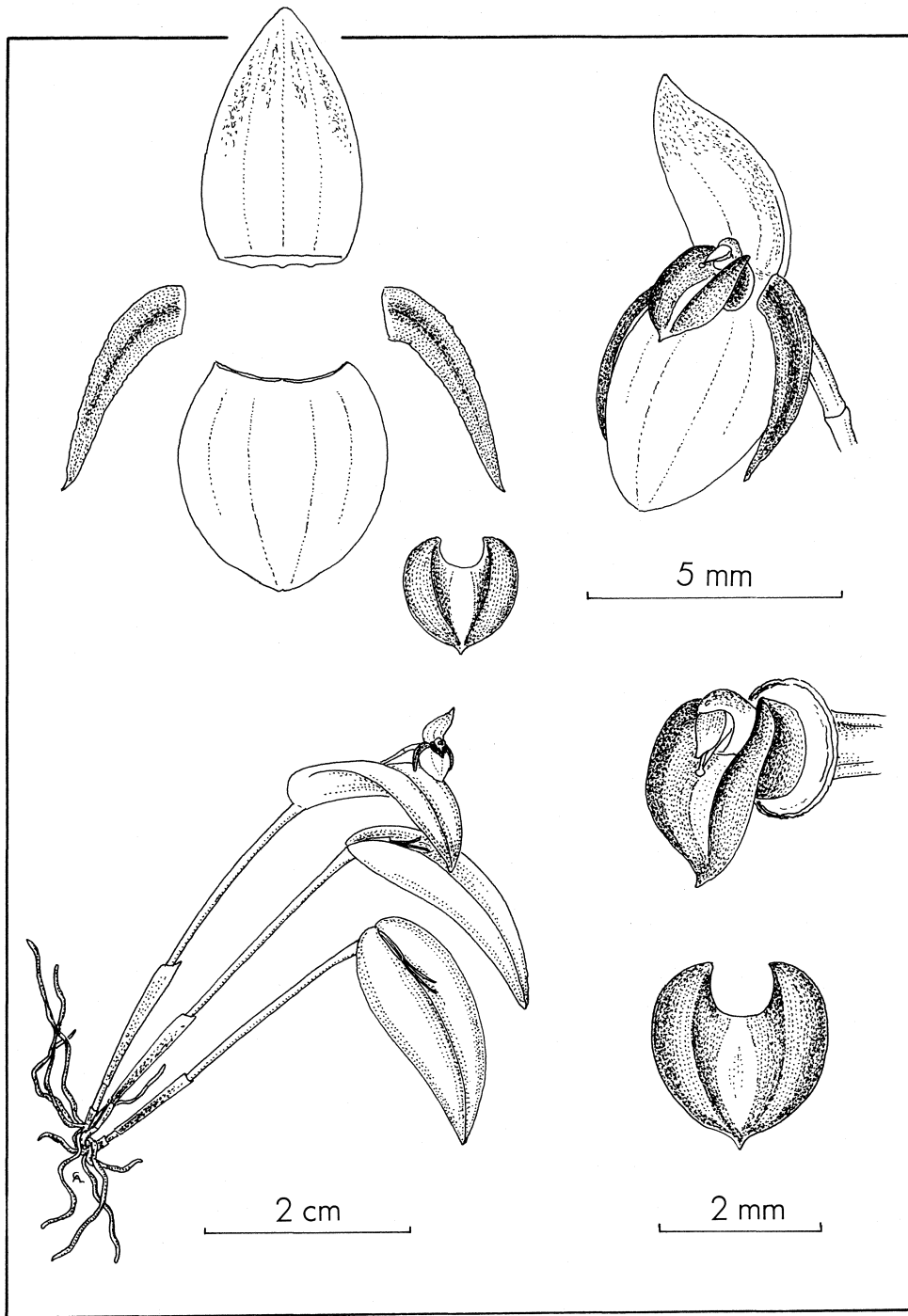


Figure 290. PLEUROTHALLIS SANCHOI Ames

Pleurothallis saundersiana Rchb. f., Gard. Chron. 74. 1866.

Pleurothallis felis-lingua Barb. Rodr., Gen. Spec. Orchid. Nov. 2:18. 1882.

Pleurothallis bidentula Barb. Rodr., Gen. Spec. Orchid. Nov. 2:20. 1882.

Pleurothallis cryptoceras Rchb. f., Flora 69:554. 1886.

Pleurothallis josephensis Barb. Rodr., Vellozia, ed. 2:117. 1891.

Pleurothallis juergensii Schltr., Repert, Spec. Nov. Regni Veg. Beih. 35-54. 1925.

Pleurothallis vinosa Hoehne & Schltr., Arq. Bot. Estado Sao Paulo 1:227. 1926.

Plant small, epiphytic, repent; primary stem terete, elongated, sheathed, producing a secondary stem about every 2 cm; roots few, flexuous. Secondary stems terete, 2-4 cm long, the lower half concealed by 1-2 tubular sheaths, unifoliate. Leaf coriaceous, elliptical, obtuse to subacute, tridentate, base rounded, sessile, 3-5.5 X 2-2.8 cm. Inflorescence a short, 1-, 2-flowered raceme, the flowers successive; peduncle stout, 4-5 mm long, from a 2-3 mm spathe at the base of the leaf; floral bract tubular, 2.5 mm long; pedicel 4 mm long; ovary 1.5 mm long; dorsal sepal ovate, narrowly obtuse, apex red-brown and convex, 11 X 4 mm, 5-veined, the veins red on white, the central vein prominent dorsally; sepals connate to near the middle into a broadly ovate, bicarinate lamina, gibbous basally, 8 X 6 mm, mottled red-purple on green; petals elliptical, acute, serrulate above the middle, 3 X 1 mm, translucent with 3 red-purple veins; lip fleshy, oblong, 4 X 2 mm, apex rounded, convex, purple-brown, the margins minutely serrate, with a pair of small, erect lateral lobes below the middle, green, base broadly hinged to the column-foot and flanked by a minute pair of lobules, disc with a longitudinal pair of low, fleshy elevations; column terete, 3 mm long, with a foot 2 mm long.

ETYMOLOGY: Named in honor of W. Wilson Saunders, Esq., who cultivated the plant.

TYPE: BRAZIL. without locality or collector, *W. W. Saunders s.n.*

DISTRIBUTION: southern Brazil and Bolivia.

BOLIVIA: SANTA CRUZ: epiphytic near Santa Cruz, *Janet Kuhn s.n.* (SEL), flowered in cult. 21 Oct. 1975.

Reichenbach described *Pleurothallis saundersiana* in 1866 from a plant cultivated by Saunders who had obtained it from Low's nursery, where it had been introduced from Brazil. Writing in *Refugium Bontanicum* in 1872, Reichenbach stated that Saunders suggested that the plant might have come from Popayan, Colombia. A century later, it seems that the original information was correct. The species is known from southern Brazil, where it was described as *P. bidentula* and *P. josephensis* by Barbosa Rodrigues, and it is now reported from Bolivia for the first time.

The species is distinguished by its long, creeping rhizome which produces short secondary stems, each bearing a thick coriaceous leaf which is sometimes suffused with purple. The gaping flowers are borne singly on a short peduncle which may later bear a second flower. Therefore, although abbreviated, the inflorescence is considered racemose. The colorful flowers are relatively large, appearing white, and striped and mottled with red-purple. The lateral sepals, shorter than the dorsal sepal, are partially united, forming a mentum with the column-foot. The lip is fleshy with a rounded, minutely toothed apex and a pair of small lateral lobes. The minute lobules at the base are not mentioned in the earlier descriptions.

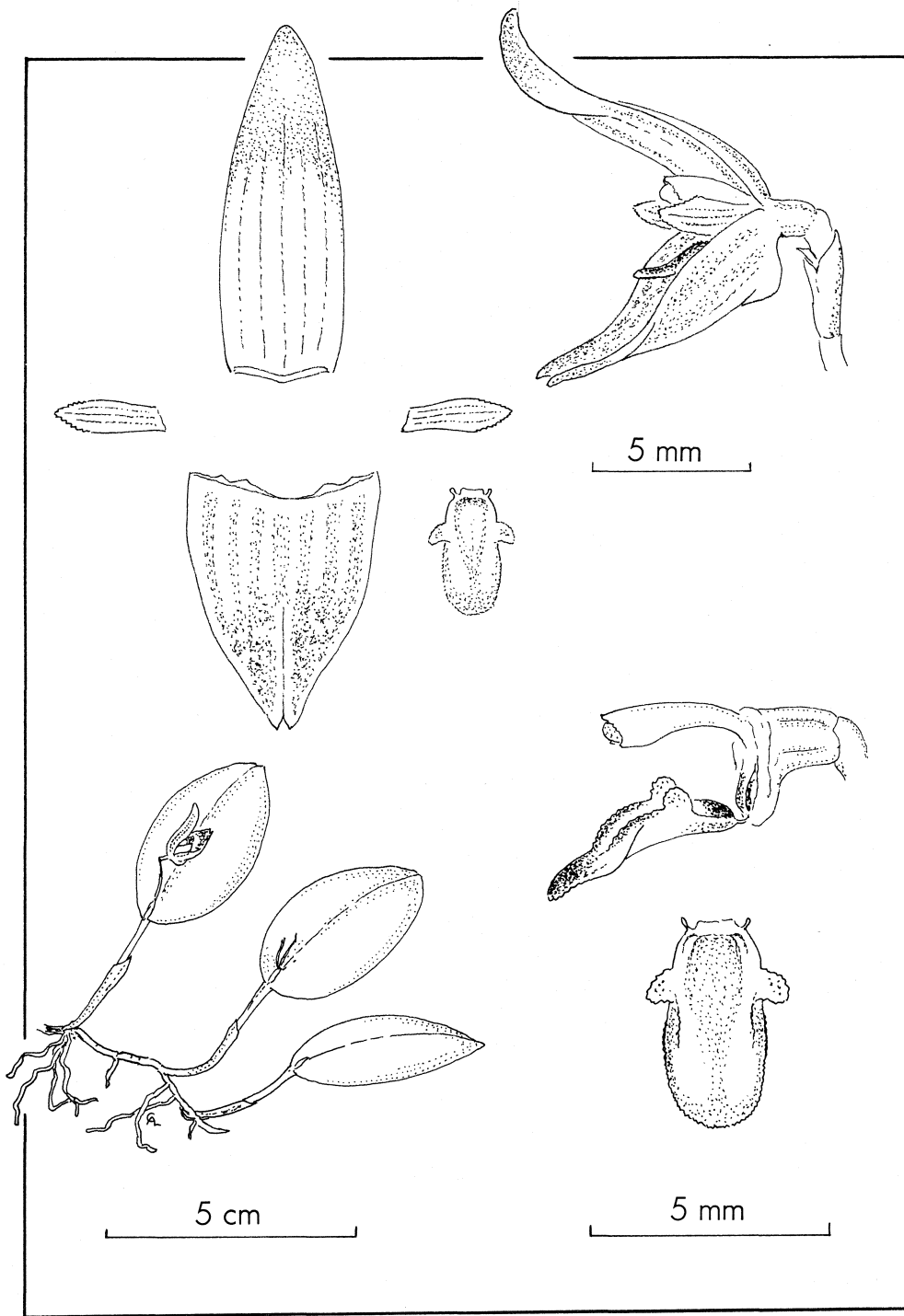


Figure 291. PLEUROTHALLIS SAUNDERSIANA Rehb. f.

Pleurothallis scitula Luer, sp. nov.

Habitu *P. phyllocardiae* Rchb. f. similis, sed floribus pubescentibus nondeflexis, synsepalo latiore quam sepalo dorsali, disco labelli sine depressionibus differt.

Plant medium to large, epiphytic, caespitose; roots slender, flexuous. Secondary stems slender, terete, erect, 8-25 cm long, with a closely fitting tubular sheath below the middle and 1-2 others at the base, unifoliate. Leaf coriaceous, deflexed, ovate, concave, shortly acuminate, acute, tridenticulate, the base sessile, deeply cordate with overlapping auricles, dark green often suffused or spotted with purple, especially beneath, 6-13 cm long, 4.5-7.5 cm wide spread out. Inflorescence fasciculate, the flowers produced singly and successively from a conduplicate spathe, 1.5-2 cm long, 1-1.8 cm broad, erect from the base of the leaf; floral bract and pedicel each about 1 cm long, enclosed within the spathe; ovary 5-6 mm long; flowers shortly pubescent, yellow marked with purple; dorsal sepal ovate, obtuse, 11 mm long, 8-9 mm wide, 3(5)-veined; lateral sepals connate into a broadly ovate-cordate, obtuse, retuse, synsepal, 11-13 mm long, 10-13 mm wide, 4-veined; petals narrowly ovate-oblong, obtuse, denticulate, 9-10 mm long, 2.5 mm wide; lip red, ovate, subacute to obtuse, the base shallowly concave with rounded angles, the disc minutely papillose centrally adjacent to the glenion, the remainder of the surface shallowly rugose, 4-5 mm long, 3.5-4 mm wide; column stout, 1.5 mm long, 2 mm wide, with a short, broad foot.

ETYMOLOGY: From the Latin *scitulus*, "pretty, handsome," in allusion to the appearance of the flowering plant.

TYPE: 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 & F. L. Stevenson 1361* (HOLOTYPE: SEL).

DISTRIBUTION: Panama.

Vegetatively this species is similar to *Pleurothallis phyllocardia* Rchb. f., but the pretty yellow, purple-striped flowers face straight outward, not downward and inward. The flowers of both species emerge from a broad, erect spathe from the base of a deeply cordate, concave leaf. The broad sepals and petals of *P. scitula* are covered with a dense, short pubescence, and the synsepal is wider than the dorsal sepal. The lip is of similar size and shape to that of *P. phyllocardia*, but it is far less papillose and it lacks the concavities to either side of the glenion.

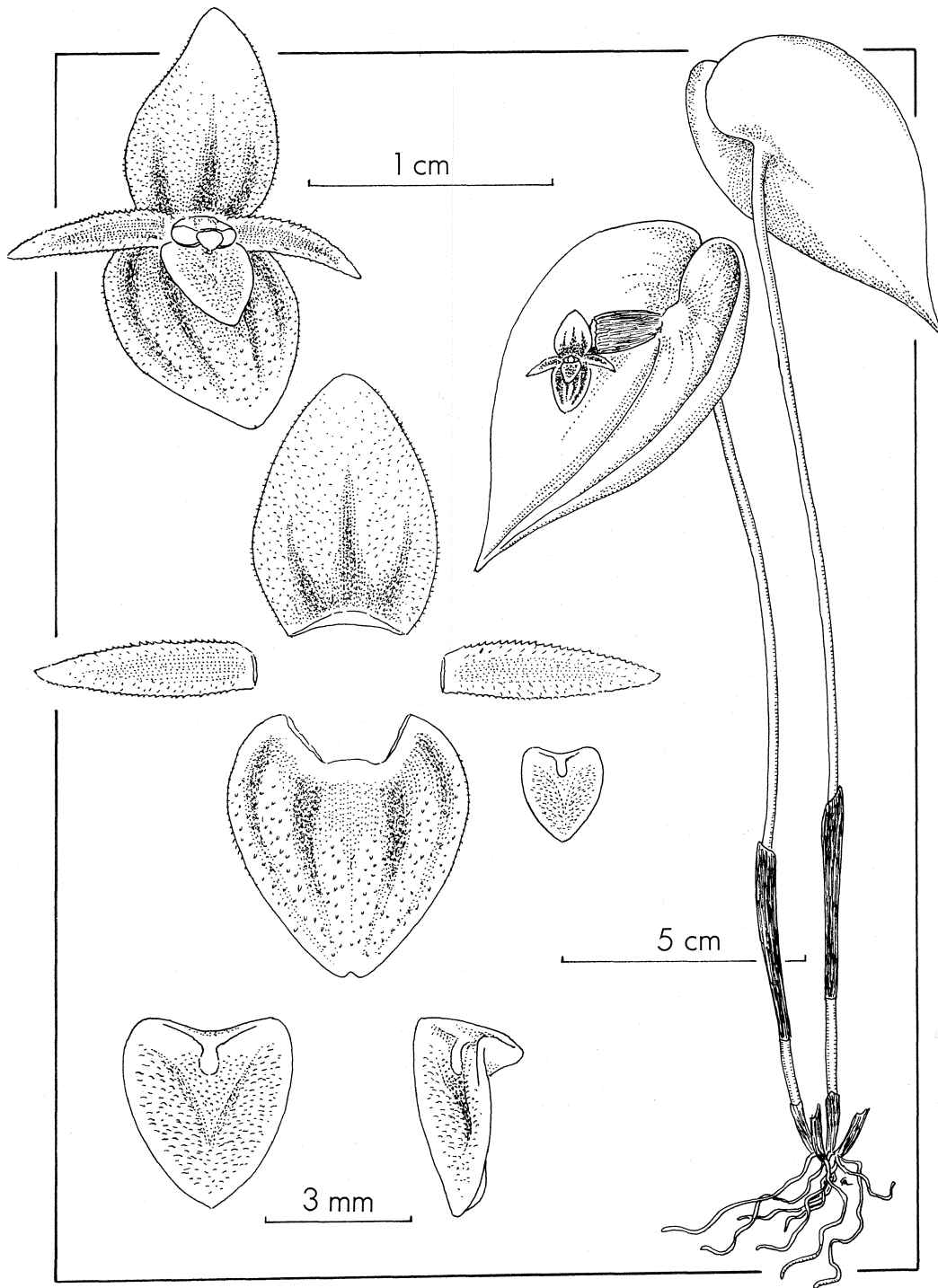


Figure 292. PLEUROTHALLIS SCITULA Luer

***Pleurothallis sempergemmata* Luer, sp. nov.**

Habitu et floribus *P. uncinatae* Fawc. similis, sed differt floribus cleistogamis, apice labelli conduplicato, disco labelli rugoso.

Plant medium to large in size, epiphytic, shortly repent to caespitose; rhizome thick; roots slender, flexuous. Secondary stems stout, terete, moderately compressed above, 18-30 cm long, provided with 4-5 loose, scarious sheaths, commonly shredded or shed, unifoliate. Leaf erect, thick, coriaceous, dark green, ovate, the margins more or less revolute, the apex acute, tridentate, the base rounded, conduplicate, sessile, 14-22 cm long, 4-5 cm wide. Inflorescence fasciculate, the flowers fleshy, cleistogamous, ovoid, brownish, shortly pubescent, produced singly and successively from a spathe, 2-3.5 cm long, fugacious, deep in the cleft of the base of the leaf; peduncle pubescent, 2-4 cm long; floral bract shortly scabrous, oblique, close-fitting, about 1 cm long; pedicel enclosed by the floral bract, about 8 mm long; ovary pubescent, about 7 mm long when the flower may be considered mature but unfertilized; sepals entirely united, densely pubescent in tufts, smooth and glabrous within, concave, the dorsal sepal ovate, obtuse, 15 mm long, 7 mm wide, the lateral sepals together similar to the dorsal sepal, 14 mm long, 9 mm wide; petals fleshy, yellow, dotted in rows of purple, elliptical, subacute, 10 mm long, 3 mm wide; lip ovate-oblong, red, 3-lobed, 8 mm long, 4 mm wide, lateral lobes uncinata, just below the middle, directed forward, cannot be spread, the apex conduplicate, retuse, verrucose, the base broadly hinged to the column-foot, with indistinct auricles, the disc with a broad, basal, curved callus, transversely rugose, extending toward the apex between a pair of thickened, verrucose calli extending forward from the lateral lobes; column curved, terete, 7 mm long, the anther with a few bristles along the upper margin.

ETYMOLOGY: From the Latin *semper*, "forever," and *gemmatus*, "with buds" (*gemma*, "bud"), in reference to the cleistogamous flowers.

TYPE: PANAMA: CHIRIQUI: epiphytic in valley of cloud forest above Guadalupe, alt. ca. 2200 m, 17 Dec. 1976, C. Luer, A. Luer, R. L. Dressler, N. H. Williams & F. L. Stevenson 1360 (HOLOTYPE: SEL).

ADDITIONAL MATERIAL EXAMINED: PANAMA: CHIRIQUI: epiphytic in cloud forest above Boquete, 20 Dec. 1976, C. Luer, A. Luer & R. L. Dressler 1353 (SEL).

DISTRIBUTION: Panama.

Vegetatively, this robust species is similar to *Pleurothallis uncinata* Fawc. and its relatives (*P. alexandrae* Schltr. and *P. pastacensis* Luer). The thick, dark green leaf with revolute margins is conduplicate basally. One to three brown, shortly pubescent, ovoid buds are produced simultaneously on comparatively long peduncles. The sepals, which never part, reach about 15 mm in length before the ovary begins to swell. The plant is scarcely more than a cleistogamous form of *P. uncinata*, but the differences seem sufficient to recognize it specifically.

Flowers were dissected at all stages of maturity, from immature buds to flowers on swollen ovaries. The sepals, petals and column grew thicker with the enlargement of the ovary, but the red lip was found to remain unchanged. Perhaps because the lip never obtains room for expansion, the apex is more or less bilobed with erect sides. The uncinata lateral lobes cannot be spread because of the thick substance of the lip, and the intervening disc is transversely rugose, not smooth as in *P. uncinata*.

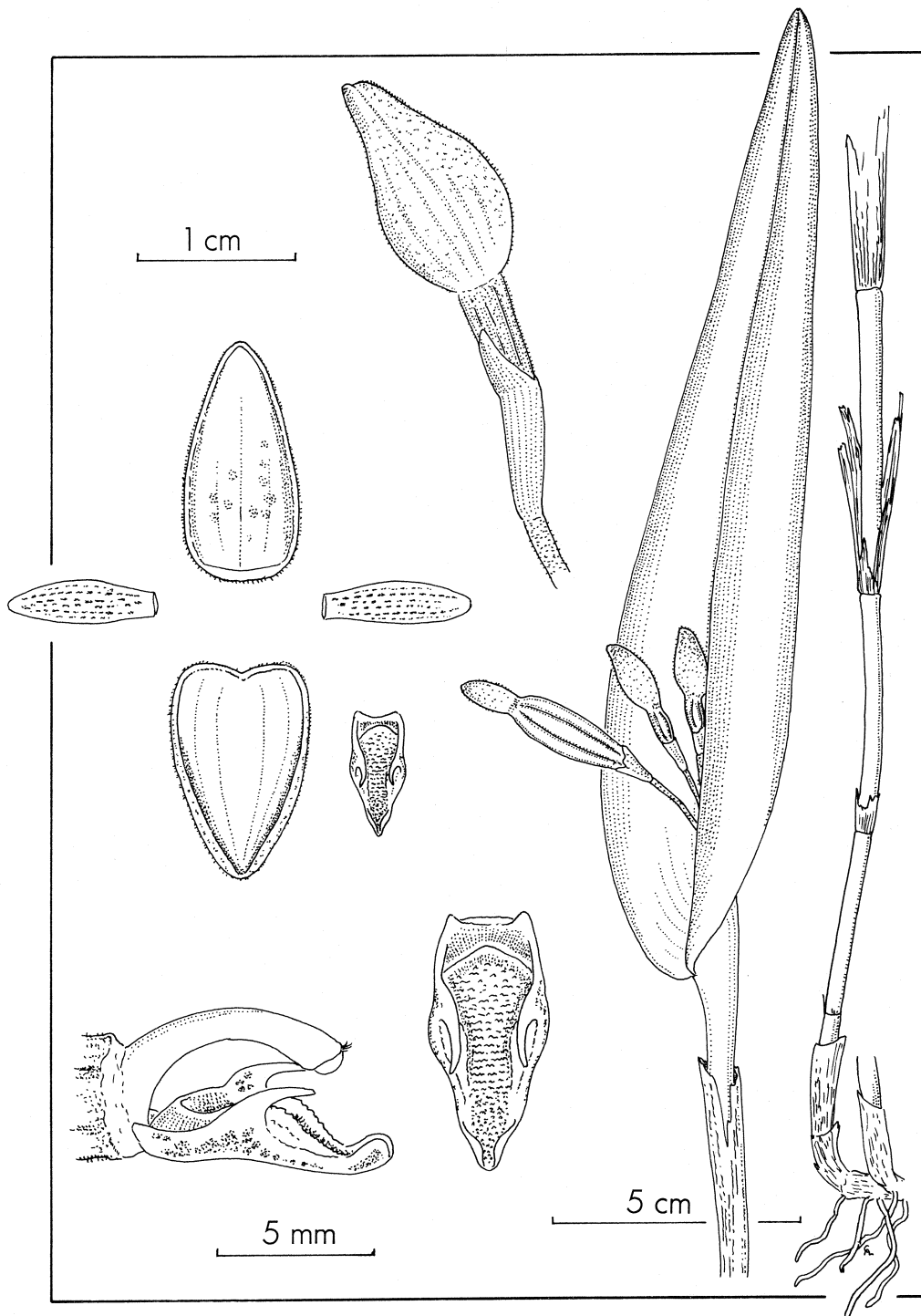


Figure 293. PLEUROTHALLIS SEMPERGEMMATA Luer

Pleurothallis simplicicaulis (C. Schweinf.) C. Luer, comb. nov.

Pleurothallis scandens Ames var. *simplicicaulis* C. Schweinf., Bot. Mus. Leaflet 20:16. 1962.

Plant medium sized, epiphytic, caespitose; roots filamentous, flexuous. Secondary stems erect, slender, 15-20 cm tall, concealed by close-fitting, tubular sheaths, at least the lower ones tomentose, unifoliate. Leaf narrowly elliptic to fusiform, acute, tridenticulate, base cuneate, sessile, 6-9 cm X 7-9 mm. Inflorescence a few-, single-flowered fascicle from the base of the leaf; floral bract and pedicel with purple pubescence, each 2 mm long; ovary pubescent, 1.5 mm long; sepals yellow-green, ovate, acute, pubescent externally, minutely flecked with brown-purple internally, the dorsal sepal 5 X 1.75 mm, 3-veined, the lateral sepals oblique, united below the middle to form a mentum with the column-foot, each 4.5 X 2 mm, 2-veined; petals translucent yellow-green, 4 X 1.5 mm, subquadrate or obovate below the middle, 3-veined, the margin serrulate near the junction with the apical portion, the apex narrowly triangular, obtuse, thickened; lip oblong, the apex rounded, minutely erose, with small erect, broadly triangular, oblique, obtuse, erose, lateral lobes near the middle, the base auriculate, shortly hinged to the column-foot, disc with a longitudinal pair of callosities with a channel between; column stout, 2 mm long, with a short foot.

ETYMOLOGY: From the Latin *simplex*, "simple, unbranched," and *caulis*, "stem," in reference to the non-proliferating habit in contrast to the scandent habit of the species to which it was attributed as a variety.

TYPE: VENEZUELA: BOLIVAR: Apácará-tepuí, 1700-1850 m, 23 June 1953, J. Steyermark 75957 (HOLOTYPE: AMES).

DISTRIBUTION: Venezuela.

VENEZUELA: without exact locality, cultivated by Philip Jesup, s.n. (SEL).

This species was illustrated in Venezuelan Orchids Illustrated 2:285. 1961 as *Pleurothallis lancipetala* (Karst.) Schltr., which is a larger plant with red-striped, glabrous flowers. In 1962, Schweinfurth described this species as a variety of *P. scandens* Ames, which is a smaller, scandent species. *Pleurothallis simplicicaulis* is distinguished by the echinate sheaths which clothe the non-proliferating stem, the small, narrowly elliptical leaf, and the few-flowered fascicle of small greenish flowers which are covered with a purplish brown pubescence. The apices of the petals are tapered and thickened. The little lip is oblong and rounded in front, auriculate at the base, and with a small pair of serrated lateral lobes. It is closely allied to the Ecuadorian *P. ephelis* C. Luer which has glabrous flowers.

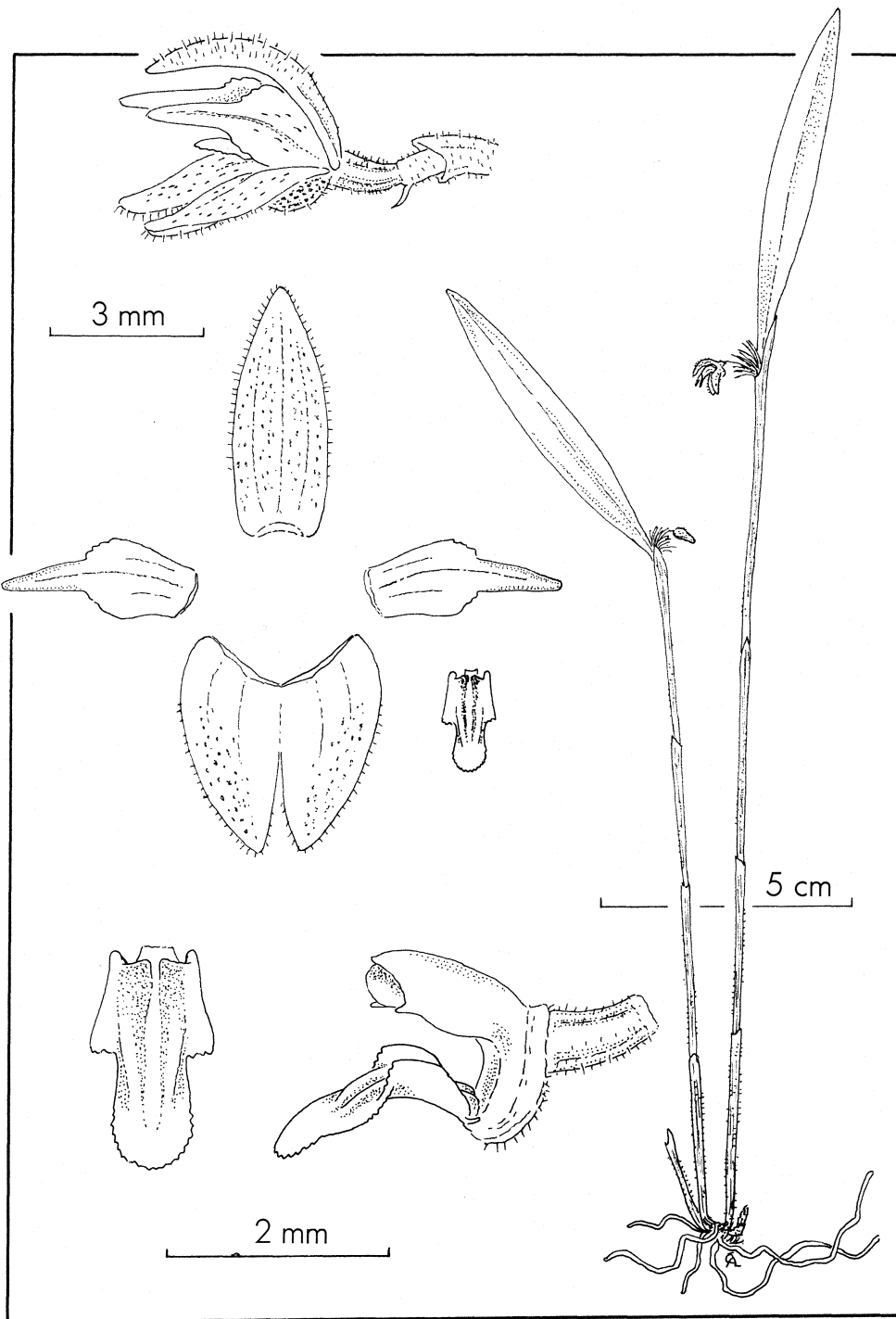


Figure 294. PLEUROTHALLIS SIMPLICICAULIS (C. Schweinf.) Luer

Pleurothallis spathilabia Schltr., Repert. Spec. Nov. Regni Veg. Beih. 27:56. 1924.

Plant medium in size, epiphytic, caespitose; roots fine, flexuous. Secondary stems stout, terete, unifoliate, 5-8.5 cm long, with a tubular sheath below the middle and another at the base. Leaf erect, coriaceous, smooth, flat, elliptical-oblong, obtuse to rounded at the retuse apex, the base cuneate to rounded into a distinct petiole, 1-1.5 cm long, the blade 4-7 cm long, 2-3.5 cm wide. Inflorescence 1-2 ascending, subdensely many-flowered racemes, 10-18 cm long, the peduncle from a spathe, 5 mm long, from the apex of the stem; floral bract tubular, 3 mm long; pedicel 3 mm long; ovary 1 mm long; sepals completely free, pale yellow-green, shortly ciliate, elliptical, acuminate, acute, 3-veined, the dorsal sepal 7 mm long, 3 mm wide, the lateral sepals oblique, 6 mm long, 2.75 mm wide; petals translucent yellow, oblong, obtuse, retuse with a minute apiculum in the sinus, 3.5 mm long, 1.5 mm wide, the single vein thickened internally and externally; lip obovate-spatulate, the apex rounded and minutely serrulate, curved below the middle, the base rounded and broadly hinged to the column-foot, the disc with a pair of parallel carinae below the middle, 3.5 mm long, 2.25 mm wide, the three veins marked with purple beneath; column minutely denticulate, 1.5 mm long, with an equally long foot.

ETYMOLOGY: From the Latin *spatha*, "a broad, flat blade," and *labium*, "lip," in reference to the spatulate labellum.

TYPE: COLOMBIA: NARIÑO: on trees and rocks near Chachatoy not far from Pasto, alt. 2300 m, Nov. 1921, *W. Hopp 117*.

DISTRIBUTION: Colombia and Ecuador.

ECUADOR: MANABI: epiphytic about half way up Cerro Montecristi, alt. ca. 500 m, 27 Feb. 1977, *C. Luer, J. Luer, K. Cordoba 1587* (SEL), greenhouse acc. no. 77-1756, flowered in cult. 15 April 1977.

This species, previously reported only from Colombia, was recently discovered on an isolated elevation (Cerro Montecristi) in coastal Ecuador. The oblong, retuse, paddle-like leaves are smooth and flat with a distinct, somewhat twisted petiole. The racemes of translucent pale yellow-green flowers far surpass the leaves. The delicately ciliated sepals are free, the laterals widely spreading. The petals are retuse, and the lip is broadly spatulate with a circular apex.

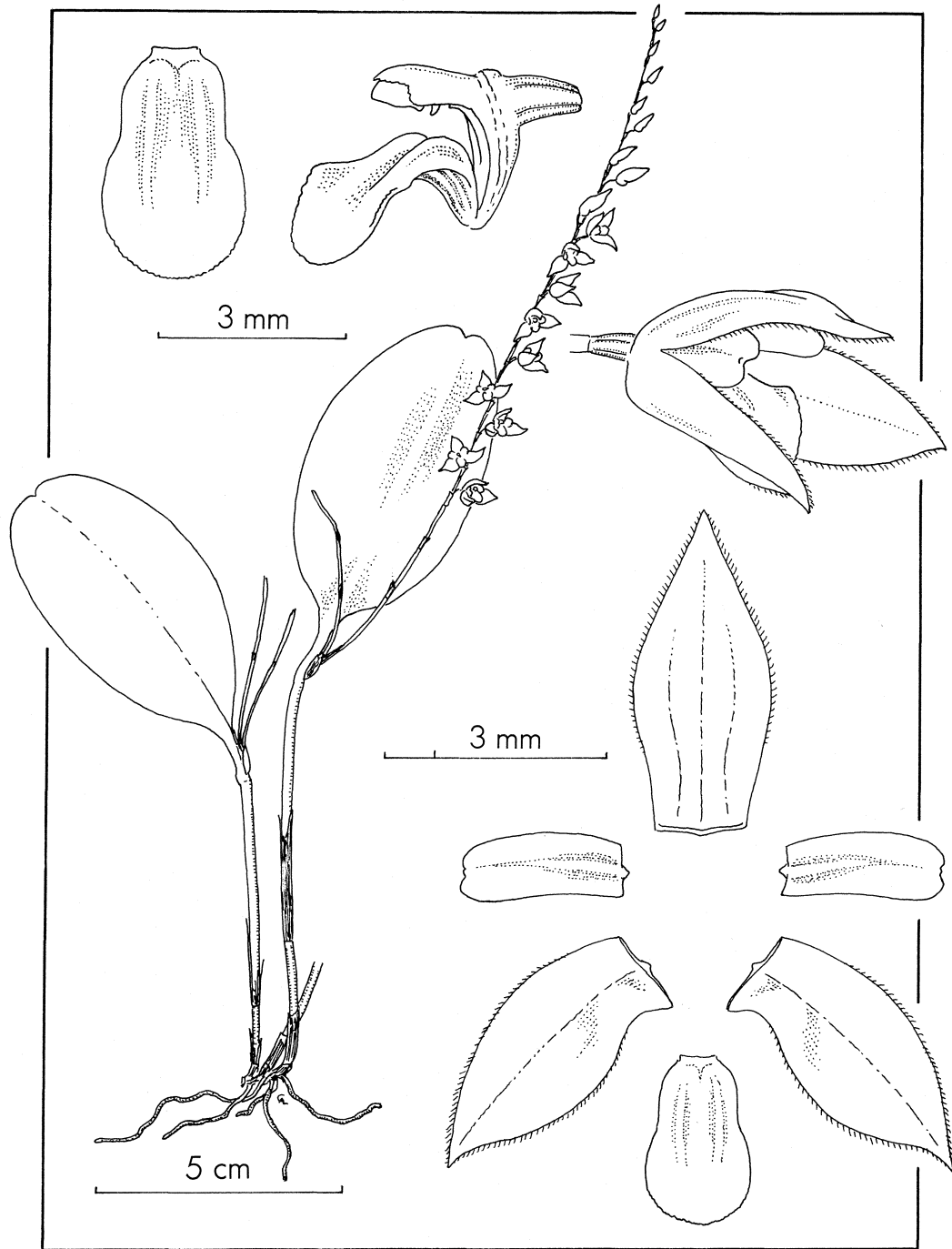


Figure 295. PLEUROTHALLIS SPATHILABIA Schltr.

Pleurothallis speciosa Luer, sp. nov.

Planta grandis epiphytica breviter repens, caulibus secundariis teretibus purpureis vaginis spiculatis unifoliatis, foliis erectis rigidis anguste ovatis acutis breviter petiolatis, inflorescentia fasciculatis floribus singularibus flavis purpureo vittatis, petalis ovato-acuminatis sepalis ovatis longioribus, labello crasso oblongo nondenticulato.

Plant large, epiphytic, shortly repent to caespitose; roots slender brown, fibrous. Secondary stems terete, stout, purple, 11-30 cm long, clothed by 4-8 spiculate sheaths, shed on older stems, unifoliate. Leaf erect, thick, rigid, coriaceous, dark green suffused with purple, narrowly ovate, acute, tridenticulate, the base cuneate, short-petiolate, 8-16 cm long, 2-3.3 cm wide. Inflorescence fasciculate, the flowers produced singly from a dense mass of nodes and old sheaths at the base of the leaf-petiole; peduncle 5-6 mm long; floral bract tubular, pubescent, 2-4 mm long; pedicel sparsely short-pubescent, 3.5 mm long; ovary glandular pubescent, 2.5 mm long; flowers relatively large, spreading, pale yellow with red-purple stripes; sepals ovate, slightly acuminate, acute, with a sparse red pubescence above the middle, glabrous within, the dorsal sepal 9.5 mm long, 5 mm wide, 5-veined, the lateral sepals oblique, united only at the base, each 9 mm long, 4.5 mm wide, 4-veined; petals ovate, acuminate and contracted above the middle, the apex thickened, acute, 10 mm long, 3.75 mm wide, 3-veined; lip thick, oblong, slightly constricted just above the middle, the apex convex, abruptly acuminate, the base subtruncate, the disc with smooth, rounded, longitudinal, marginal calli below the middle, yellow mottled with purple, 5 mm long, 2 mm wide; column stout, 3 mm long, with a concave foot.

ETYMOLOGY: From the Latin *speciosus*, "splendid," in reference to the showy flowers.

TYPE: PANAMA: CHIRIQUI: epiphytic in a valley of cloud forest above Guadalupe, alt. ca. 2000 m, 13 Sept. 1976, C. Luer & H. Butcher 1371 (HOLOTYPE: SEL), greenhouse acc. no. 123-76-18, flowered in cult. 5 Feb. 1977.

DISTRIBUTION: Panama and ?Venezuela.

The long, purple stems of this large, handsome species are concealed by a series of coarsely pubescent sheaths until the latter are eventually shed. The tough, erect, lance-shaped blade is folded at the base into a short petiole, and from a cluster of nodes in the fold the flowers are produced on single peduncles. The sepals and petals are translucent yellow and conspicuously striped with red-purple. The broad, acuminate petals are longer than the sepals. *Pleurothallis speciosa* is apparently very closely allied to the Colombian *P. lancipetala* (Karst.) Schltr. Both possess relatively large, striped flowers, but the latter species is distinguished by a pair of lateral teeth on the lip. The lip of the presently described species is thick with longitudinally rounded margins.

This species appears to be illustrated in Foldats, *Flora Venez. Orch.* 2:270, 1970, as *P. exasperata* Lindl.

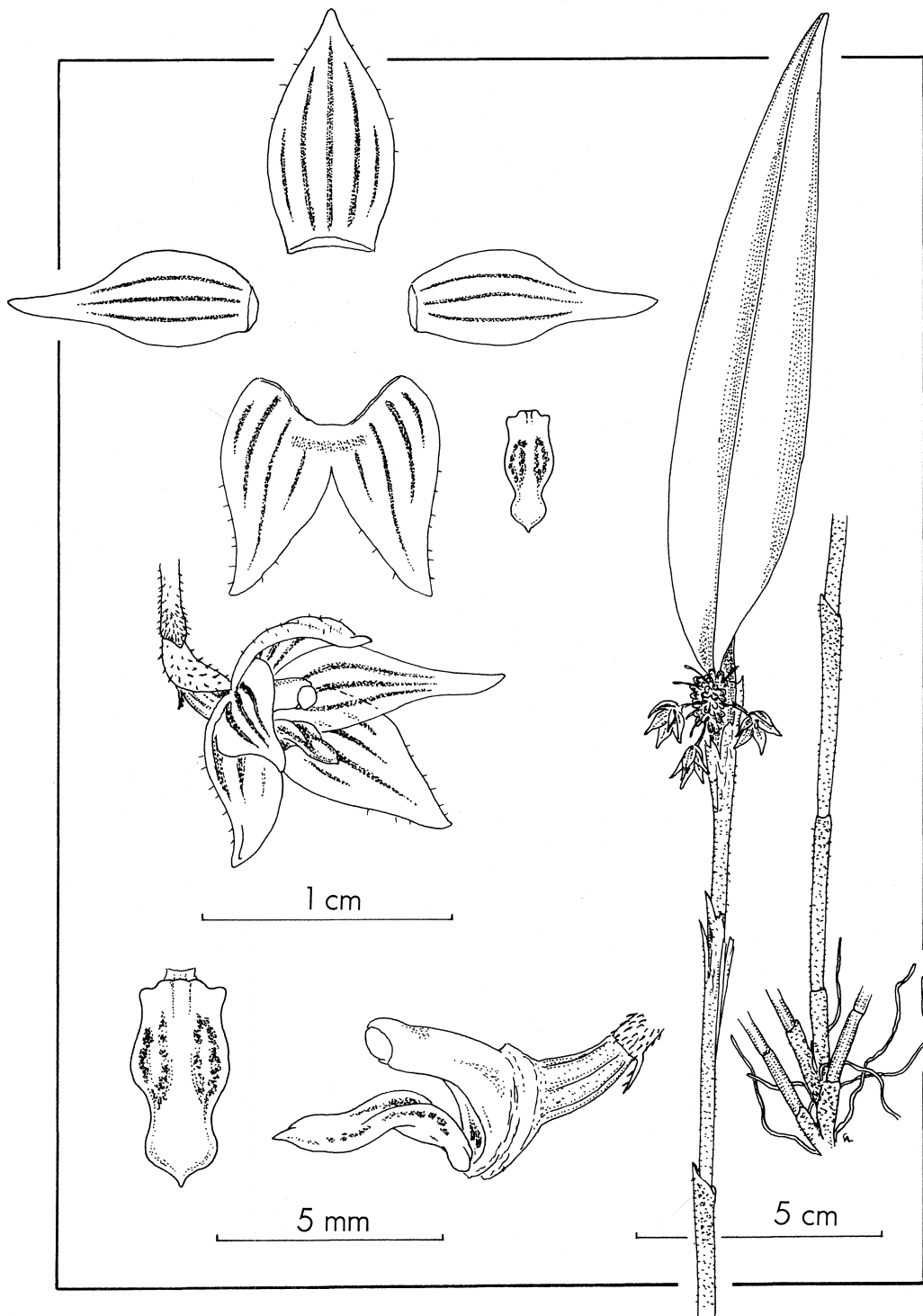


Figure 296. PLEUROTHALLIS SPECIOSA Luer

***Pleurothallis stenota* Luer, sp. nov.**

Planta parva epiphytica caespitosa, caulibus secundariis gracilibus teretibus unifoliatis, foliis erectis coriaceis angustis imo ovatis acutis base rotundatis sessilibus, floribus singulariis paucifloris fasciculatis late expansis pallide fulvidis, sepalo dorsale synsepaloque anguste ovatis acutis, petalis anguste triangularibus acutis, labello oblongo obtuso.

Plant small, epiphytic, caespitose; roots fine, flexuous. Secondary stems slender, terete, unifoliate, 5-8.5 cm long, with a thin, tubular, closely fitted sheath below the middle and 1-2 others at the base. Leaf erect, coriaceous, very narrowly ovate, acute, tridenticulate, the base cuneate to rounded, sessile, 6-9 cm long, 1.2-1.4 cm wide. Inflorescence a few-flowered fascicle of single, vertical flowers, the flowers widely spread, glabrous, pale orange-brown, nodding, from a spathe 7-8 mm long, at the base of the leaf; pedicel 10-11 mm long, floral bract thin, 3-4 mm long; ovary minimally verrucose, 3 mm long; dorsal sepal very narrowly ovate, acute, 12 mm long, 3 mm wide, 3-veined; lateral sepals connate into a narrowly ovate acute, lamina, 11 mm long, 4.5 mm wide, 4-veined; petals membranous, narrowly triangular, acute, 4 mm long, 1 mm wide, 1-veined; lip oblong, obtuse, the base truncate, shallowly concave on the end, the glenion incompletely bifid; column short, stout, about 1 mm long.

ETYMOLOGY: From the Greek *stenotos*, "narrow," in reference to the narrow leaves, and the slender flowers with narrow sepals.

TYPE: *ECUADOR*: AZUAY: epiphytic in an old mossy, orange grove along the old road between Quayaquil and Cuenca, alt. ca. 500 m, 1 March 1977, C. Luer, J. Luer & K. Cordoba 1584 (HOLOTYPE: SEL), greenhouse acc. no. 77-1817, flowered in cult. 10 April 1977.

DISTRIBUTION: Western Ecuador.

This small species is similar to and sympatric with *Pleurothallis ensata* Luer. Although flowering plants are readily distinguishable, descriptions and dried specimens appear deceptively alike. Both species have slender secondary stems terminated by an erect, very narrowly ovate leaf. The smaller flowers of *P. ensata* are produced singly and successively; those of *P. stenota* are produced several at a time. The sepals and petals of the latter are longer and proportionately narrower. The petals of the former are short and thick. The flowers of *P. stenota* spread widely, the narrow dorsal sepal and the synsepal pointing 180° from each other producing a slender, vertical flower 2 cm long.

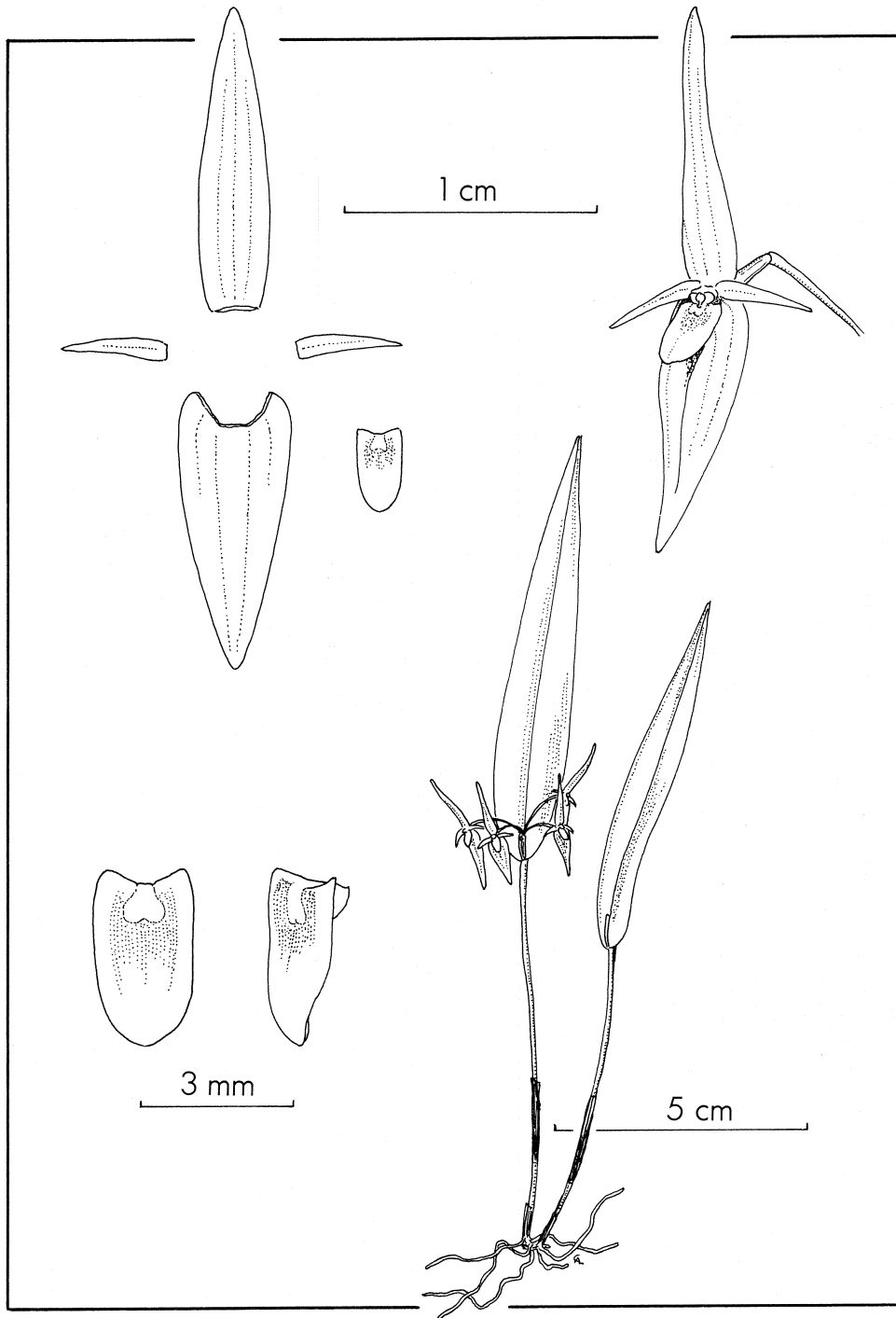


Figure 297. PLEUROTHALLIS STENOTA Luer

***Pleurothallis tempestalis* Luer, sp. nov.**

Habitu et floribus *P. divexae* Ames similis, sed carinis denticulatis sepalorum et callis lobo anticoque labelli bene circumscriptis differt.

Plant small, epiphytic, caespitose; roots fine, flexuous. Secondary stems short, terete, 7-10 mm long, unifoliate, with 1-2 thin tubular sheaths at the base. Leaf coriaceous, narrowly obovate, obtuse, tridenticulate, the base narrowly cuneate-petiolate, 13-18 mm long, 4-5 mm wide. Inflorescence a flexible, flexuous, several- to many-flowered, distichous raceme to 8 cm long, the flowers produced singly and successively; peduncle filiform, ascending from a 1 mm spathe at a node on the secondary stem; floral bract 1.5 mm long; pedicel 2-3 mm long; ovary verrucose, 1 mm long; sepals red-brown, oblong, the apices attenuated into slender tails, 7 mm long, 1.5 mm wide, the caudae 3.5 mm long, the dorsal sepal tricarinate, the carinae tall, coarsely and broadly denticulate, the tail slightly clavellate, the lateral sepals more or less sigmoid, united basally, each bicarinate similar to the dorsal sepal; petals elliptical, oblique, acute, lacerate near the middle, 2 mm long, 1.5 mm wide, yellow with a red vein; lip fleshy, more or less oblong, obtusely lobed near the base, with thick, red, papillose calli near the middle, separated from each other and the well circumscribed rounded, red-papillose, apical lobe by a smooth, orange convex surface, the base bilobed, papillose, shortly hinged to the column-foot, 2 mm long, 1 mm wide; column yellow, slender, 2 mm long, with a prominent, bilobed foot.

ETYMOLOGY: From the Latin *tempestas*, "bad weather," and *-alis*, "belonging or pertaining to," in allusion to the cold, wet windy weather which prevails most of the time where this species grows.

TYPE: *ECUADOR*: ZAMORA-CHINCHIPE: epiphytic in stunted trees near the pass at km 14 east of Loja, alt. 2800 m, 6 March 1977, C. Luer, J. Luer & K. Cordoba 1570 (HOLOTYPE: SEL).

DISTRIBUTION: Southeastern Ecuador.

Along with *Pleurothallis ichthyonekys* and *P. lenticularis*, *P. tempestalis* grows on the mossy branches of stunted trees which endure a nearly constant tempest near the mountain crest. As a fierce wind beats a frigid mist through the mossy boughs, the delicate, little flowers of these species are whipped to and fro without suffering the slightest injury. Transfer to a warm, tranquil habitat would certainly spell their doom.

In habit and flowers this species is similar to the Costa Rican *P. divexa* Ames, but it differs in the coarsely denticulate carinae of the sepals, and in the well-demarcated calli and anterior lobe of the lip, which are densely covered by red papillae. A distinct orange belt of smooth tissue separates them.

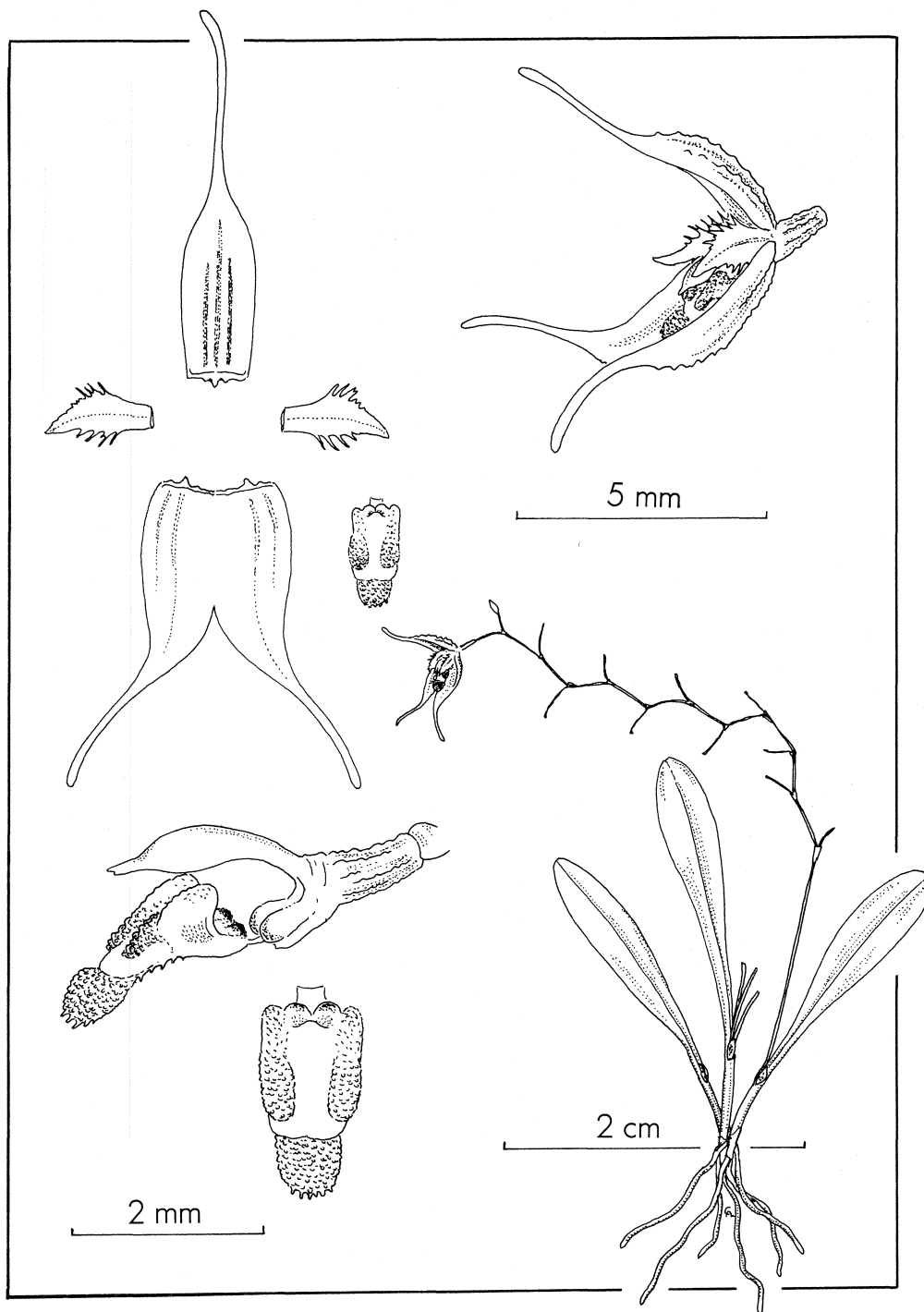


Figure 298. PLEUROTHALLIS TEMPESTALIS Luer

Pleurothallis thymochila, Luer, sp. nov.

Planta epiphytica mediocris caespitosa, caulibus secundariis gracilibus teretibus unifoliatis vaginatis, foliis erectis coriaceis ellipticis obtusis sessilibus, racemo longo flexuoso laxo plurifloro, flores maroninis carnosus bilabiatis parvis, sepalo dorsali elliptico lateribus involutis, sepalis lateralibus supra medium connatis concavis lateribus unvolutis bicarinatis, carinis serratis ad apicibus acutis, petalis late obovatis concavis margine apicis involuto verruculoso, labello elliptico trilobato, lobo antico ligulato crasso verrucoso obtuso, lobis lateralibus tenuibus rotundatis erectis.

Plant epiphytic, medium in size, caespitose; roots slender, flexuous. Secondary stems slender, terete, 3-5 cm long, largely concealed by a loose, tubular sheath, with 1-2 shorter sheaths at the base, unifoliate. Leaf coriaceous, erect, elliptical, obtuse, retuse, the base cuneate, sessile or subsessile, 5-8 × 2-3 cm. Inflorescence a suberect, loose, several-flowered, slightly flexuous raceme, up to 28 cm long, the dark red, fleshy, bilabiate flowers opening a few at a time; peduncle slender, from a narrow spathe 6-9 mm long, at the base of the leaf; floral bract infundibular, acute, 3 mm long; pedicel 6-10 mm long; ovary 4 mm long; dorsal sepal elliptical, acute, the sides involute in the natural position, 11 × 4.5 mm spread; lateral sepals connate to above the middle into an ovate synsepal, concave, the sides involute, bicarinate, the 2 carinae serrate, each terminating in an acute apex, 11 × 7 mm together and spread; petals broadly obovate, concave, the apex rounded with incurved margins, verrucose externally, subcarinate internally along the 3 veins, 4.5 × 2.5 mm; lip thick, fleshy, 3-lobes, ovate, obtuse, maroon and extensively papillose above the basal lobes, the basal lobes large, rounded, white, erect, embracing the column, 5 × 2 mm; column stout, red, 2 mm long with a short, narrow foot.

ETYMOLOGY: From the Greek *thymos*, "warty excrescences," and *cheilos*, "lip," in reference to the verrucose lip.

TYPE: 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 992 (HOLOTYPE: SEL), flowered in cult 26 May 1976.

DISTRIBUTION: Panama.

This species is closely related to the Central American *Pleurothallis pachyglossa* Lindl., but differs in having obtuse leaves, and longer racemes with more but smaller flowers. The lip is broader and thicker with larger basal lobes, similar to the lip of *P. tuerckheimii* Schltr, but from the latter it is easily distinguished by its smaller stature, small spathe, and smaller flowers.

Pleurothallis thymochila is characterized by its oblong, obtuse leaves, a slender stem with a loose sheath, a small spathe, and a long, lax, flexuous raceme of 5-9 small, maroon flowers, 2-3 reaching anthesis simultaneously. The sides of the sepals are rolled in with toothed carinae of the lateral sepals. The lip is thick and verrucose with rounded, erect lateral lobes.

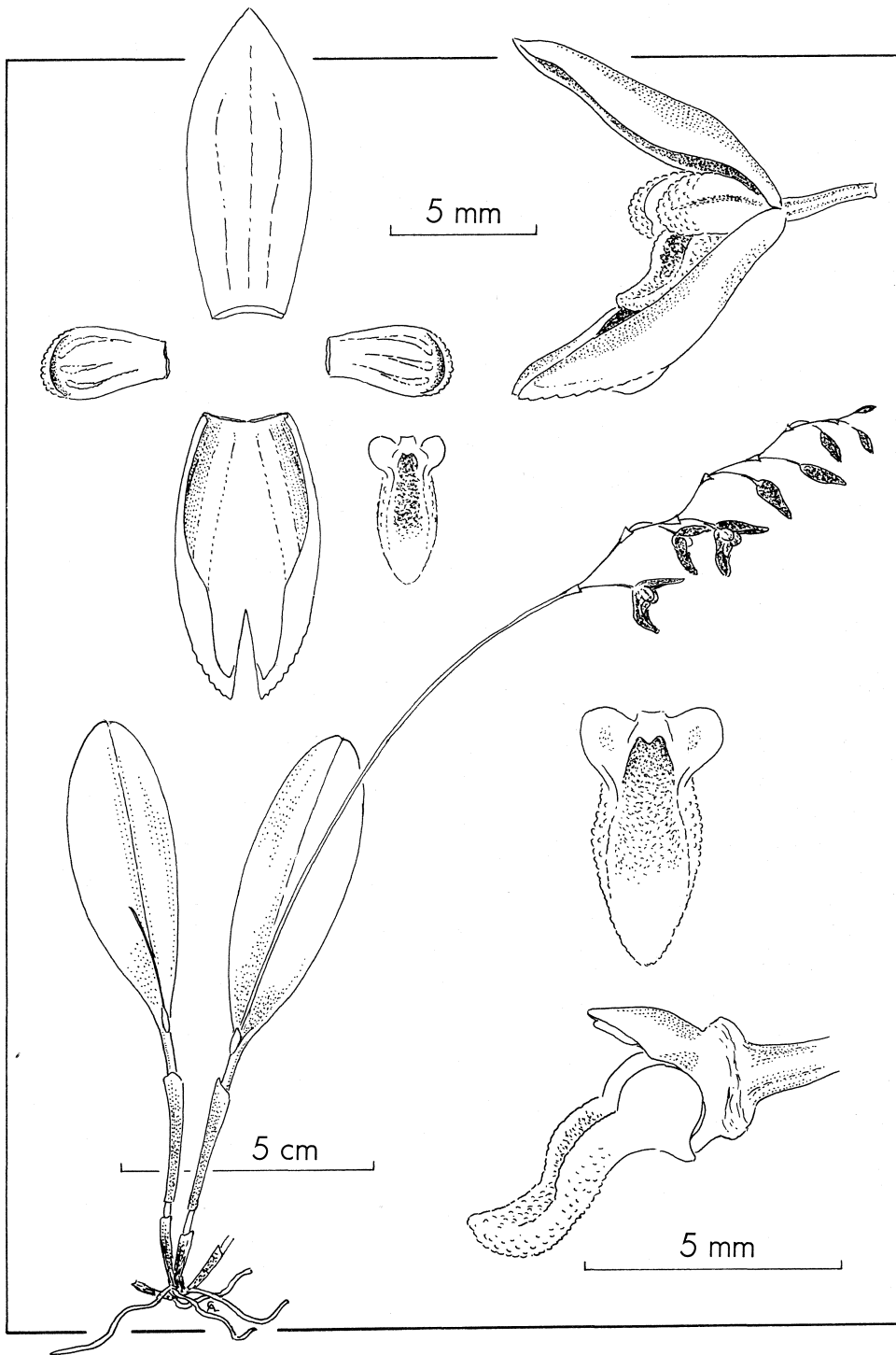


Figure 299. PLEUROTHALLIS THYMOCHILA Luer

Pleurothallis titan Luer, sp. nov.

Habitu et flore *P. cardiothallidis* Rchb. f. similis, sed statura multimore floris et margine labelli glabro differt.

Plant large, epiphytic, caespitose; roots slender, flexuous. Secondary stems slender, terete, 12-20 cm long, with a closely fitting tubular sheath below the middle and 1-2 others at the base, unifoliate. Leaves ovate, acuminate, acute, tridenticulate, the base deeply cordate, sessile, 10-20 cm long, 4-7 cm wide. Inflorescence fasciculate, the huge, widely spread flowers produced singly and successively from a spathe about 2 cm long in the axil of the leaf; pedicel 15-18 mm long; floral bract 6-7 mm long; ovary curved, 10 mm long; sepals glabrous, pale rose-brown, the dorsal sepal ovate, acute, 30-35 mm long, 15-17 mm wide, 9-veined, the lateral sepals connate into an ovate, acute synsepal, 33 mm long, 21 mm wide, 10-veined; petals pale rose-brown, narrowly triangular, acuminate to acute, 15 mm long, 3 mm wide, 3-veined; lip pale yellow, oblong-obovate to subpandurate, the apex subacute, the tip bulbous, the thickened margins glabrous, the base shallowly concave, subcordate, 14 mm long, 8.5 mm wide, 7-veined; column stout, 1.5 mm long, 4 mm wide.

ETYMOLOGY: Named for Titan of Greek mythology, noted for his immense size.

TYPE: PANAMA: CHIRIQUI: epiphytic in cloud forest above the Fortuna dam camp site, alt. 1000 m, Aug. 1976, *R. L. Dressler s.n.* (HOLOTYPE: SEL), cult. at SEL, greenhouse acc. no. 123-76-20, flowers intermittently in cult.

DISTRIBUTION: Panama.

The flower of this species resembles a gigantic flower of *Pleurothallis cardiothallis* Rchb. f. Since these two plants most certainly rely upon different pollinators, and since both occur sympatrically in western Panama, they most likely represent distinct, although closely allied species. Vegetatively the plants of the two species are very similar although the deeply cordate leaves of *P. titan* are proportionately narrower than those of *P. cardiothallis*. The dimensions of the huge flat flower are more than twice to three times those of *P. cardiothallis*, which makes the surface area over four to nine times as great. The pandurate lip is glabrous and wider above the middle.

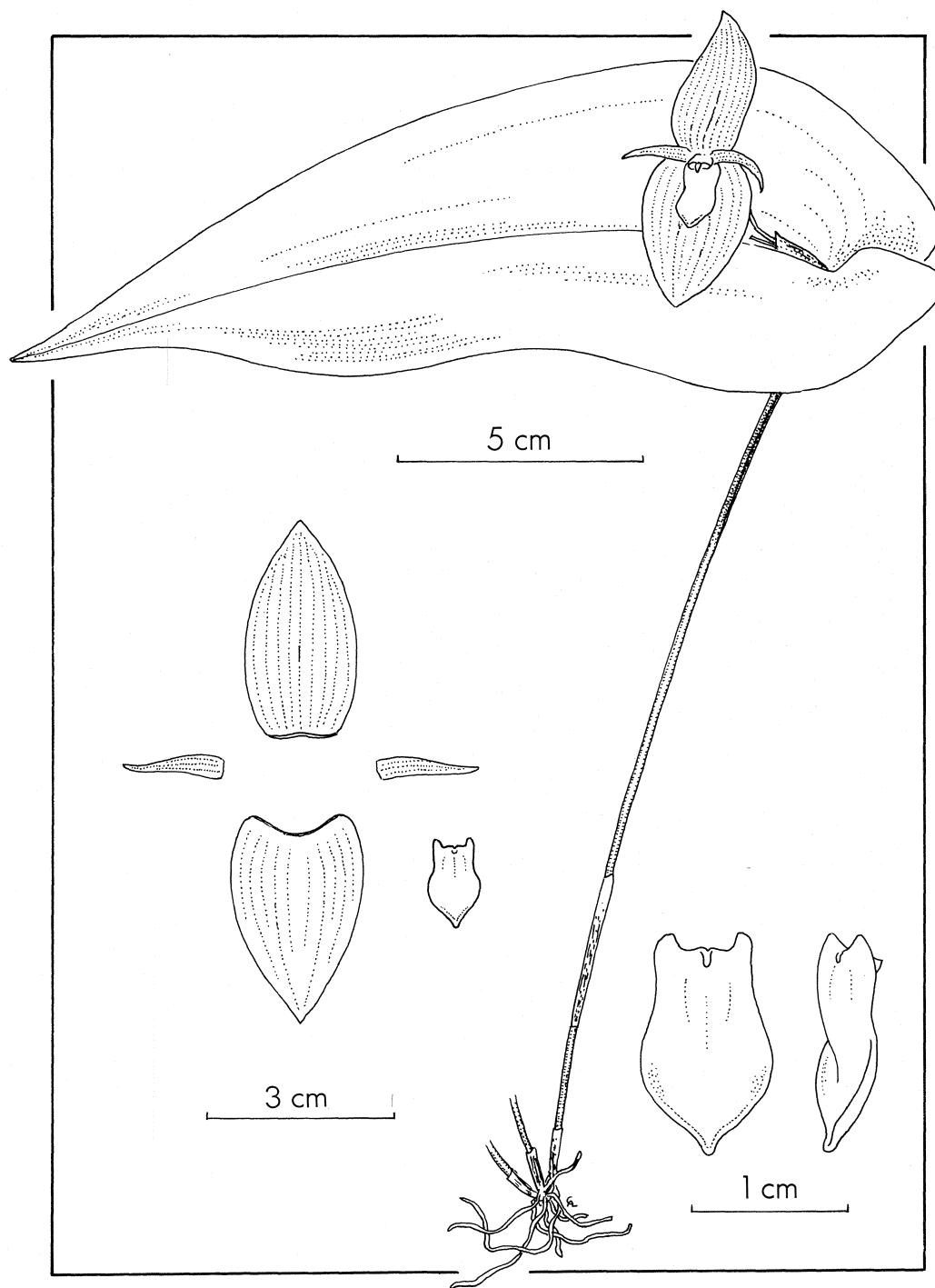


Figure 300. PLEUROTHALLIS TITAN Luer

***Pleurothallis veraguacensis* Luer, sp. nov.**

Habitu *P. rhodoglossae* Schltr. similis, sed differt sepalo dorsali crasso convexo, petalis rubris glabris anguste linearibus.

Plant small, epiphytic, caespitose; roots filiform, flexuous. Secondary stems slender, terete, 5-10 cm long, with 2-3 tubular sheaths near the base, unifoliate. Leaf coriaceous, spreading, ovate, acuminate, acute, tridenticulate, the base deeply cordate, sessile, 4.5-7.5 cm long, 2.5-4 cm wide. Inflorescence fasciculate, the small, bilabiate flowers produced singly and successively from a spathe, 5-7 mm long, at the base of the leaf; floral bract 2-3 mm long; pedicel 5 mm long; ovary 3 mm long; dorsal sepal yellow, obovate, obtuse, thickened, convex, 5.5 mm long, 2.25 mm wide, 3-veined, sub-tricarinate externally; lateral sepals connate into a pale brown, elliptical synsepal, obtuse, 4.5 mm long, 3.25 mm wide; petals red, glabrous, narrowly linear, acute, 4 mm long, 0.5 mm wide, 1-veined; lip ovate-cordate, the apex obtuse to rounded, the base concave, the disc smooth, yellow, flecked with brown, the glenion well developed, 1.75 mm long, 1.5 mm wide; column rose, short, 1 mm long, 1 mm wide.

ETYMOLOGY: Named for the Province of Veraguas where the species was discovered.

TYPE: PANAMA: VERAGUAS: epiphytic in the cloud forest near the continental divide above Santa Fe, alt. ca. 700 m, 5 Sept. 1976, C. Luer & R. L. Dressler 1141 (HOLOTYPE: SEL).

DISTRIBUTION: Panama.

This small, broadly cordate-leaved species may be identified by its thickened, obovate, obtuse dorsal sepal which is convex above the middle and sub-tricarinate externally. The petals are glabrous and narrowly linear. The featureless, subcordate lip is very small.

Pleurothallis veraguacensis may be distinguished from *P. homalantha* Schltr., *P. homalanthoides* Schltr., and *P. nemorum* Schltr. by its smaller flower with a three-veined dorsal sepal (instead of five-veined). From *P. antonensis* L. O. Wms. it may be distinguished by its glabrous petals, and smaller flower and lip. It is most like *P. rhodoglossa* Schltr. which has a similar small lip, but a membranous, concave dorsal sepal.

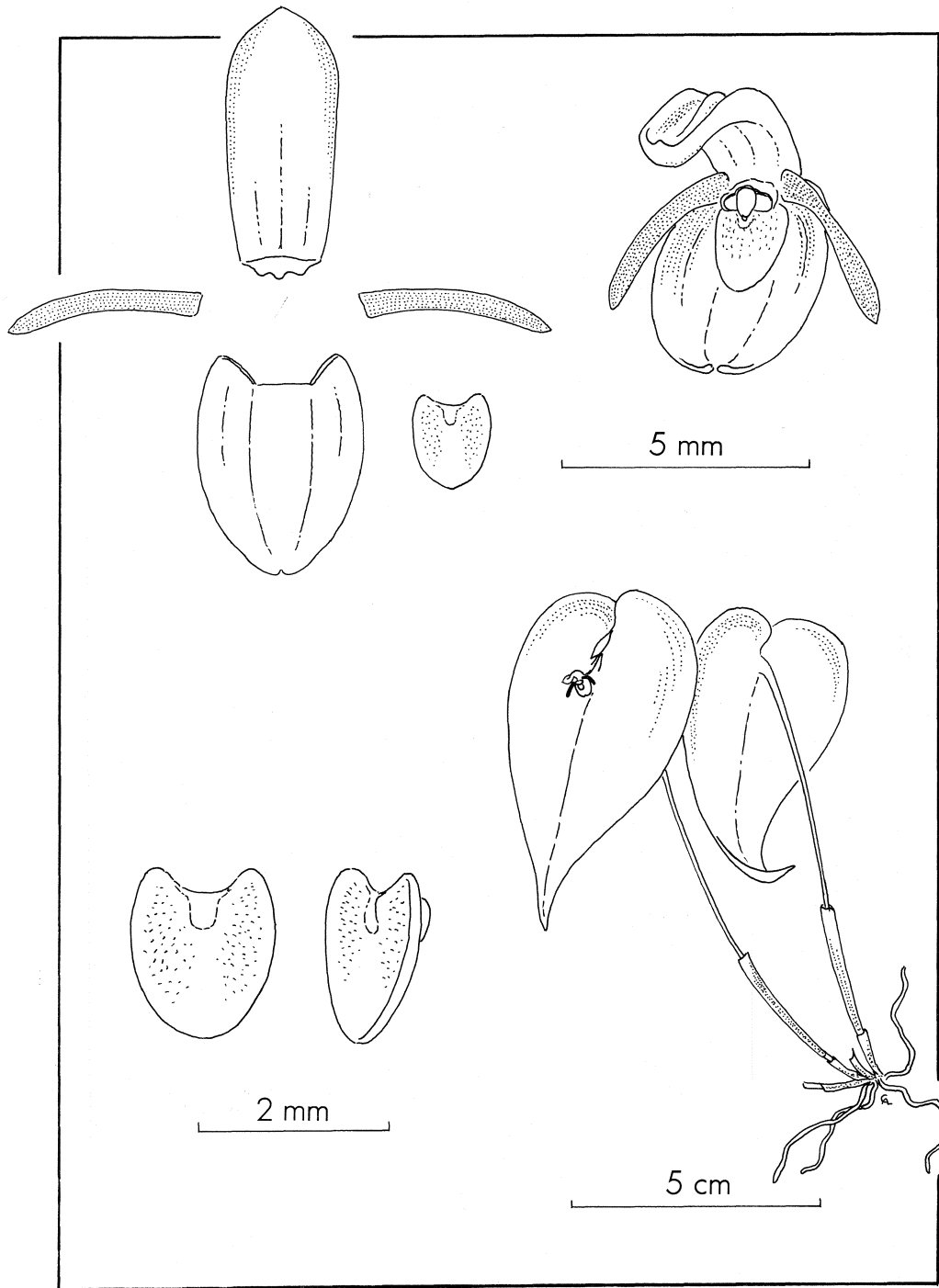


Figure 301. PLEUROTHALLIS VERAGUACENSIS Luer

***Pleurothallis vestigipetala* Luer, sp. nov.**

Planta parva epiphytica scandens, rhizomate erecto radicibus obtecto, caulibus abbreviatis unifoliatis, foliis coriaceis anguste ellipticis subacutis, racemo brevi paucifloro, floribus flavis tubulosis successivis ut videtur cleistogamis, sepalis ovato-oblongis acuminatis, petalis vestigialibus minutissimis ovatis ciliatis, labello elliptico marginibus lateralibus involutis extus minute pubescenti, columna grandi cylindrica apoda.

Plant small, epiphytic, scandent, the rhizome more or less erect, branching, producing a secondary stem about every 5 mm, concealed by descending roots and ascending secondary stems; roots slender, flexuous. Secondary stems terete, 3-5 mm long, with 1-2 thin, basal sheaths, unifoliate. Leaves suberect, coriaceous, narrowly elliptical, subacute, apiculate, the base narrowly cuneate, indistinctly petiolate, 15-23 mm long, 3.5-5 mm wide. Inflorescence a short (2-3 cm), few-flowered (3-4), loose raceme; peduncle filiform, from a node on the secondary stem; floral bract 2-3 mm long; pedicel 2-4 mm long; ovary tripartite, 2.5 mm long; flowers yellow, tubular, the sepals not spreading, maturing singly and successively, each producing a capsule, presumably cleistogamous; dorsal sepal ovate, acuminate, acute, 6 mm long, 2 mm wide, faintly 3-veined, the mid-vein prominent; lateral sepals easily separable, oblong, acuminate, acute, 6 mm long, 1.5 mm wide, the mid-veins prominent; petals minute, ovate, ciliate, 0.6 mm long, 0.2 mm wide; lip translucent yellow, elliptical, the lateral margins involute, 2.75 mm long, 1.2 mm wide spread, minutely pubescent externally, glabrous within, the base membranous, cuneate, attached to the under surface of the base of the column; column large, cylindrical, 3 mm long, footless.

ETYMOLOGY: From the Latin *vestigialis*, "vestigial," and *petalum*, "petal," in allusion to the degenerate petals.

TYPE: *ECUADOR*: AZUAY: epiphytic in trees along the stream from Lake Zaragucho, 20 km west of Cuenca, alt. 3000 m, 2 March 1977, C. Luer, J. Luer & K. Cordoba 1496 (HOLOTYPE: SEL).

DISTRIBUTION: Southern Ecuador.

Both *Pleurothallis spiralis* and *P. vestigipetala* are shortly scandent in habit, resembling each other very closely except for the smaller size of the latter. A leafy axis is formed by the rhizome engulfed by secondary stems and twisting roots. The presumably cleistogamous flowers of *P. vestigipetala* mature successively on short, few-flowered racemes. Flowers from all stages of developing ovaries and maturing capsules were dissected. The sepals of mature flowers are easily separable, but at no time do they part except slightly near the apices. The large cylindrical column nearly fills the space within the flower. The stigma is located on the end just beneath the anther. The insignificant lip is curled beneath the column and attached to the footless base. The microscopic petals cling to the sides of the base of the column.

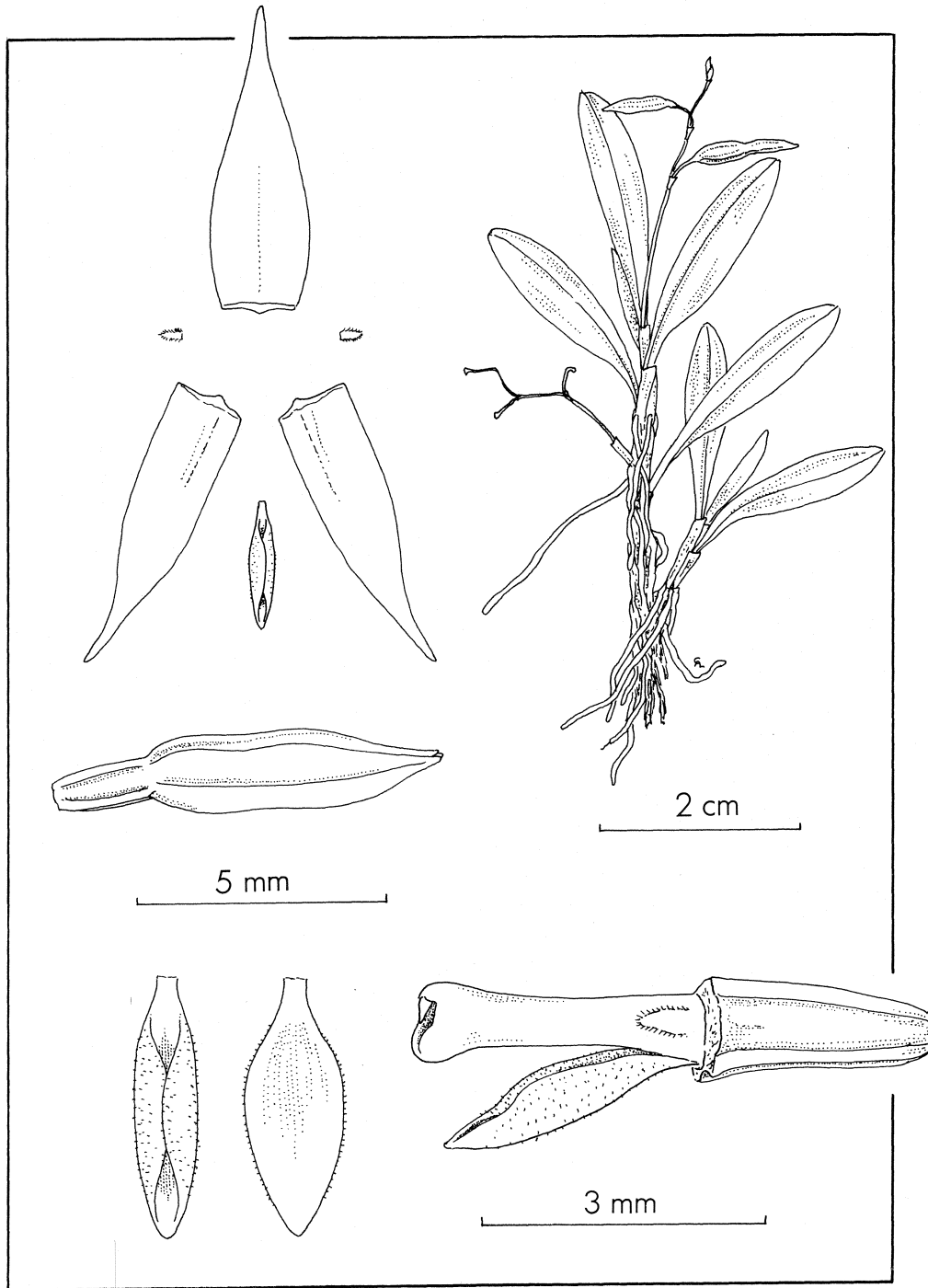


Figure 302. PLEUROTHALLIS VESTIGIPETALA Luer

Pleurothallis volcanica Luer sp. nov.

Species haec ab *P. Rowleei* Ames differt floribus multiparvioribus et petalis integris.

Plant small to medium in size, epiphytic, caespitose; roots filiform, flexuous. Secondary stems slender, terete, 4-14 cm long, with a closely fitting tubular sheath below the middle and 1-2 others at the base, unifoliate. Leaf coriaceous, erect to spreading, ovate, acuminate, acute, tridenticulate, the base broadly cuneate to rounded, sessile, 4-8 cm long, 1.5-3 cm wide. Inflorescence a weak, suberect, laxly several-flowered (5-11), secund raceme, 5-14 cm long, the peduncle filiform, from a slender spathe 5-14 mm long at the base of the leaf; flowers small, pale rose, glabrous, bilabiate; floral bract 1.5 mm long; pedicel 4-9 mm long; ovary 1 mm long; dorsal sepal ovate, acuminate, acute, concave, 3.5-4 mm long, 2.5 mm wide, 3-veined; lateral sepals connate into an ovate, acuminate, acute, minutely emarginate synsepal, similar to the dorsal sepal, 3.25-4 mm long, 2.5 mm wide, 4-veined; petals pale orange, linear-oblong, oblique, acute, thickened, entire, 2.5-3 mm long, 0.5 mm wide; lip pale yellow, sagittate-trilobed, genuflexed near the middle, the apical lobe narrowly triangular, acute, the lateral lobes broadly subquadrate, incurved, the base deeply concave, the disc with a well developed glenion near the middle, 1.5 mm long; 1.5 mm wide; column stout, 1.5 mm long, with a bulbous foot.

ETYMOLOGY: Named for the town of Volcán in the Province of Chiriqui, Panama, near which the species occurs.

TYPE: PANAMA: CHIRIQUI: epiphytic in cloud forest near Río Chiriqui west of Volcán, alt. 1500 m, 12 Sept. 1976, C. Luer & H. Butcher 1260 (HOLOTYPE: SEL), greenhouse acc. no. 123-76-64, flowered in cult. 18 Oct. 1976; on road-cut, Silla de Cerro Pando, west of El Hato del Volcán, 30 Nov. 1964, R. L. Dressler 2962 (SEL).

DISTRIBUTION: Panama.

Although obviously closely allied to *Pleurothallis longipedicellata* Ames & Schweinf. and *P. rowleei* Ames, this species is distinct in the thrice smaller flowers with entire petals. The flowers are not much smaller than those of *P. dentipetala* Rolfe, from which it is distinct in the longer pedicels as well as the smaller habit and entire petals.

Pleurothallis volcanica may be recognized by its slender secondary stems, ovate, acuminate leaves, and very small, pastel-colored, relatively long-pedicellate flowers borne in a loose raceme which exceeds the leaf to nearly twice its length. The similar, concave, acuminate dorsal sepal and synsepal spread to expose the minute lip flanked by entire, extended petals. The petals of all the related species are denticulate or ciliate.

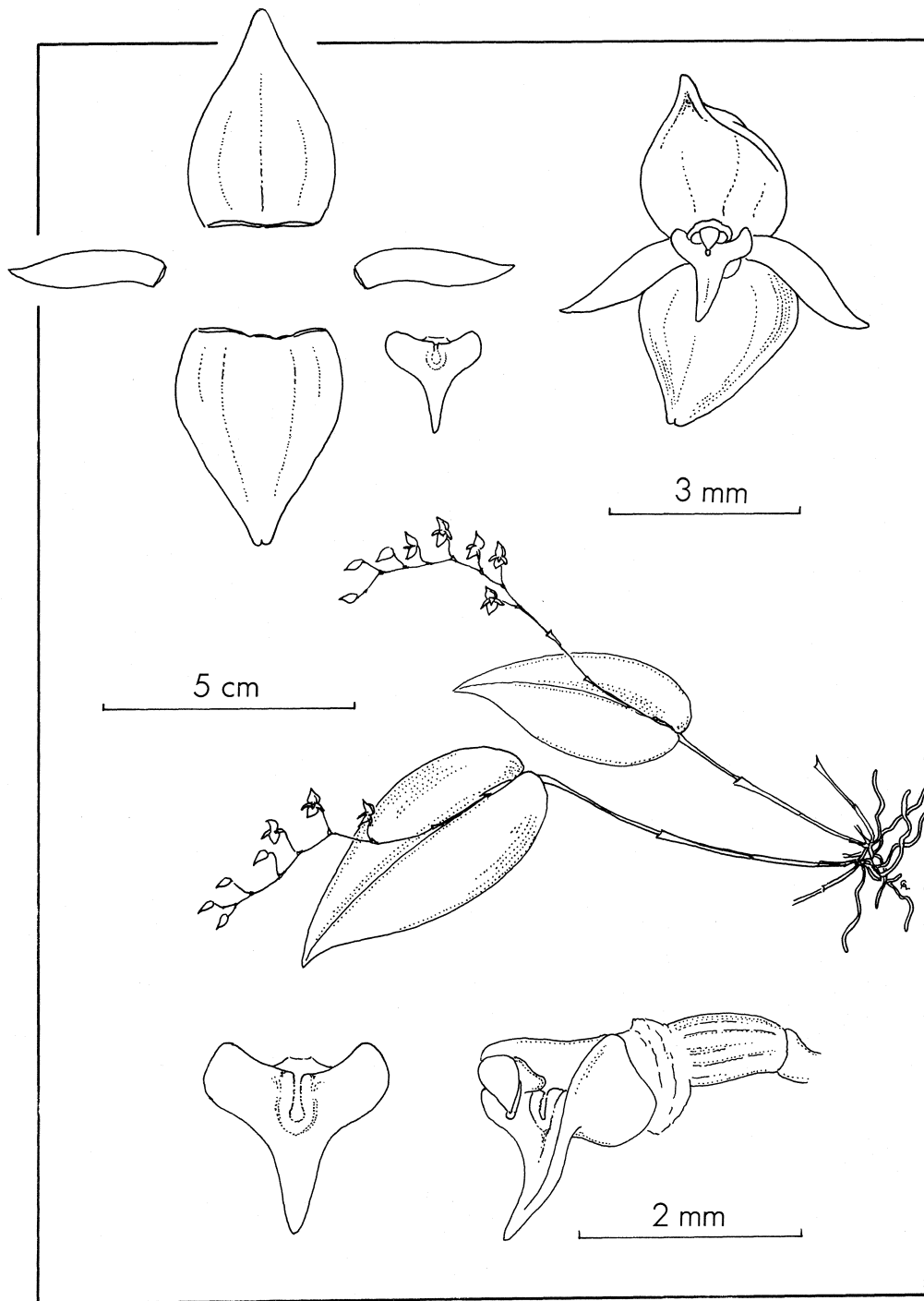


Figure 303. PLEUROTHALLIS VOLCANICA Luer