

Platystele calymma Luer, sp. nov.

Planta parva epiphytica caespitosa, caulibus secundariis abbreviatis unifoliatis, foliis coriaceis obovatis obtusis tridenticulatis petiolatis, racemo gracili quam folio triplo longiore plurifloro, floribus parvis glabris albo-virentibus longipedicellatis, sepalo dorsali oblongo concavo, sepalis lateralibus libris late falcatis acutis, petalis anguste obovatis-falcatis abrupte acuminatis, labello carnosio obovato obtuso callo basi transverse semilunato, columna latis-sime cucullata grandi pro flore.

Plant small, epiphytic, caespitose; roots slender, flexuous. Secondary stems abbreviated, 4-10 mm long, mostly clothed by 1-2 thin, ribbed sheaths, unifoliolate. Leaf erect or suberect, coriaceous, obovate, the apex obtuse to rounded, tridenticulate, the base cuneate, acuminate into a petiole 5-8 mm long, the leaf 2-3.5 cm long including the petiole, 7-10 mm wide. Inflorescence a slender, weak, laxly several-flowered (8-10) raceme, 6-8 cm long including the filiform peduncle, from a node on the secondary stem; floral bract oblique, acute, 1 mm long; pedicel 3 mm long; ovary 0.5 mm long; flowers glabrous, greenish white, widespread; dorsal sepal oblong, acute, concave, 2 mm long, 0.9 mm wide, indistinctly 1-veined; lateral sepals free, broadly falcate, acute, 1.75 mm long, 0.8 mm wide, indistinctly 1-veined; petals obovate-falcate, shortly acuminate, acute, 1.75 mm long, 0.4 mm wide; lip green fleshy, the cells prominent microscopically, obovate, obtuse, the base with a transverse, semilunate callus, the disc thickened above the basal callus with a shallow depression in the center, 1 mm long, 0.6 mm wide; column 1 mm long with broad, rounded, lateral wings, 1.3 mm across, spread apart, the foot obsolescent.

ETYMOLOGY: From the Greek *calymma*, "a hood," in reference to the large, hooded column.

TYPE: PANAMA: PANAMA: epiphytic in the cloud forest along the El Llano-Carti road, alt. ca. 650 m, Feb. 1977, R. L. Dressler s.n. (HOLOTYPE: SEL), greenhouse acc. no. 77-1751, flowered in cult. 15 May 1977.

DISTRIBUTION: Panama.

Vegetatively this distinctive species is not remarkable, the small, obovate, short-stemmed leaves resembling many species of *Pleurothallis* and *Stelis*. The tiny, greenish white flowers, however, differ in many respects from those of other species of *Platystele*. The broad, falcate lateral sepals are held together as if they were united. The equally long, falcate petals are held out and down to either side of the lateral sepals. The obtuse, green labellum is similar in size to the comparatively large broadly cucullate column which overhangs about half of the lip. Deep within the hood, the lip is furnished with a transverse, rounded callus just above the attachment to the base of the column.

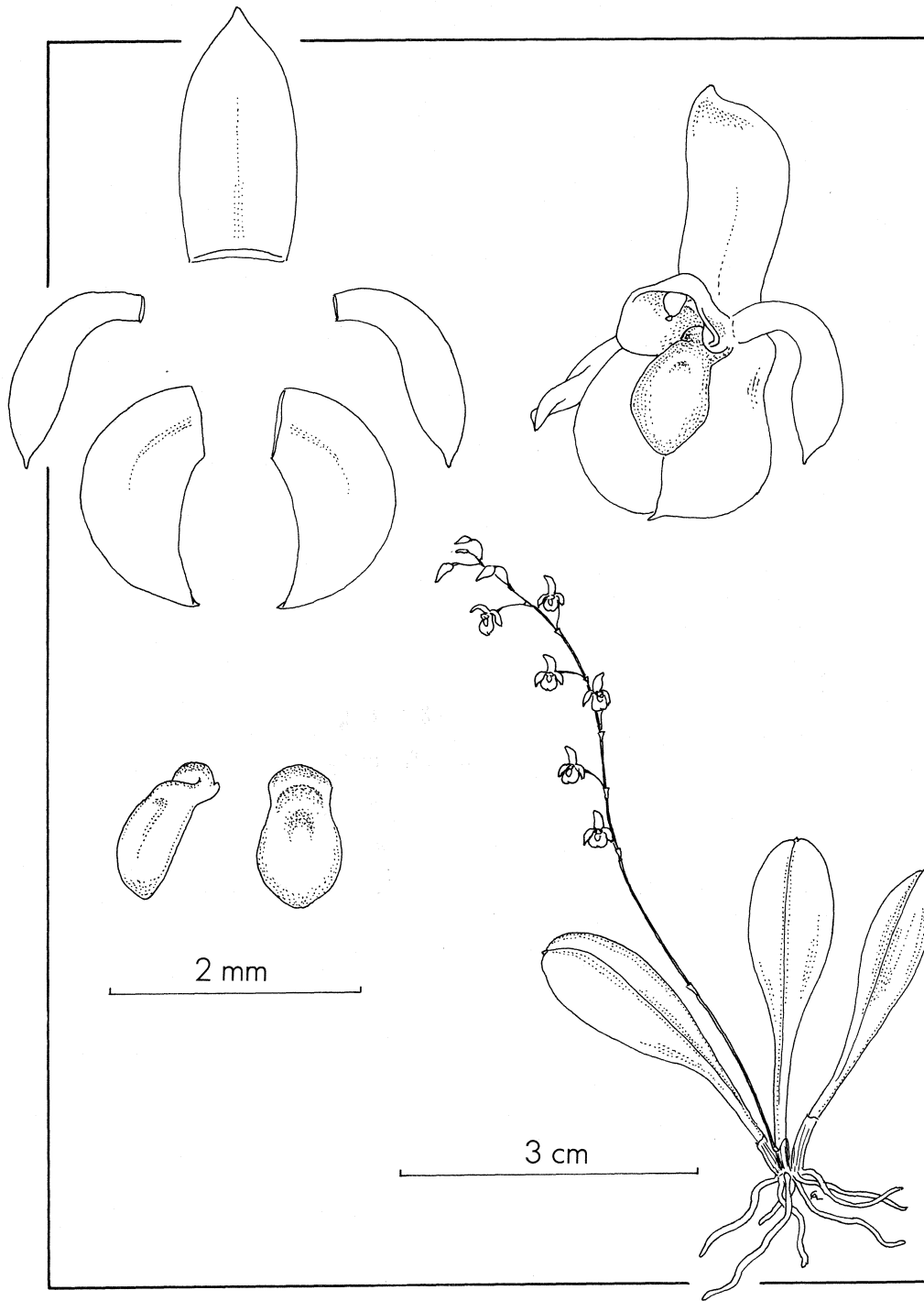


Figure 214. PLATYSTELE CALYMMA Luer

Platystele gyroglossa Luer, sp. nov.

Habitu et floribus *P. miserae* (Lindl.) Garay similis, sed floribus minoribus et labello suborbiculato differt.

Plant small, but large for the genus, epiphytic, caespitose; roots slender, flexuous. Secondary stems terete, short, 5-10 mm long, partially concealed by two thin, tubular sheaths, unifoliate. Leaf erect, coriaceous, narrowly ovate the apex subacute to obtuse, tridenticulate, the base narrowly cuneate, gradually petiolate, 2-6 cm long including the petiole, 9-14 mm wide. Inflorescence a slender, subdensely many-flowered, distichous raceme 6-9 cm long, producing 5-10 flowers simultaneously, the peduncle filiform, from a node low on the secondary stem; floral bract tubular, acute, about 1 mm long; pedicel 1.5-2 mm long; ovary scabrous, 1 mm long; sepals and petals widely spread, free, glabrous, pale yellow-green suffused with rose centrally, the dorsal sepal ovate, obtuse, 2 mm long, 1.3 mm wide, the lateral sepals ovate, oblique, subacute, subcarinate, 2 mm long, 1 mm wide, the petals elliptical, subacute, 2 mm long, 0.8 mm wide; lip red, the cells visible microscopically, sub-orbicular, rounded, convex above, concave beneath, the base shortly concave, 1.6 mm long, 1.2 mm wide; column stout, hooded, about 1 mm long and broad.

ETYMOLOGY: From the Greek *gyros*, "rounded," and *glossa*, "tongue," in reference to the suborbicular lip.

TYPE: *ECUADOR*: TUNGURAHUA: epiphytic in old guava trees between Baños and Río Negro, alt. ca. 1800 m, 13 March 1975, *C. Luer & R. Kent 208* (HOLOTYPE: SEL), greenhouse acc. no. 15-75-117, flowers intermittently in cult.

DISTRIBUTION: Eastern Ecuador.

Vegetatively this species is as large as and similar to that of *Platystele misera* (Lindl.) Garay. Although also similar, the flowers are smaller, and are borne on shorter racemes, but the racemes still may exceed the leaves by about twice their length. Also resembling *P. misera*, the translucent yellow-green sepals and petals are ovate and subacute, but the red lip is rounded. *Platystele gyroglossa* is much larger than *P. ovatilabia* (Ames & Schweinf.) Garay.

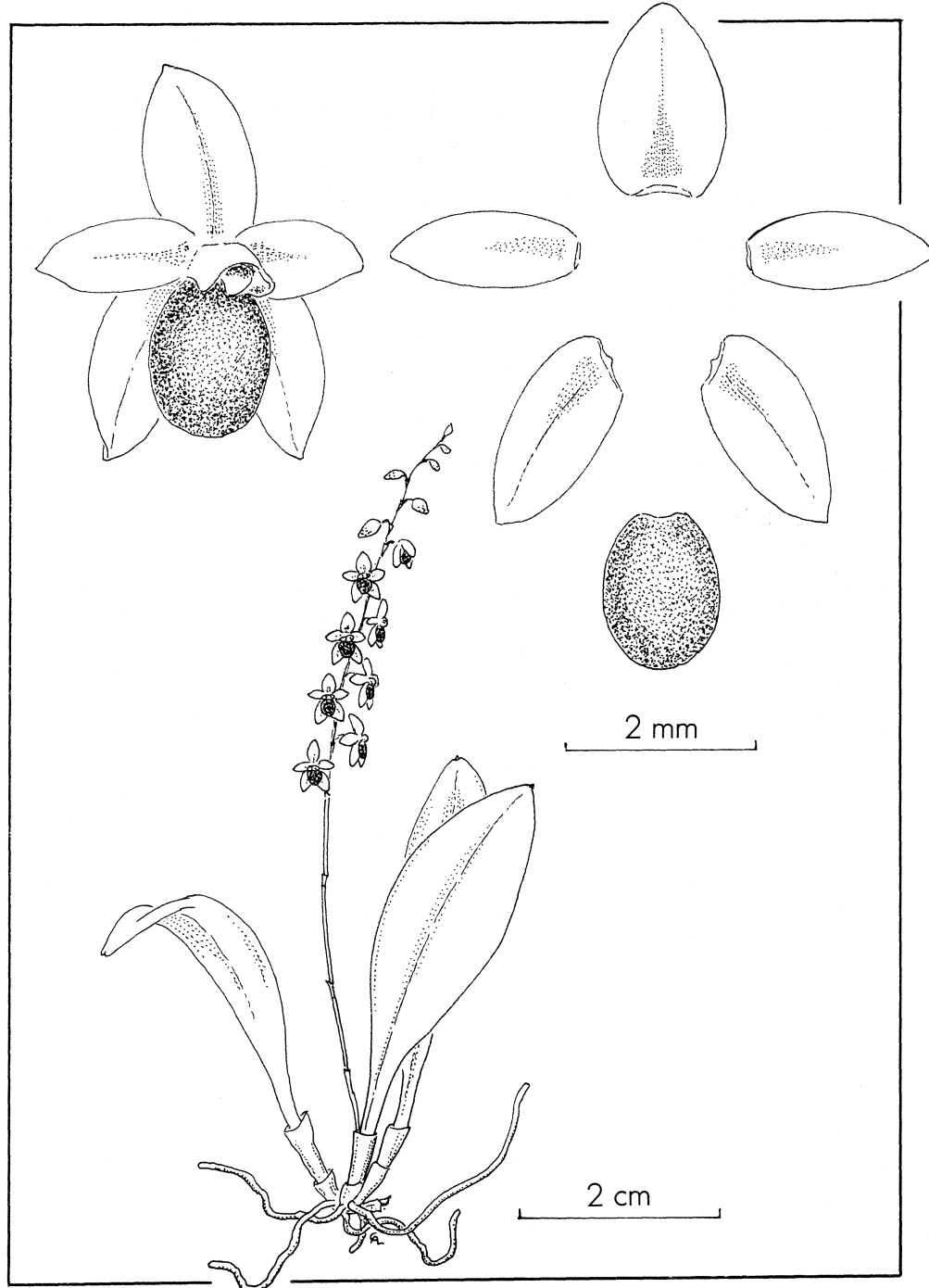


Figure 215. PLATYSTELE GYROGLOSSA Luer

Platystele misera (Lindl.) Garay, Bot. Mus. Leaflet. 21:251. 1967.

Pleurothallis misera Lindl., Folia Orchid. Pleuroth. 36. 1859.

Humboldtia misera (Lindl.) Kuntze, Rev. Gen. Pl. 2:668. 1891.

Plant small, but large for the genus, epiphytic, caespitose; roots filamentous, flexuous. Secondary stems short, terete, 1-2.5 cm long, partially concealed by thin, scarious, tubular sheaths, unifoliate. Leaf coriaceous, narrowly obovate, the apex obtuse to rounded, tridenticulate, the base narrowly cuneate, gradually petiolate, 3-6 cm long including the petiole, 1-1.5 cm wide. Inflorescence a slender, densely many-flowered, distichous raceme to 23 cm long, producing 5-10 flowers simultaneously, the peduncle filiform, from a node low on the secondary stem; floral bract infundibular, acute, 2 mm long; pedicel 2 mm long, ovary 1 mm long; sepals and petals widely spread, free, glabrous, pale yellow with the central vein rose, all elements ovate, subacute to acute, the sepals 3-3.5 mm long, 1.5-2 mm wide, the petals 3 mm long, 1 mm wide; lip red, fleshy, the cells visible microscopically, ovate, acute, more or less convex, concave beneath, the base rounded, 2.5 mm long, 1.3 mm wide; column hooded, short, 1 mm long, 2 mm broad.

ETYMOLOGY: From the Latin *miser*, "wretched," probably in allusion to Lindley's opinion of the little plant.

TYPE: PERU: SAN MARTIN: Chachapoyas, *Mathews 3197* (HOLOTYPE: K).

DISTRIBUTION: Peru, Ecuador, and Colombia.

ECUADOR: without definite locality, *B. Berliner s.n.* (SEL), flowered in cult. 17 Oct. 1975.

COLOMBIA: ANTIOQUIA: La Primavera, 40 km S. of Medellin, alt. 1700 m, 12 June 1965, *C. H. Dodson & H. Hills 3107* (SEL).

Although one of the largest species of the genus *Platystele*, *P. misera* apparently ranked low in Lindley's estimation among the species of *Pleurothallis*. The narrowly obovate leaves form dense clusters, and the slender flower-stem towers far above. An unusually large number of flowers, up to ten and arranged in two rows, reaches anthesis simultaneously as the flowering progresses up the stem. The flowers are not unusual for the genus. All floral parts are ovate with more or less subacute apices, translucent yellow and suffused with rose centrally; the lip is crystalline red.

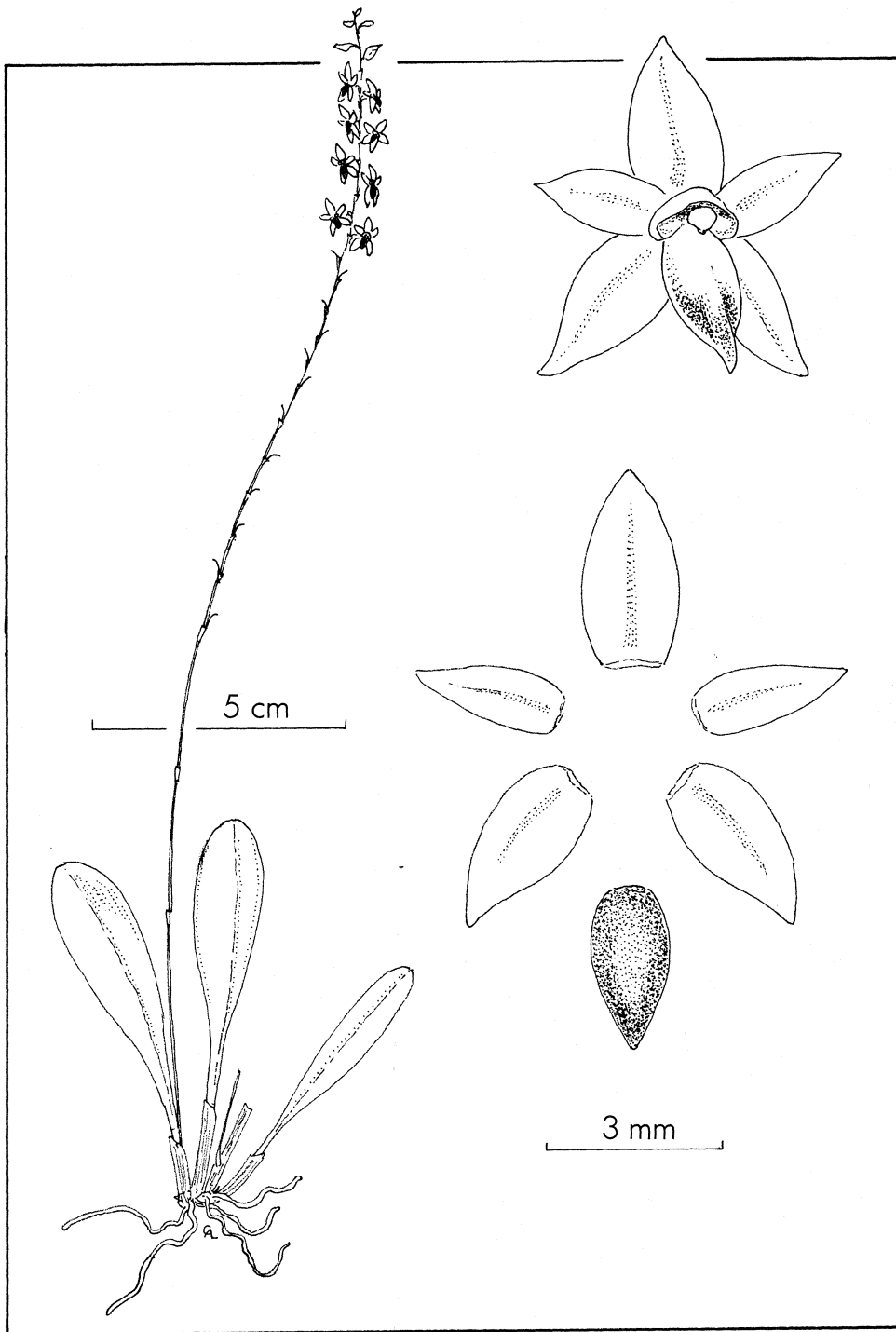


Figure 216. PLATYSTELE MISERA Lindl.

Platystele pisifera (Lindl.) Luer, comb. nov.

Pleurothallis pisifera Lindl., Folia Orchid. Pleuroth. 36. 1859.

Humboldtia pisifera (Lindl.) Kuntze, Rev. Gen. Pl. 2:668. 1891.

Plant very small, epiphytic, caespitose; roots relatively thick, flexuous. Secondary stems abbreviated, 2-4 mm long, surrounded by 1-2 loose, thin sheaths, unifoliate. Leaf erect, coriaceous, narrowly obovate, subacute to obtuse, tridenticulate, the base narrowly cuneate into a slender, channeled petiole, 2-3 cm long including the petiole, 3-4 mm wide. Inflorescence a weak, flexible, subdensely many-flowered raceme to 12 cm long, the yellow, glabrous flowers produced 1 (to 2?) at a time, the peduncle capillary, from a node on the secondary stem; floral bract translucent, oblique, acute, 1.5 mm long; pedicels from 7 mm long below to 3 mm long above; ovary 1 mm long; sepals ovate with long-acuminate, acute apices, the dorsal sepal concave, 5 mm long, 1 mm wide, the lateral sepals oblique, 5 mm long, 1.5 mm wide; petals ovate with long-acuminate, acute apices, 3 mm long, 1 mm wide; lip fleshy, narrowly triangular, the apex narrowly acute, microscopically erose, the base truncate, swollen into a bilobed callus, 1.5 mm long, 0.5 mm wide; column hooded, short, about 1 mm long and wide.

ETYMOLOGY: From the Latin *pisum*, "pea," and *-fer*, "bearing" (from *ferre*, "to bear"), hence "pea-bearing" in allusion to "fruit globular, smaller than the smallest peas."

TYPE: *ECUADOR*: AZUAY: Zaragucho, near Cuenca, 23 Oct. 1839, *Jameson s.n.* (HOLOTYPE: K).

DISTRIBUTION: Southern Ecuador.

ECUADOR: AZUAY: epiphytic near Lake Zaragucho, 20 km west of Cuenca, alt. 3000 m, 10 Jan. 1958, *C. H. Dodson 287A* (SEL); same, 2 March 1977, *C. Luer, J. Luer & K. Cordoba 1496A* (SEL).

Dense tufts of this little species are still growing on the stunted trees near Lake Zaragucho in a high, chilly, mountainous valley, apparently where they were first obtained by Jameson about 140 years ago. Lindley spelled the name Surucucho. Remains of the old stone road to the lake are now nearly obliterated.

Long, hair-like racemes produce a succession of thin, pale yellow flowers rather typical of the genus. The sepals and petals are long-acuminate, and the lip is narrowly triangular with a bilobed callus at the base.

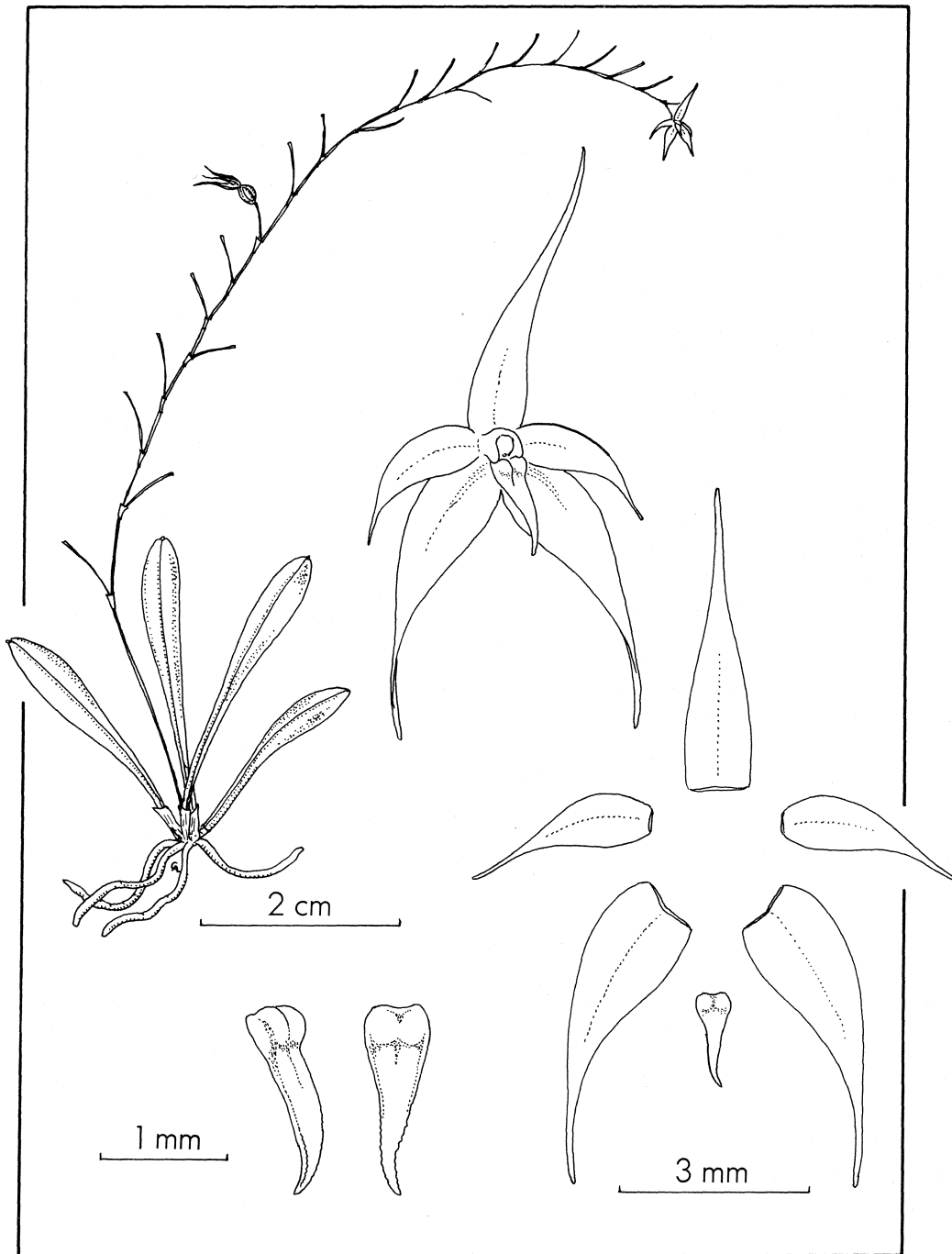


Figure 217. *PLATYSTELE PISIFERA* (Lindl.) Luer

Platystele stevensonii Luer, sp. nov.

Planta perpusilla epiphytica caespitosa, caulibus secundariis brevissimis unifoliatis, foliis coriaceis anguste obovatis obtusis tridenticulatis base acuminatis petiolatis, racemo flaccido longissimo multifloro floribus successivis, sepalis petalisque roseo-virescentibus ciliolatis, sepalis ovatis acuminatis, petalis angustissime ovatis acuminatis, labello rubro carnosso elliptico rotundato leviter sulcato.

Plant very small, epiphytic, caespitose; roots slender, flexuous. Secondary stems abbreviated, 3-5 mm long, partially concealed by 1-2 short, tubular sheaths, unifoliate. Leaf erect, coriaceous, narrowly obovate, obtuse, tridenticulate, marginate, the base narrowly cuneate-acuminate into a petiole, 10-20 mm long including the petiole, 4-5 mm wide. Inflorescence a weak, flaccid, many-flowered raceme, up to 15 cm long, producing 1-3 flowers simultaneously, the peduncle filiform, from a node on the secondary stem; floral bract 0.5 mm long, pedicel 2-10 mm long, ovary 0.5 mm long; sepals and petals free, wide-spread, rose with green apices, the margins minutely ciliate, the sepals ovate with narrowly acuminate apices, the lateral sepals oblique, 3 mm long, 0.8-1 mm wide, 1-veined, the petals very narrowly ovate, acuminate, 2 mm long, 0.25 mm wide; lip rose-red, fleshy, elliptical, the apex rounded, the base shallowly concave, the disc shallowly sulcate, 1.25 mm long, 0.75 mm wide; column red, hooded, short, about 1 mm long, 1 mm wide.

ETYMOLOGY: Named in honor of *F. L. Stevenson* who found the plant and kept it in cultivation.

TYPE: *ECUADOR*: without locality, *F. L. Stevenson 61874-12* (HOLOTYPE: SEL), flowered in cult. 18 June 1974, 24 Jan. 1975.

DISTRIBUTION: Ecuador.

This species was found in Ecuador, perhaps ten years ago, by *F. L. Stevenson* of Chamblee, Georgia, where it has thrived in cultivation since that time. Vegetatively *Platystele stevensonii* is similar to many other species in the genus. The weak, flaccid, hair-like raceme continues to elongate as it produces as many as 30 flowers a few at a time in slow succession. The flowers are rose with green, acuminate apices of the widely spread, minutely ciliated sepals and petals. The elliptical lip is red.

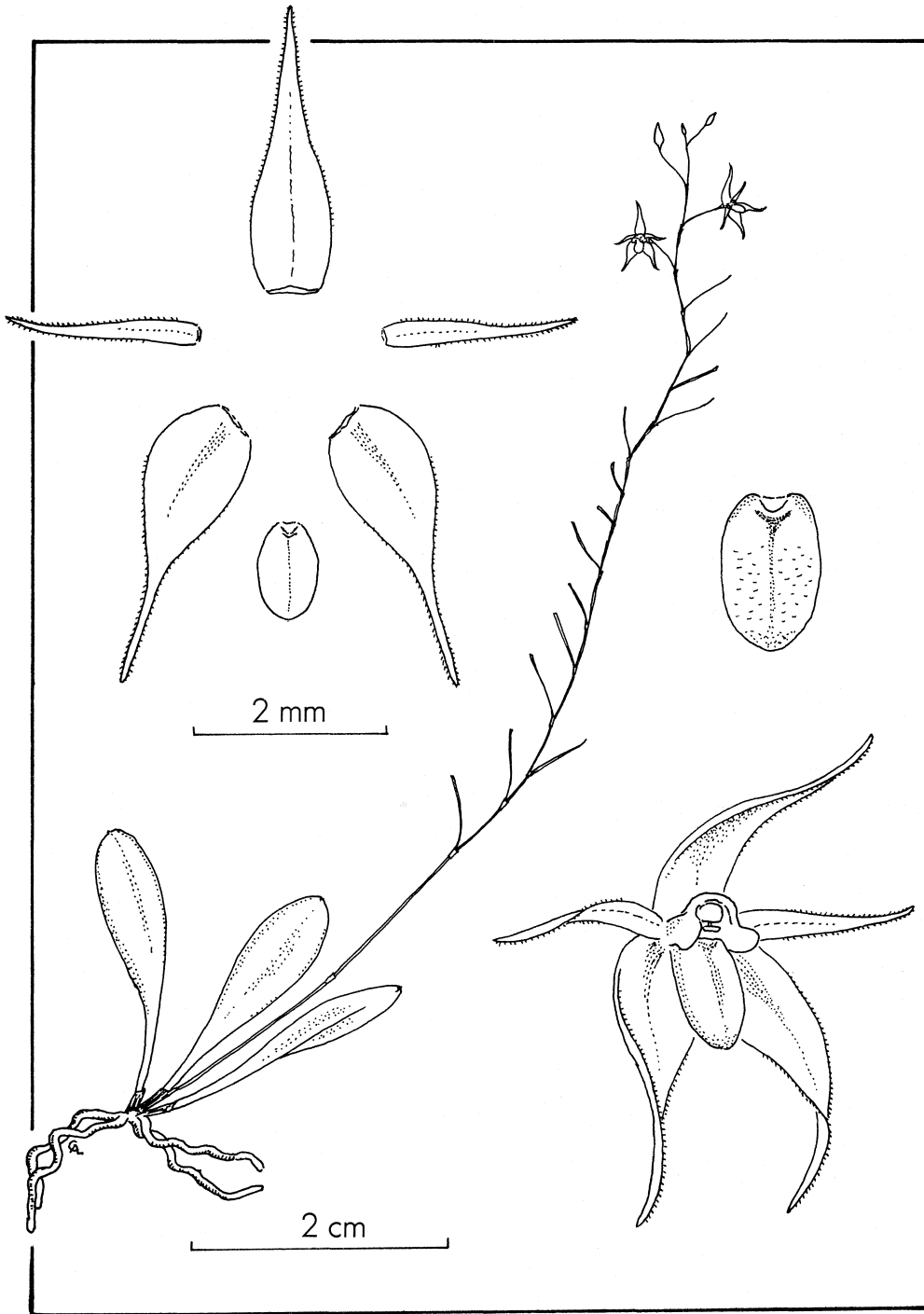


Figure 218. PLATYSTELE STEVENSONII Luer