

ICONES STELIDARUM (ORCHIDACEAE) COLOMBIAE III¹

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Abstract. An additional fifty new species of *Stelis* from Colombia are described and illustrated in this the third of a series that includes those not identified when compared with any of the previously known species.

Keywords: Colombia, Orchidaceae, Pleurothallidinae, *Stelis*

While continuing to revise the genus *Stelis* Sw. for Colombia, an additional 50 new species are described and illustrated in the third part of this series.

Stelis adinfinatum Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Antioquia?: without collection data, fl. in cult. by Marta and Oscar Robledo at La Ceja, Jan. 1978, *C. Luer 2871* (Holotype: SEL). Fig. 1.

This long-scandent, prolific species is characterized by each ramicaul bearing another ramicaul; an elongated, flexuous, successively flowered raceme of flowers with obtuse, long-pubescent sepals, single-veined petals, and a subquadrate lip.

Plant medium in size, epiphytic, prolific, long-scandent; roots slender. Ramicauls slender, ascending, 6–9 cm long, enclosed by a tubular sheath from below the middle and another at the base, arising from the apex of a ramicaul, with a spathe 1–1.5 cm long. *Leaf* erect, coriaceous, elliptical, subacute to obtuse, 5–7 cm long including a petiole 1–2 cm long, the blade 1.5–1.8 cm wide in the dry state, cuneate below into the petiole. *Inflorescence* solitary; to 25 cm long, the raceme erect, arching, flexuous, distichous, many-flowered; floral bracts oblique, acute, 2 mm long; pedicel 1.5 mm long; ovary 2 mm long; the peduncle 7–10 cm long, from the apex of a ramicaul with a spathe 1.5 cm long; flowers light yellow; *sepals* long-pubescent within, ovate, obtuse, 3-veined, the dorsal sepal 3 mm long, 3 mm wide, the lateral sepals, 2 mm long, 2.7 mm wide; *petals* transversely ovate, the apical margin obtuse, thickened, 0.6 mm long, 1 mm wide, 1-veined; *lip* subquadrate, 0.5 mm long, 0.7 mm wide, 0.7 mm deep, shallowly concave below a bitumid bar with a shallow notch, the apex broadly obtuse with the margin thickened, the dorsum featureless, the base truncate, hinged to the column-foot; *column* stout, 0.6 mm long and wide, the anther and confluent stigmatic lobes apical.

Etymology: From the Latin *adinfinatum*, “without end,” referring to the continuous production of superposed ramicauls.

This medium-sized species is distinguished by a long-scandent chain of end-to-end ramicauls, a petiolate leaf, and an elongating, flexuous raceme with several flowers

persisting at the summit. A ramicaul emerges together with the spathe and an inflorescence at the apex of each ramicaul. The sepals are 3-veined long-pubescent, the petals are single-veined, and the lip is a simple type A.

Stelis amaliae Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Cauca: Valle de Popayán, cultivated in Popayán by Amalia Lehmann de Sarria, 16 November 1982, *C. Luer 8447* (Holotype: SEL). Fig. 2.

This medium-sized, caespitose species is characterized by acute, elliptical leaves surpassed by two twice-longer, many-flowered, strict, distichous racemes with small, 3-veined sepals; minute, thick, 3-veined petals; and a minute, rounded lip with a broad bar.

Plant medium in size, epiphytic, densely caespitose; roots slender. Ramicauls erect, slender, 4–6 cm long, with a tubular sheath on the middle third and another 1–2 sheaths about the base. *Leaf* erect, coriaceous, elliptical, acute, 5–8 cm long including a petiole 1.5–2 cm long, the blade 0.7–1 cm wide in the dry state, cuneate below into the petiole. *Inflorescence* 1–2; 10–16 cm long, erect, strict, distichous, many flowered; floral bracts oblique, acute, 1.5–2 mm long; pedicel 1 mm long; ovary 1 mm long; the peduncle ca. 2 cm long, from near the apex of the ramicaul, subtended by a spathe 11–12 mm long; *sepals* yellow-green, lightly suffused with purple, microscopically pubescent, broadly ovate, obtuse, connate below the middle, 3-veined, 2 mm long, 2 mm wide; *petals* yellow-green, ovate, concave, 0.5 mm long, 0.6 mm wide, the apex obtuse with a thick margin, concave below a transverse carina, 3-veined; *lip* subquadrate, 0.5 long, 0.6 mm wide, 0.4 mm deep, shallowly concave below a thick, shallowly bar, apex rounded and minimally thickened, the dorsum featureless, the base truncate, hinged to the base of the column; *column* stout, ca. 0.5 mm long and wide, the anther and stigmatic lobes apical.

Eponymy: Named for Amalia Lehmann de Sarria, daughter of F.C. Lehmann, who collected and cultivated this species at their old home in Popayán.

This species from the southern Central Cordillera has no single feature to distinguish it from dozens of other species, except for the combination of the features: numerous, small

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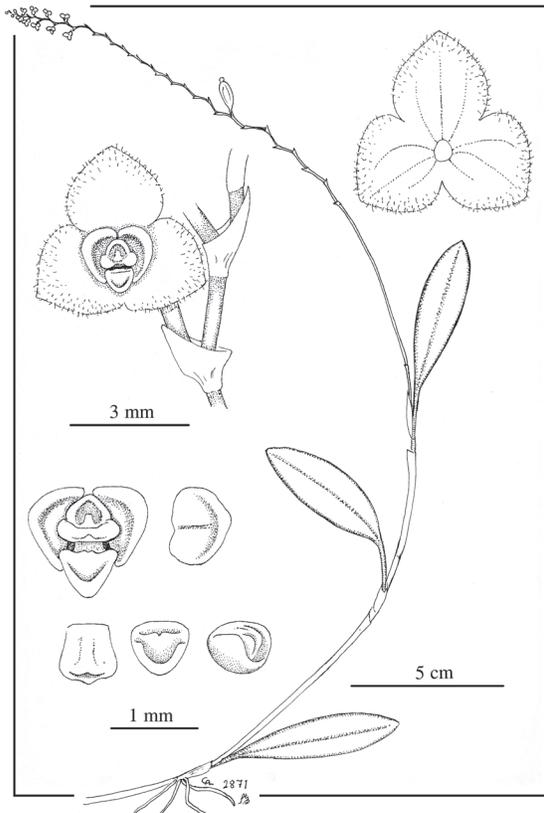


FIGURE 1. *Stelis adinfinatum* Luer & R.Escobar

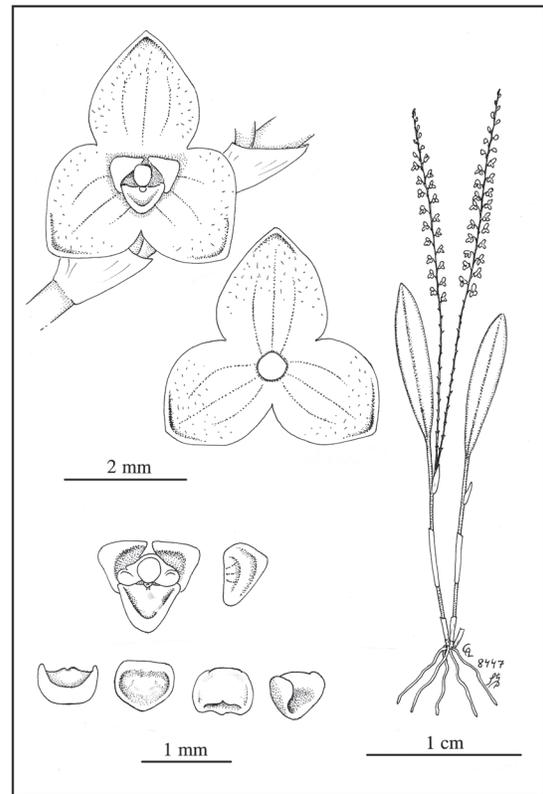


FIGURE 2. *Stelis amaliae* Luer & R.Escobar

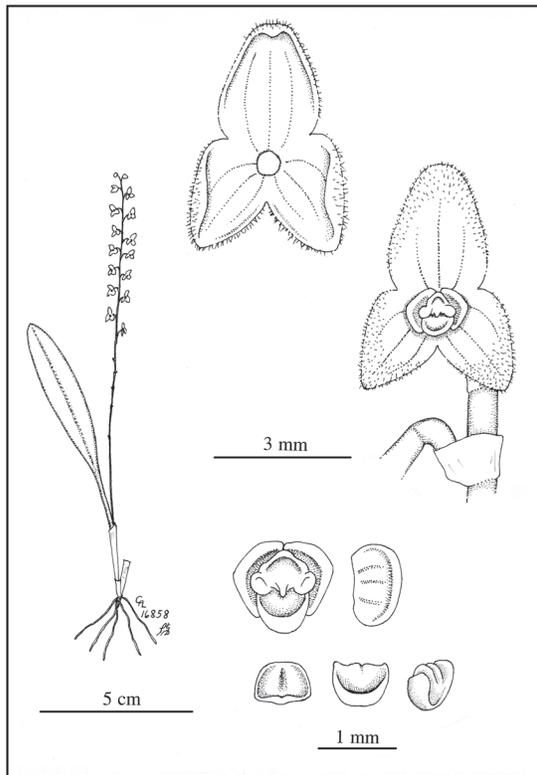


FIGURE 3. *Stelis baudoënsis* Luer & R.Escobar

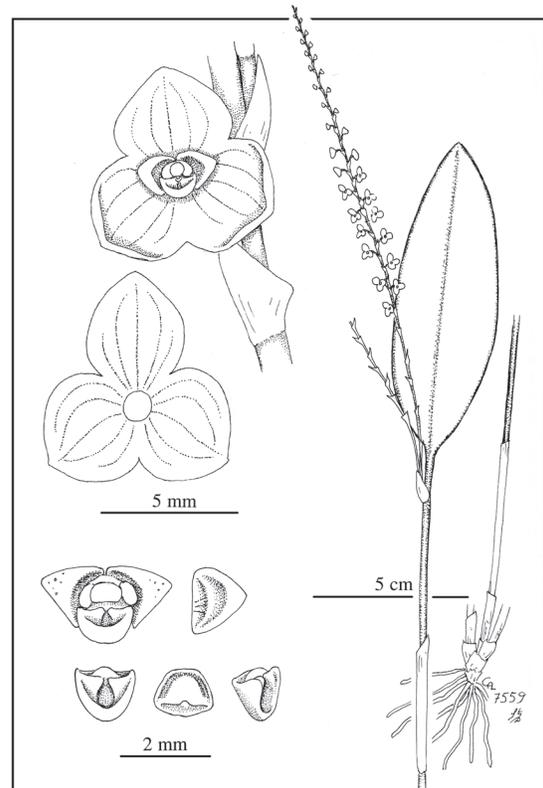


FIGURE 4. *Stelis boyacensis* Luer & R.Escobar

flowers in a crowded, two-sided racemes twice longer than acute, elliptical leaves. The sepals and petals are not distinctive except for their small size about a half millimeter long and wide.

Stelis baudoënsis Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Chocó: Alto de Baudo, 400 m, fl. in cult. by A. de Wilde above Pereira, 15 May 1993, *A. de Wilde 3939* (Holotype: SEL), C. Luer illustr. 16858. Fig. 3.

This medium-sized, caespitose species is characterized by a secund raceme twice as long as an elliptical leaf; convex, shortly pubescent, 3-veined sepals; 3-veined petals; and a rounded lip with a sulcate bar.

Plant medium in size, epiphytic, densely caespitose; roots slender. Ramicauls erect, slender, 2.5–3 cm long, enclosed by a loose, tubular sheath from below the middle, and 1–2 sheaths below and at the base. *Leaf* erect, coriaceous, elliptical, acute, 8–9 cm long including a petiole ca. 2 cm long, the blade 1–1.5 cm wide in dry state, cuneate below into the petiole. *Inflorescence* single; 12 cm long, the raceme erect, strict, subclax, many-flowered; floral bracts tubular, obtuse, 1 mm long, 1.5 mm wide; pedicels 1.5 mm long; ovary 1.5 mm long; the peduncle ca. 3 cm long, from a node below the abscission layer; flowers light green; *sepals* short-pubescent, ovate with the margins recurved, subacute, 3-veined, connate in lower quarter, the dorsal sepal 3 mm long, 2 mm wide, the lateral sepals 2 mm long, 1.75 mm wide; *petals* transversely elliptical, concave, the broadly rounded apex thickened, 0.6 mm long, 1.25 mm wide, 3-veined; *lip* subovoid, with apex broadly rounded, 0.6 mm long, 0.8 mm wide, 0.6 mm deep, shallowly concave below a broad, smooth, shallowly sulcate bar, the dorsum shallowly sulcate, the base truncate, hinged to the base of the column; *column* clavate, ca. 0.8 mm wide and long, the anther and stigmatic lobes apical.

Etymology: Named for the department of Baudo, where the species was collected.

This medium-sized, densely caespitose species occurs at a low altitude in western, coastal Colombia. It is characterized by a ramicaul shorter than an acute, elliptical leaf surpassed by a subclax, many-flowered raceme. The sepals are pubescent with the margins recurved, and the petals are 3-veined. The lip is a simple type A with a thick, smooth, shallowly sulcate bar.

Vegetatively, the plant of this collection (*de Wilde 3939*) is similar to (*de Wilde 4500*, *Stelis divergens*), described herein, both having been collected in Baudo and cultivated near Pereira, but the petals and lip differ drastically. Whether they represent a taxon with extremely variable petals and lip, or a hybrid, is impossible to determine without examination of many more specimens, an improbability at this time. In order to identify one from the other, they are given names.

Stelis boyacensis Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Boyacá: between Arcabuco and Moniquirá, 2500 m, 25 April 1982, C. Luer, J. Luer & R. Escobar 7559 (Holotype: SEL). Fig. 4.

This large, robust, caespitose species is characterized by ovate, subacute leaves; much longer, stout ramicauls; one or

two many-flowered racemes; sensitive flowers with ovate, 5-veined sepals; 3-veined petals with a subacute apex; and a lip with a rounded apex, a concave glenion, and a semiorbicular callus on the dorsum.

Plant large, robust, epiphytic, densely caespitose; roots slender. Ramicauls erect, stout, 10–21 cm long, with a tubular sheath above the middle, and another 1–2 sheaths below and about the base; *Leaf* erect, thickly coriaceous, ovate, subacute, 12–18 cm long including a petiole ca. 1.5 cm long, the blade 2.5–4 cm wide in the dry state, cuneate below into the petiole. *Inflorescence* 1–2; 12–18 cm tall, the raceme erect, strict, distichous, subcongested, with many flowers that mature simultaneously; floral bracts oblique, acute, 5 mm long below to 3 mm long above; pedicels 5 mm long below, shorter above; ovary 2 mm long; the peduncle ca. 2 cm long, subtended by a slender spathe 10–12 mm long, from a node below the apex of the ramicaul; flowers green, sensitive, closing readily, but opening quickly in pickling solution; *sepals* glabrous, the sepals broadly ovate, obtuse, 5-veined, the dorsal sepal 4 mm long, 3.5 mm wide, the lateral sepals 3.5 mm long, 4 mm wide, connate below the middle; *petals* triangular, subacute, 1.3 mm long and wide, concave and 3-veined below a transverse carina, the apical margin thickened; *lip* subquadrate, type A, 1.25 mm long, 1.5 mm wide, 1 mm deep, concave below a cleft bar with a concave glenion, the apex rounded, the margins thick, the dorsum with a low, suborbicular callus; the base truncate, hinged to the base of the column; *column* ca. 1 mm broad and long, the anther and stigmatic lobes apical.

Etymology: Named for the department of Boyacá, where this species was collected.

This large, robust species is similar to other large species with medium-sized flowers with 5-veined sepals, i.e. *Stelis colossus* Luer & R.Escobar but is best distinguished from all of them by petals with a subacute apex, and floral bracts are not large and imbricating. The flowers are sensitive, closing with disturbance, but opening in pickling solution. The lip is type A with a deep glenion.

Stelis calopsis Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Antioquia: El Retiro, above Colomborquídeas, La Horqueta, 2500 m, coll. by F. Lopez, fl. in cult. at Colomborquídeas, 27 December 1992, R. Escobar 5130 (Holotype: SEL), C. Luer illustr. 21909. Fig. 5–6.

Among the small, caespitose species, this species is distinguished by a distichous raceme of purple flowers with subcircular sepals, 3-veined petals, and a round to subquadrate lip shallowly concave below a low, central callus descending from the dorsum.

Plant small, epiphytic, densely caespitose; roots slender. Ramicauls erect, 3–10 mm long, enclosed by 1–2 tubular sheaths. *Leaf* erect, coriaceous, elliptical, acute to subacute, 10–30 mm long including a petiole 2–7 mm long, 3–5 mm wide when dry, cuneate below into the petiole. *Inflorescence* single; 3–6 cm tall, the raceme erect, subcongested, several- to many-flowered, distichous; floral bracts tubular, acute, 1–1.5 mm long, pedicels 1 mm long; ovary 1 mm long; the peduncle 2–4 cm long, from a node at the apex of the ramicaul; flowers purple; *sepals* glabrous,

expanded, 3-veined, connate below the middle, the dorsal sepal broadly ovate, subacute to obtuse, 2–2.25 mm long, 2 mm wide, the lateral sepals broadly ovate to subcircular, obtuse to rounded at the apex, 2 mm long, 2 mm wide; *petals* transversely elliptical, concave, broadly rounded at the apex, with the margin minimally thickened, without a transverse callus, 0.75–1 mm long, 1–1.25 mm wide, 3-veined; *lip* subquadrate, 0.75–1 mm long, 0.9–1.25 mm wide, 0.5 mm deep, shallowly concave below a low, central callus that extends from the base to the middle of the lip, the apex rounded to subtruncate; the base broadly truncate, hinged to the base of the column; *column* ca. 0.9 mm long and wide, the anther and the stigmatic lobes apical.

Etymology: From the Greek *Kalopsix*, “a pretty bit,” or “morsel,” referring to the flowering plant.

Paratypes: COLOMBIA. Antioquia: collector unknown, fl. in cult. at Colomborquídeas, 6 July 1996, C. Luer 17975 (SEL); scrub forest above the home of Rodrigo Escobar north of Bello, 9 March 1989, 1600 m, collected by S. Dalström 1258 (SEL), C. Luer illustr. 14114; forest remnant, E of Santo Domingo, 1820 m, 12 May 1985, C. Luer, J. Luer & R. Escobar 11358 (SEL).

This species is closely allied to *Stelis obovata* C. Schweinf., from eastern and Amazonian Venezuela. *Stelis caloptrix* is distinguished by a dark purple-flowered raceme about twice longer than elliptical leaves; broadly ovate to subcircular, 3-veined sepals; and thin, 3-veined petals. The lip is subquadrate and shallowly concave around a low callus that extends from the base to near the middle of the lip.

Stelis calopsix from the Western Cordillera of Colombia differs from *S. obovata* by proportionately narrower, elliptical, subacute to obtuse leaves, and dark purple flowers, while the leaves of *S. obovata* are spatulate or oblanceolate, and broadly obtuse or rounded at the tip, and all the flowers of reported collections are pale yellow.

Stelis caudex Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Cauca: Páramo de Puracé, terrestrial on the road cut, 3200 m, 14 November 1982, C. Luer & R. Escobar 8387 (Holotype: SEL). Fig. 7–8.

This small, repent species is distinguished by numerous roots produced by a thick rhizome; erect ramicauls and elliptical leaf; pubescent sepals; 3-veined petals; and an obovoid, obtuse lip with thin margins and a large, erect callus bearing on top a low, horseshoe-shaped, marginal callus.

Plant small, terrestrial, long-repent, the rhizome stout, ca. 4 mm thick, roots fleshy, ramicauls adjacent to 1 cm apart. Ramicauls erect, slender, 1.5–3 cm long, enclosed by a loose, tubular sheath and 1–2 below at the base. *Leaf* erect, coriaceous, elliptical, obtuse, 3–4.5 cm long including the petiole 0.5–0.8 cm long, 0.7–1 cm wide dry, cuneate below into the petiole. *Inflorescence* single; 8–14 cm. tall, the raceme erect, congested, distichous, many-flowered, with many flowers open simultaneously, 5–10 cm long, the peduncle ca. 4 cm long, from a node below the apex of the ramicaul; floral bracts tubular, acute, 2.5 mm long; pedicels 1.5 mm long; ovary 1.5 mm long; *sepals* yellow with a

short, brown pubescence, broadly ovate, connate in lower quarter, 3-veined, the dorsal sepal subacute, 4 mm long, 3.5 mm wide, the lateral sepals obtuse, 3.5 mm long, 3.5 mm wide; *petals* yellow, transversely ovate, the apex broadly obtuse with a thickened margin, 1.5 mm long, 2 mm wide, 3-veined, with an indistinct transverse carina; *lip* thick, obovoid, 1.8 mm long, 1.3 mm wide, 1 mm deep, the apex broadly obtuse between erect, rounded sides, and concave surrounding an erect callus that extends from the base to slightly above the middle, the dorsum of the callus with a low, horseshoe-shaped, marginal callus, the base hinged to the base of the column; *column* stout, 1 mm long and wide, with the rostellum elongated, the anther and the bilobed stigma apical.

Etymology: From the Latin *caudex*, “a trunk, a stem.” referring to the thick rhizome.

Paratypes: COLOMBIA. Nariño: Pasto, Volcán Galeras, 3200–3500 m, 4 June 1946, R.E. Schultes 7979 (AMES); Putumayo: Santiago, Santiago del Bellavista, Páramo del Bordoncillo, 3249 m, 19 March 1999, S.M. Pasmíño & M.R. Posso 027 (PSO, MO), C. Luer illustr. 21940.

This small species is distinguished by a thick, creeping rhizome wrapped by the numerous roots it produces. Erect ramicauls with an obtuse, elliptical leaf produce a single, crowded raceme of relatively large flowers. The pubescent sepals and the lips are 3-veined. Upon the large, erect callus of the lip, a low, horseshoe-shaped callus defines the margins of the loop.

Stelis cladophora Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Santander: Bucaramanga, between Bucaramanga and Berlin, 2800 m, 27 Apr. 1982, C. Luer, J. Luer & R. Escobar 7585 (Holotype: SEL). Fig. 9.

This medium-sized species is distinguished by an ascending-caespitose habit with stout, prolific ramicauls; racemes to twice longer than the leaf; multiveined, dark purple dorsal sepal and synsepal; thick petals with twice greater dimensions than those of the lip; and a subquadrate lip with three calli on the dorsum.

Plant medium in size to large, epiphytic, ascending-caespitose, roots slender. Ramicauls erect, stout, 3–4 mm thick, 3–7 cm long, with a loose, tubular sheath from below the middle, and 1–2 other sheaths about the base. *Leaf* erect, coriaceous, ovate, acute, 4–6.5 cm long, including a petiole 1–1.5 cm long, the blade 1–1.8 cm wide in dry state, cuneate below into the petiole. *Inflorescence* single; 12–17 cm long, the raceme erect, distichous, simultaneously many-flowered; floral bracts oblique, acute, acuminate, 8–10 mm long low in the raceme, 6–7 mm long near the apex; pedicels 2–4 mm long; ovary 2 mm long; the peduncle 2–5 cm long, from a spathe 10–12 mm long near the apex of the ramicaul; flowers dark purple; *sepals* glabrous, the dorsal sepal ovate, acute, 5 mm long, 6 mm wide, 5- or weakly 7-veined, connate 2 mm to the lateral sepals, the lateral sepals, ovate, subacute, 8 mm long, each 5 mm wide, connate 4 mm, in apposition, forming a deeply concave synsepal; *petals* semilunate, the apex broadly rounded with a broad, thick margin with minute crystals, concave, with a transverse carina, 1.6 mm long, 2.3 mm wide, 3-veined;

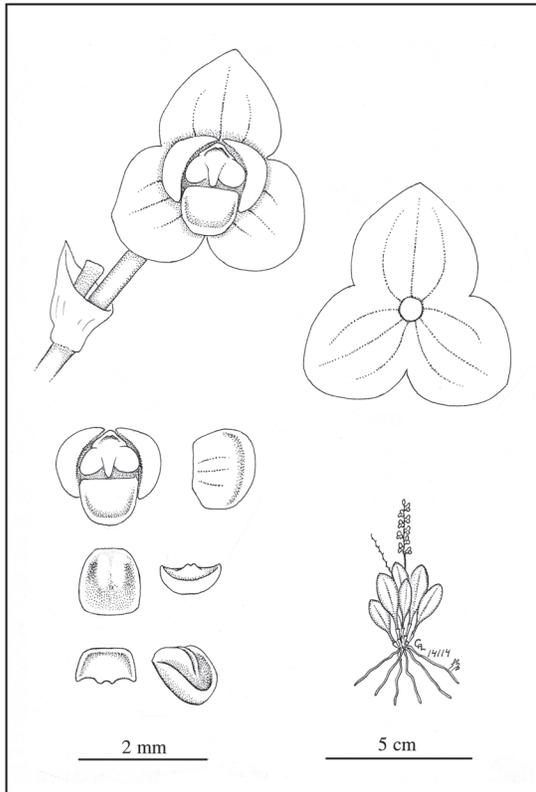


FIGURE 5. *Stelis calopsis* Luer & R. Escobar

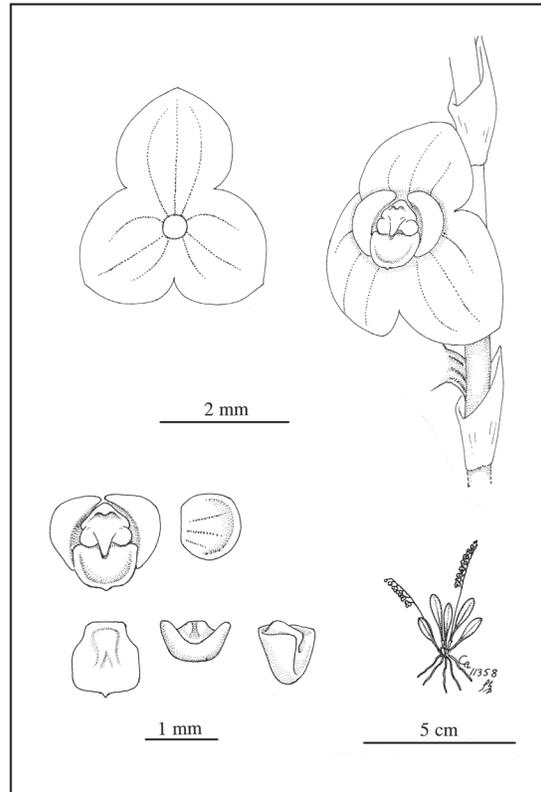


FIGURE 6. *Stelis calopsis* Luer & R. Escobar

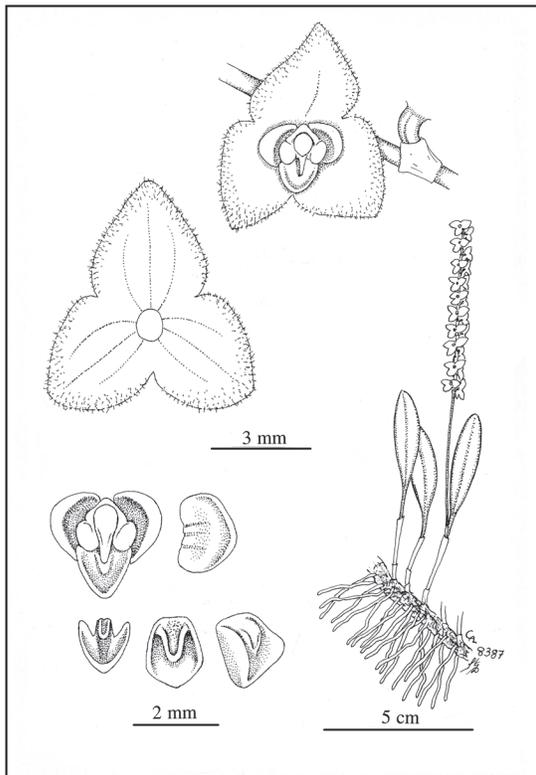


FIGURE 7. *Stelis caudex* Luer & R. Escobar

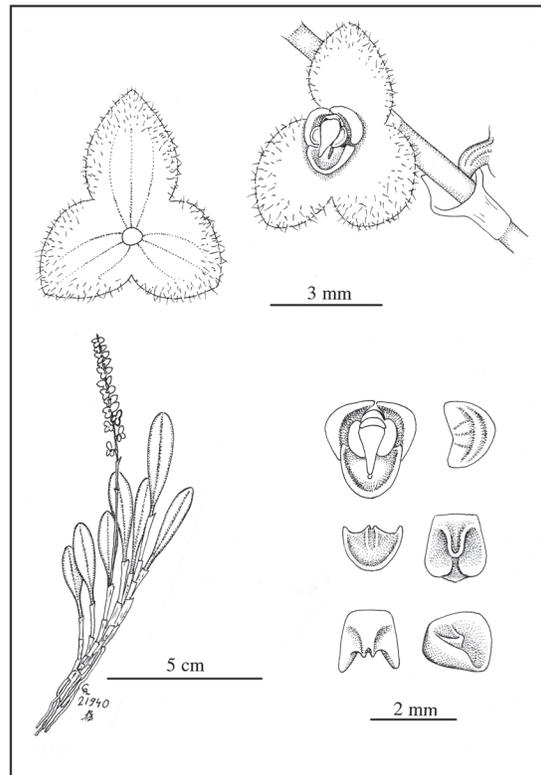


FIGURE 8. *Stelis caudex* Luer & R. Escobar

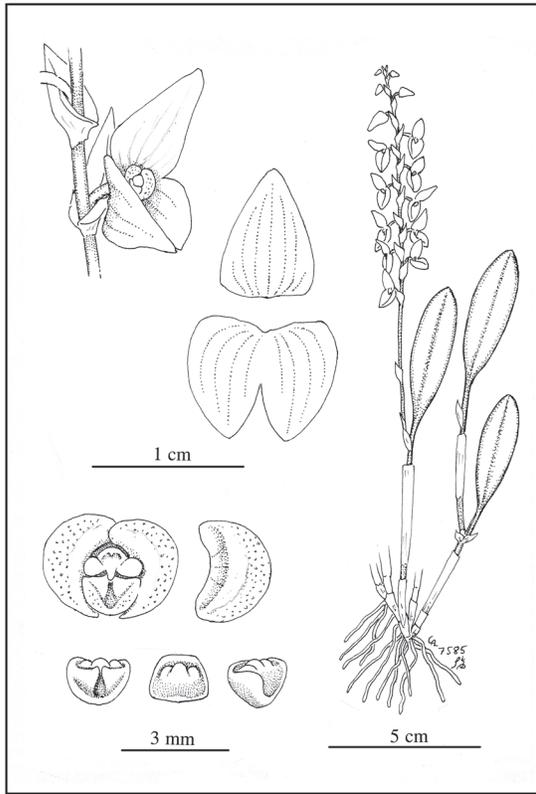


FIGURE 9. *Stelis cladophora* Luer & R. Escobar

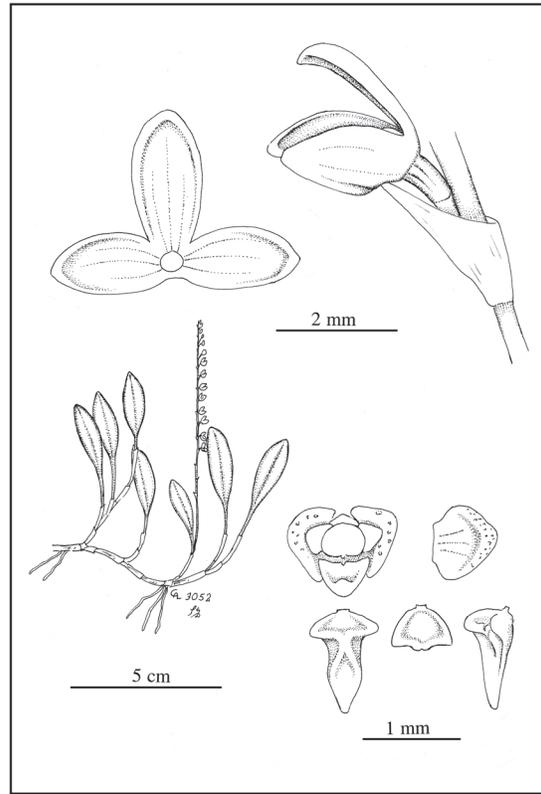


FIGURE 10. *Stelis crassisejala* Luer & R. Escobar

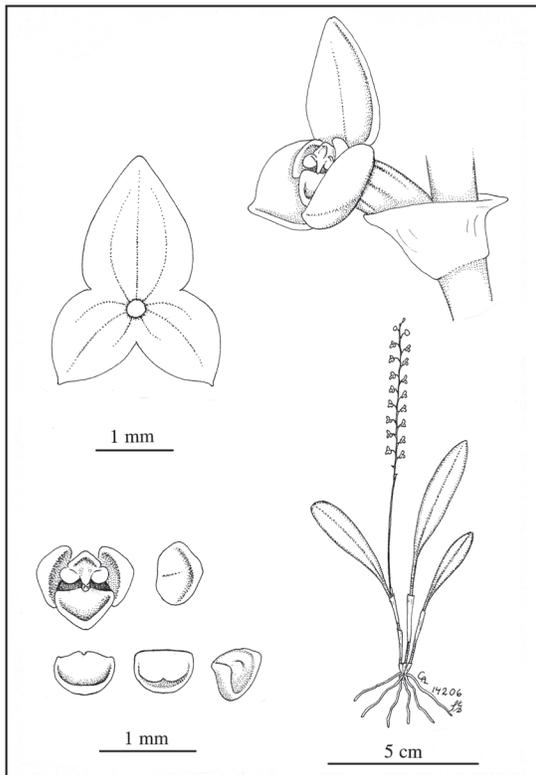


FIGURE 11. *Stelis craticula* Luer & R. Escobar

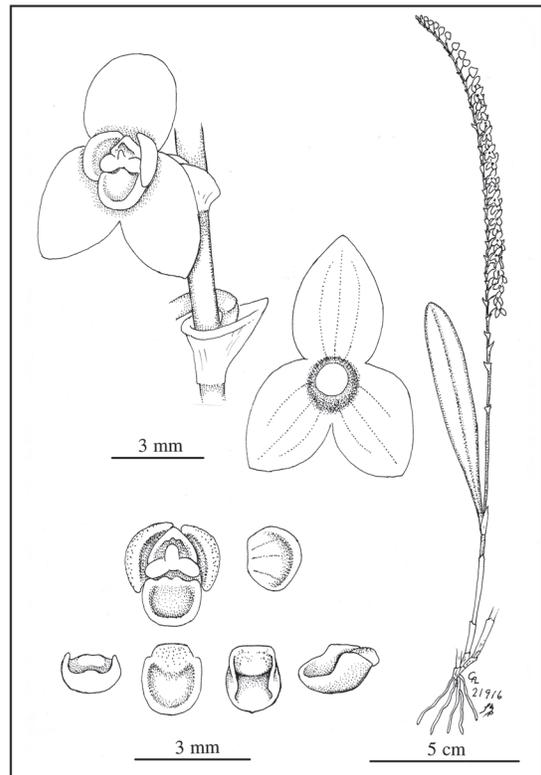


FIGURE 12. *Stelis cupreata* Luer & R. Escobar

lip thick, subquadrate, 0.75 mm long, 1.3 mm wide, 1 mm deep, shallowly concave below a thick bar with a glenion, the apex broadly obtuse with a broad margin, the dorsum with 3 low, rounded calli, the base truncate, hinged to the base of the column; column clavate, ca 1 mm wide and long, the anther and the bilobed stigma apical.

Etymology: From the Greek *kladophora* “branch-bearing,” referring to the prolific habit.

This strong species is characterized by an ascending-caespitose habit with thick, prolific ramicauls. A simultaneously many-flowered raceme of large, dark purple flowers with a deeply concave synsepal surpasses the leaf about thrice the length. The lateral sepals are held in apposition, although only semiconnate. The thick, semilunate petals are proportionately large. A row of three, low, rounded calli occupy the dorsum of the lip.

Stelis crassisepala Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Cauca: Popayán, Páramo de Barbillas, SE of Popayán, 3070 m, 27 July 1978, C. Luer, J. Luer & R. Escobar 3052 (Holotype: SEL). Fig. 10.

This small, ascending-repent species with a trilobed lip is similar to *Stelis elongata* Kunth, but differs with a habit less than half the size, and with thick, concave sepals.

Plant small, epiphytic, scandent, long-repent, the rhizome stout, branching, ascending, 1–1.5 cm long between ramicauls; roots slender. Ramicauls ascending, relatively stout, 1–1.5 cm long, enclosed by a loose, tubular sheath and another sheath below and at the base. *Leaf* erect, coriaceous, elliptical, acute, 3–5 cm long including the petiole 1–1.5 cm long, the blade 0.6–1.2 cm wide in the dry state, cuneate below into the petiole. *Inflorescence* single; 6–8 cm long, the raceme erect, strict, secund, loose to congested above, many-flowered; floral bracts oblique, acute, 2–3 mm long; pedicels 1 mm long; ovary 0.5 mm long; the peduncle ca. 1 cm long, from a node below the apex of the ramicaul; *sepals* yellow, mottled with purple, glabrous, thick, especially at the apices, elliptical, subacute, concave, connate basally, 2–2.5 mm long, 1–1.25 mm wide, 3-veined, the lateral sepals, antrorse; *petals* yellow-white, transversely ovate, 0.75 mm long, 0.75 mm wide, 3-veined, the apex broadly obtuse with a thickened margin, without an obvious transverse carina; *lip* yellow-white, trilobed, 1.5 mm long, 1 mm wide across basal lobes, 0.5 mm deep, the basal lobes formed by incurved margins above the base, then meet medially and descend onto the ovate, acute middle lobe, the base hinged to the column-foot; *column* stout, ca. 1.5 mm long, 2 mm wide, the anther and the bilobed stigma apical.

Etymology: From the Latin *crassisepalus*, “with thick sepals,” for obvious reasons.

This small, scandent species is characterized by a stout, branching rhizome with short, ascending ramicauls with elliptical leaves and an erect inflorescence about twice as long. The three sepals are concave and markedly thickened, especially toward the apices, and with the lateral sepals antrorse. The petals are 3-veined. The trilobed lip is similar to that of the frequent, widely distributed *Stelis elongata* Kunth.

Stelis crassisepala differs from *S. elongata* by a smaller habit with proportionately shorter ramicauls, and third smaller, thick, more or less concave sepals mottled with purple.

Stelis craticula Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Antioquia: Yarumal, near Estadero Ventanas, 2000 m, 16 March 1989, C. Luer, J. Luer, S. Dalström & W. Teague 14206 (Holotype: SEL). Fig. 11.

This small, caespitose species is characterized by small, white flowers evenly spaced in a distichous raceme about twice longer than an elliptical leaf; acute, 3-veined sepals with the lateral sepals antrorse; single-veined petals; and a lip with a bigibbous callus.

Plant small, epiphytic, densely caespitose. Ramicauls erect, very slender, 2–3.5 cm long, with a tubular sheath from below the middle, and 1–2 sheaths below and at the base. *Leaf* erect, coriaceous, subacute to obtuse, elliptical, 4–6 cm long including a petiole, ca. 1.5 cm long, the blade 0.7–0.9 cm wide in the dry state, narrowly cuneate below to the petiole. *Inflorescence* single; 6–9 cm long, the raceme erect, subcongested, distichous, many-flowered with most flowers open simultaneously; floral bracts oblique, obtuse, dilated, 1 mm long, 2 mm wide; pedicels 0.5 mm long; ovary 0.8 mm long; the peduncle ca. 3 cm long, subtended by a spathe 6–7 cm long, from a node at the apex of the ramicaul; *sepals* white, glabrous, ovate, acute to subacute, 3-veined, connate in lower fourth, the dorsal sepal 1.75 mm long, 1.3 mm wide, the lateral sepals antrorse, oblique, 1.25 mm long, 1 mm wide; *petals* white, transversely ovate, 0.5 mm long, 0.6 mm wide, 1-veined, concave, the apex broadly obtuse, with the margin minimally thickened, without a transverse carina; flowers white; *Sepals* more or less suffused with red-brown, ovoid, 0.4 mm long, 0.6 mm wide, 0.3 mm deep, type A, the apex rounded with thickened margin, concave below a shallowly sulcate, thick bar, the dorsum smooth, convex, the base truncate, hinged to the base of the column; *column* stout, ca. 0.8 mm long and wide, the anther and the stigmatic lobes apical.

Etymology: From the Latin *craticulus*, “latticed,” referring to the delicate racemes.

This small species is superficially similar to many others with an erect inflorescence twice longer than an elliptical leaf, but it differs by a distichous raceme with tiny, white, spaced evenly flowers, imparting a distinctive appearance. The sepals are ovate and 3-veined, the petals are single-veined, and the bar of the lip is thick, smooth and shallowly sulcate.

Stelis cupreata Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Boyacá: Chiquinquirá. 5 km W of village, 3000 m, fl. in cult. 2 January 1993, by A. de Wilde 4435 (Holotype: SEL), C. Luer illustr. 21916. Fig. 12.

This caespitose species is characterized by a secund, many-flowered raceme that far surpasses an oblong, subacute leaf; shorter ramicauls; glabrous, 3-veined, ovate, sepals; 3-veined petals; and a spoon-shaped lip half-filled with a large callus at the base.

Plant medium in size, epiphytic, densely caespitose; roots slender. Ramicauls erect, slender, 4–6 cm long, with a loose, tubular sheath from below the middle, another 1–2 sheaths below and at the base. *Leaf* erect, coriaceous, oblong, subacute to obtuse, 7–9 cm long including a petiole 1–1.5 cm long, the blade 1–1.5 cm wide in the dry state, cuneate below into the petiole. *Inflorescence* single; 17–20 cm tall, the raceme erect, congested, secund, many-flowered with most flowers open simultaneously; floral bracts oblique, acute, 2.5 mm long; pedicels 1.5 mm long; ovary 2 mm long; the peduncle ca. 8 cm long, subtended by a spathe 10–11 mm long, from a node near the apex of the ramicaul; flowers yellow; *sepals* expanded, glabrous, ovate, subacute to obtuse, 3-veined, connate to near the base, the dorsal sepal 4 mm long, 3 mm wide, the lateral sepals 3 mm long, 3 mm wide; *petals* transversely obovate, obtuse, concave, 3-veined, 1 mm long, 1 mm wide, without a transverse carina; *lip* scaphoid, 2 mm long, 2 mm wide, 0.9 mm deep, concave within the rounded apex with a slightly thickened margin, and concave below a large, rounded, microscopically pubescent callus from the base; attached to the base of the column; *column* stout, ca. 2 mm long and wide, the anther and the stigmatic lobes apical.

Etymology: From the Latin *cupreatus*, “coppery,” referring to the “bronze glow” of the yellow flowers.

This caespitose species is characterized by a long, secund raceme of yellow flowers with a coppery suffusion. The sepals are ovate and three-lobed; the petals are nearly circular and 3-veined; and the lip is spoon-shaped with a round, slightly thickened margin. The basal half of the lip is occupied by a rounded callus that protrudes from overlying the basal margin to near the middle.

The lip of *Stelis cupreata* is very similar to that of *Stelis cyathochila* Luer & R. Escobar described herein, but the plant differs by a larger habit, ramicauls much longer than the leaves, and especially the lateral sepals that are antrorse and connate to the dorsal sepal for about a third of their length.

Stelis dendrophila Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Santander: Bucaramanga, forest between Bucaramanga and Berlin, 2600 m, 28 April 1982, *C. Luer & R. Escobar 7619* (Holotype: SEL). Fig. 13.

This medium-sized, repent species is characterized by a slender rhizome, slender ramicauls and narrow, elliptical leaves and two or three racemes about as long; minutely pubescent, obtuse sepals; 3-veined petals; and a minute, rounded lip with an indistinct glenion.

Plant medium in size, epiphytic, repent, the rhizome slender, 1–1.5 cm between ramicauls. Ramicauls erect, slender, 5–6 cm long, with a tubular sheath from below the middle, and another 1–2 sheaths below and at the base. *Leaf* erect, coriaceous, narrowly elliptical, acute, 5–6 cm long including a petiole ca. 1 cm long, the blade 0.7–1 cm wide in the dry state, cuneate below to the petiole. *Inflorescence* 2–3; 4–5 cm long, the racemes erect, distichous, successively many-flowered; floral bracts oblique, acute, 3 mm long; pedicels 1 mm long; ovary less than 1 mm long; the peduncle 1–2 cm long, subtended by a spathe 7–8 mm

long, from a node below the apex of the ramicaul; flowers purple; *sepals* glabrous, expanded, broadly ovate, obtuse, 3-veined, connate below the middle, the dorsal sepal 2.5 mm long, 2.75 mm wide, the lateral sepals oblique, 2 mm long, 2 mm wide; *petals* transversely semilunate, concave within a narrowly, thickened, apical margin, with a transverse carina, 3-veined, 0.6 mm long, 1 mm wide; *lip* subquadrate, 0.6 long, 0.6 mm wide, 0.5 mm deep, concave within the rounded apex, concave below a thick bar with an ill-defined glenion, the dorsum slightly convex, the base truncate, attached to the base of the column; *column* stout, ca. 0.8 mm long and wide, the anther and the stigmatic lobes apical.

Etymology: From the Greek *dendrophilus*, “tree-loving,” referring to an epiphytic habit.

This medium-sized, repent species is characterized by a combination of a slender rhizome, slender ramicauls with narrow, elliptical leaves, and two or three racemes about as long; minutely pubescent, obtuse sepals; 3-veined petals; and a minute, rounded lip with an indistinct glenion.

Stelis dewildei Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Risaralda: Pereira, Santa Rosa de Cabral, Ucumarí, Regional Nature Reserva, 2150 m, fl. in cult. April 1992, by *A. de Wilde 03* (Holotype: SEL), *C. Luer* illustr. 21917. Fig. 14.

This caespitose species is distinguished by a congested raceme about half as long as an ovate leaf; a transversely ovate, 5-veined dorsal sepal; thick, shortly pubescent petals; and a subquadrate lip with a large glenion and a solitary, round callus on the dorsum.

Plant medium in size, epiphytic, densely caespitose; roots slender. Ramicauls erect, slender, 6–9 cm long, with a tubular sheath on the middle third, another 1–2 sheaths below and at the base. *Leaf* erect, coriaceous, ovate, acute, 5–7.5 cm long including a petiole 1.5 cm long, the blade 1.5–2 cm wide in the dry state, cuneate below into the petiole. *Inflorescence* single; 3–4 cm long, the raceme erect, congested, distichous, many-flowered with most flowers open simultaneously, floral bracts oblique, acute, 2 mm long; pedicels 1.5 mm long; ovary 1 mm long; the peduncle less than 1 cm long, subtended by a slender spathe 1 cm long, from a node near the apex of the ramicaul; flowers yellow; *sepals* glabrous, expanded, transversely ovate, obtuse, connate to near the middle, the dorsal sepal 3 mm long, 4 mm wide, 5-veined, the lateral sepals oblique, 2.5 mm long, 3.25 mm wide, 4-veined; *petals* thick, transversely semilunate, with a broad, shortly pubescent margin, concave below a transverse carina, 3-veined, 1 mm long, 1.75 mm wide; *lip* type A, subquadrate, 0.6 long, 1 mm wide, 0.75 mm deep, concave within the rounded apex, the bar cleft with a large, deep glenion, the dorsum with a semiorbicular callus, the base truncate, attached to the base of the column; *column* stout, ca. 1 mm long and wide, the anther and the stigmatic lobes apical.

Eponymy: Named for Ahrend de Wilde, ecologist, collector of this species.

This caespitose species is characterized by a congested raceme about half the length of an ovate leaf. The flowers are broadly expanded with transversely ovate, 5-veined

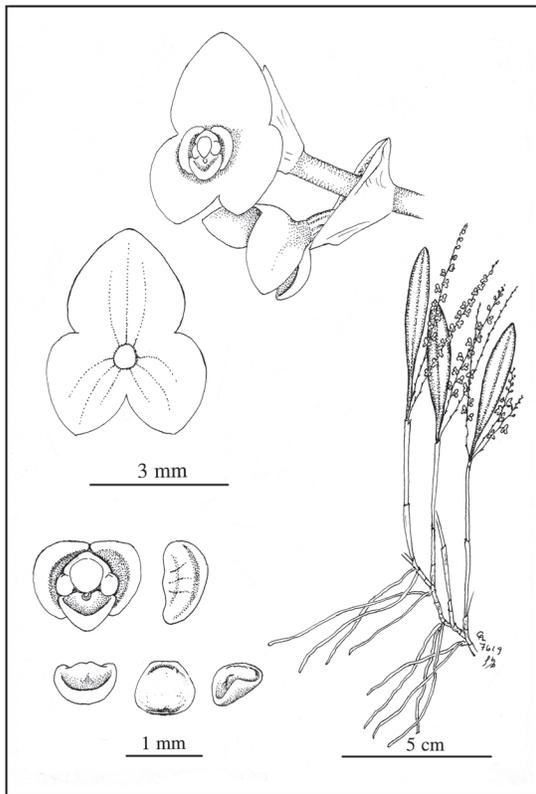


FIGURE 13. *Stelis dendrophila* Luer & R. Escobar

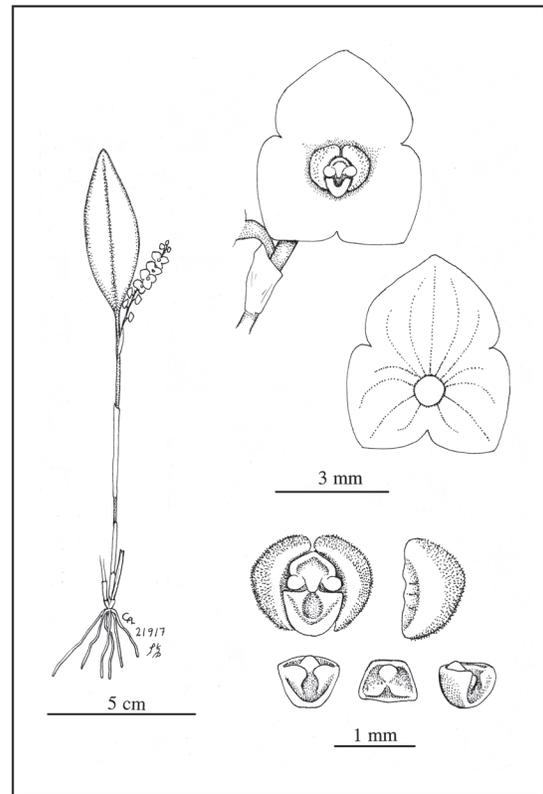


FIGURE 14. *Stelis dewildei* Luer & R. Escobar

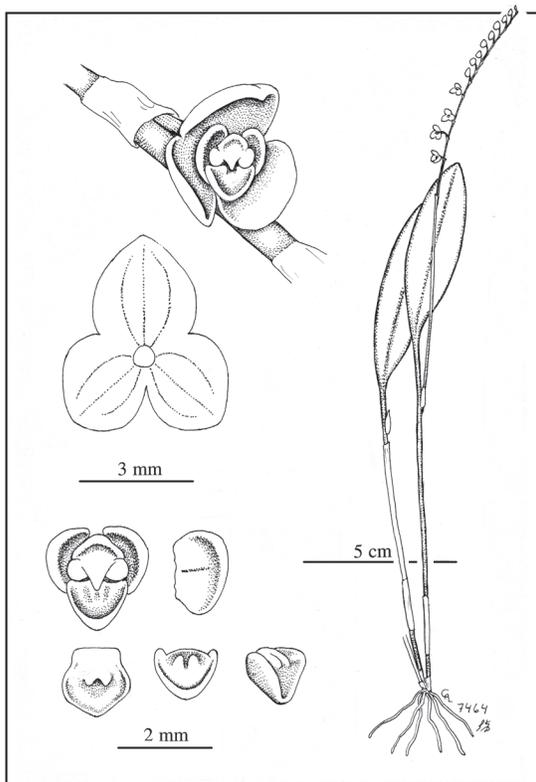


FIGURE 15. *Stelis dithele* Luer & R. Escobar

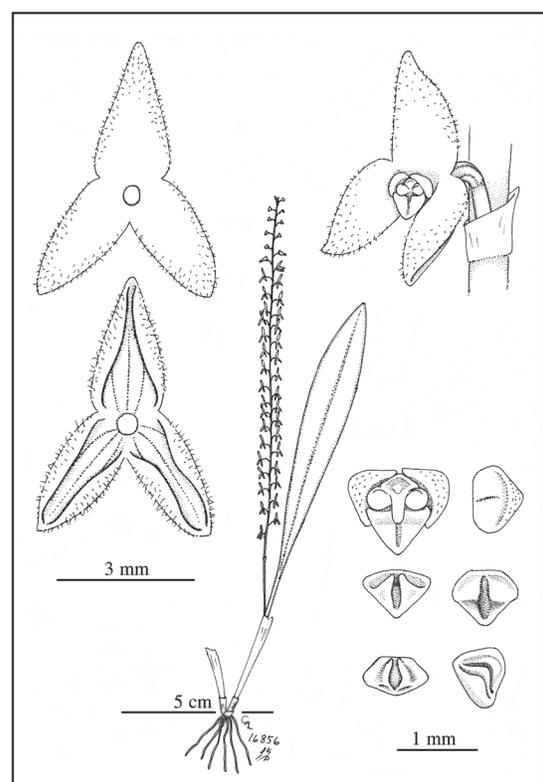


FIGURE 16. *Stelis divergens* Luer & R. Escobar

sepals that are connate to about the middle. The petals are thick, semilunate and minutely pubescent. The lip is type A with a large glenion and a round callus on the dorsum.

Stelis dithele Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Risaralda: near San Clemente, 2200 m, 20 April 1982, C. Luer, J. Luer & R. Escobar 7464 (Holotype: SEL). Fig. 15.

This large species is characterized by acute, elliptical leaves that are exceeded by a long-pedunculate inflorescence; fleshy, obtuse, 3-veined sepals; single-veined petals; and an obtuse lip with a central pair of small, conical calli.

Plant large, epiphytic, densely caespitose. Ramicauls erect, slender, 7–10 cm long, with a tubular sheath from below the middle, and another 1–2 sheaths below and at the base. *Leaf* erect, coriaceous, acute, elliptical, 8–11 cm long including a petiole 1.5–2 cm long, the blade 1–1.6 cm wide in the dry state, cuneate below into the petiole. *Inflorescence* single; 13–14 cm long, the racemes erect, strict, subclax, secund, many-flowered with many flowers open simultaneously; floral bracts tubular, obtuse, 1.5 mm long; pedicels 2 mm long; ovary 2 mm long; the peduncle 7–8 cm long, subtended by a slender spathe ca. 8 mm long, from a node below the apex of the ramicaul; flowers purple; *sepals* fleshy, glabrous, slightly concave, broadly ovate, obtuse, 3-veined, connate to near the middle, the dorsal sepal 2.5 mm long, 2.5 mm wide, the lateral sepals 2.25 mm long, 2.25 mm wide; *petals* transversely elliptical, 1.2 mm long, 2 mm wide, 1-veined, the apex broadly rounded, thickened on the rounded margin, concave without a transverse carina; *lip* subquadrate, obtuse, 1.5 mm long, 1.4 mm wide, 1 mm deep, concave below the bar modified into a pair a low, obtuse, conical calli, the dorsum slightly convex, the base truncate, hinged to the base of the column; *column* stout, ca. 1 mm long and wide, the anther and the stigmatic lobes apical.

Etymology: From the Greek *dithele*, “two-nippled,” referring to the pair of small, nipple-like calli in the center of the lip.

This large, caespitose species is distinguished by a pair of low, conical, nipple-like calli in the center of the lip, similar to the forked callus of *Stelis major* Rchb.f. Otherwise, the species is characterized by an inflorescence with a peduncle as long as an acute, elliptical, long-petiolate leaf; fleshy, glabrous 3-veined sepals; and thin, single-veined petals.

Stelis divergens Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Chocó: Alto de Baudo, 400 m, fl. in cult. by A. de Wilde above Pereira, 15 May 1993, A. de Wilde 4500 (Holotype: SEL), C. Luer illustr. 16856. Fig. 16.

This medium-sized, caespitose species is characterized by a ramicaul much shorter than a narrowly elliptical leaf; a congested, distichous raceme that exceeds the leaf; pubescent, ovate sepals with recurved sides; single-veined petals; and a lip with a bar cleft from the base to apex.

Plant medium in size, epiphytic, densely caespitose; roots slender. Ramicauls erect, stout, 2.5–3 cm long, enclosed by a loose, tubular sheath from below the middle, and another

1–2 sheaths below and at the base. *Leaf* erect, coriaceous, elliptical, acute, 7–12 cm long including a petiole 1.5–2.5 cm long, the blade 1–1.5 cm wide in dry state, cuneate below into the petiole. *Inflorescence* single; 9–16 cm long, the raceme erect, strict, distichous, subcongested, simultaneously many-flowered; floral bracts tubular, obtuse, 1.5 mm long; pedicels 1.5 mm long; ovary 1 mm long; the peduncle ca. 2 cm long, from a node below the abscission layer; *sepals* light yellow, pubescent, ovate with sides recurved, acute, 3-veined, connate basally, the dorsal sepal 3.5 mm long, 1.5 mm wide unexpanded, the lateral sepals 2.5 mm long, 1.5 mm wide unexpanded; *petals* transversely ovate, concave, the broadly obtuse apex thickened, 0.8 mm long, 1.2 mm wide, 1-veined; *lip* subovoid, with apex subacute, 0.75 mm long, 1.25 mm wide, 0.6 mm deep, shallowly concave below a broad bar with a cleft that extends from the base to the apex via a glenion, the base truncate, hinged to the base of the column; *column* clavate, ca. 1 mm wide and long, the anther and stigmatic lobes apical.

Etymology: From the Latin *divergens*, “of two kinds,” referring to the similarity.

This medium sized, densely caespitose species occurs at a low altitude in western, coastal Colombia. It is characterized by a ramicaul shorter than an acute, narrowly elliptical leaf surpassed by a many-flowered raceme. The sepals are pubescent with markedly recurved sides, and the petals are single-veined. The lip is remarkable with a shallow, longitudinal cleft that divides the dorsum from the base, then forward across the divided bar, and descending as a wide glenion to the apex.

Vegetatively, the plant of this collection (*de Wilde 4500*) is similar to (*de Wilde 3939*, *Stelis baudoënsis*), described herein, both having been collected in Baudo and cultivated near Pereira, but the petals and lip differ drastically. Whether they represent a taxon with extremely variable petals and lip, or a hybrid, is impossible to say without examination of many more specimens, an improbability at this time. In order to identify one from the other, they are given names.

Stelis dinamica Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Risaralda: near San Clemente, 2200 m, 20 April 1982, C. Luer, J. Luer & R. Escobar 7466 (Holotype: SEL). Fig. 17.

This robust, medium-sized species is characterized by stout ramicauls; obtuse, elliptical leaves far surpassed by a congested, many-flowered raceme; floral bracts much longer than the flower; acute, 5-veined, broadly ovate sepals; 3-veined petals; and a lip with a minutely sulcate bar and a round apex.

Plant medium in size, epiphytic, densely caespitose. Ramicauls erect, stout, 4–5 cm long, with a loose tubular sheath from below the middle, another 2 sheaths below and at the base. *Leaf* erect, coriaceous, elliptical, obtuse to rounded at the tip, 6–8 cm long including a petiole less than 1 cm long, the blade 1.5–2 cm wide in the dry state, cuneate below to the petiole. *Inflorescence* single; 20–26 cm tall, the raceme erect, congested, distichous, many-flowered; floral bracts imbricating, oblique, acute, 9 mm long below to 6

mm long above; pedicels 3 mm long; ovary 1 mm long; the peduncle 6–8 cm long, subtended by a spathe 1.5 cm long, from a node below the apex of the ramicaul; *sepals* fleshy, yellow, glabrous, the sepals similar, broadly ovate, obtuse, 2.5 mm long, 3 mm wide, 5-veined, connate to near the middle; *petals* brown, transversely semilunate, 1 mm long, 1.5 mm wide, 3-veined, concave below a thick, rounded apical margin, and concave below a transverse carina; *lip* brown, type A, subquadrate, 1 mm long, 1.5 mm wide, 1 mm deep, concave below a minutely sulcate bar, the apex rounded, the dorsum slightly convex, the base truncate, hinged to the base of the column; *column* stout, ca. 1 mm long and wide, the anther and the stigmatic lobes apical.

Etymology: From the Greek *dynamikos*, “strong, powerful” in reference to the robust habit, albeit not large.

This robust, caespitose species is characterized by thick ramicauls with thick, elliptical leaves, and a long, congested raceme with floral bracts longer than small flowers. The sepals are broadly ovate and 5-veined. The lip is type A with broadly rounded apex.

Stelis ejuncida Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Santander: W of Velez, road to Landázuri, 2150 m, 5 May. 1984, C. Luer, J. Luer & R. Escobar 10111 (Holotype: SEL). Fig. 18.

This small, scandent species is characterized by very slender, proliferating ramicauls, narrow leaves, and multiflowered inflorescences nearly as long; medium-sized, obtuse, 3-veined sepals; and an obtuse lip with a thick subacute apex.

Plant small, epiphytic, shortly ascending, with some caespitose components, the rhizome slender; roots slender. Ramicauls erect, very slender, 2–6 cm long, enclosed by a tubular sheath below the middle and another sheath at the base, often produced from the apex of another ramicaul. *Leaf* erect, coriaceous, narrowly elliptical, subacute to acute, petiolate, 5–7 cm long including a petiole 2 cm long, 0.7–1 cm wide in the dry state, contracted below the petiole. *Inflorescence* single; 5–7 cm long, the raceme erect to more or less arching, congested, many-flowered with many flowers open simultaneously; floral bracts conspicuous, broadly infundibular, oblique, acute, 3 mm long, 2 mm wide; pedicels 1.5 mm long; ovary 1.5 mm long; peduncle 2–3 cm long, subtended by a fugacious spathe, from a node at the apex of the ramicaul; flowers purple; *sepals* glabrous, ovate, obtuse, 3-veined, the dorsal sepal 3.5 mm long, 2.5 mm wide, the lateral sepals oblique, 2.5 mm long, 2.5 mm wide; *petals* semilunate, 1 mm long, 1.4 mm wide, 3-veined, the apex rounded with a broad, thick, crystal-studded margin, concave, with a transverse carina; *lip* subtriangular, 0.75 mm long, 0.9 mm wide, 0.5 mm deep, shallowly concave below a bar with a small glenion, and concave within the broad margin of the subacute, triangular apex, the dorsum with a subspherical callus above the base, the base truncate, hinged to the base of the column; *column* semiterete, ca. 1 mm long and wide, the anther and the bilobed stigma apical.

Etymology: From the Latin *ejuncidus*, “slender, rushlike,” referring to the habit.

Although prolific by definition, apparently only one or two ramicauls are produced from the apex of a very slender ramicaul. The primary ramicauls are produced from a short, ascending rhizome, with some caespitose components. Middle-sized flowers are borne in congested racemes about as long as the leaf; the sepals are obtuse and 3-veined; the petals are semilunate with a thick margin; and the lip is type A, also with a broad margin.

Stelis ellipsophylla Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Chocó: north of the pass between Urrao and Carmen de Atrato, 2680 m, 31 May 1995, C. Luer, J. Luer & R. Escobar 17689 (Holotype: MO). Fig. 19.

This species is characterized by a large, elliptical leaf, stout ramicauls, and two elongated, many-flowered racemes; 5-veined, subacute sepals; thick, 3-veined petals; and a lip concave above the middle and broadly subquadrate below the middle.

Plant large, epiphytic. Ramicauls erect, stout, 5 mm thick, more than 25 cm tall, with a short, tubular sheath above the middle, and others unknown below the middle, where it has been broken away. *Leaf* erect, coriaceous, elliptical, acute, 20 cm long including a petiole 3 cm long, the blade 5.5 cm wide in the dry state, cuneate below to the petiole. *Inflorescence* 2; 25 cm long, the racemes erect to arching, lax below to congested above, distichous, many-flowered; floral bracts oblique, acute, 5 mm long below to 3 mm long above; pedicels 3 mm long; ovary 2 mm long; the peduncle ca. 5 cm long, subtended by a spathe 12 mm long, from a node below the apex of the ramicaul; *sepals* dark purple externally, greenish purple within, glabrous, ovate, subacute to obtuse, 5-veined, connate below the middle, the dorsal sepal 7 mm long, 6 mm wide, the lateral sepals 6 mm long, 6 mm wide; *petals* green, transversely semilunate, 0.6 mm long, 1.2 mm wide, 3-veined, concave below a thick, rounded apical margin, with a transverse carina; *lip* green, subquadrate, 1 mm long, 0.8 mm wide, 0.5 mm deep, concave below the sulcate, apical margin (the bar) of the subquadrate, basal two-thirds, then contracted into a narrower, concave, apical third, with the apex rounded, the dorsum low, convex, the base truncate, firmly attached to the base of the column; *column* stout, ca. 1 mm long and wide, the anther and the stigmatic lobes apical.

Etymology: From the Greek *elleipsophyllus*, “elliptical-leaved,” referring to the leaf.

The ramicaul of this large, robust species was broken away from the plant, and a search failed in discovering the missing base, or another plant. The single ramicaul is 5 mm thick, 25 cm long, and bears a large elliptical leaf and a pair of long, many-flowered inflorescences. The flowers are large with 6-veined sepals, and the petals are thick and 3-veined. The lip is thick and subquadrate below the middle, then narrowed into a concave, rounded apex.

Stelis enormis Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Antioquia: Alijandra, La Planta, 1200 m, coll. by M. Zapata, July 1993, fl. in cult. at Colomborquídeas, 23 May 1995, C. Luer 17563 (MO). Fig. 20.

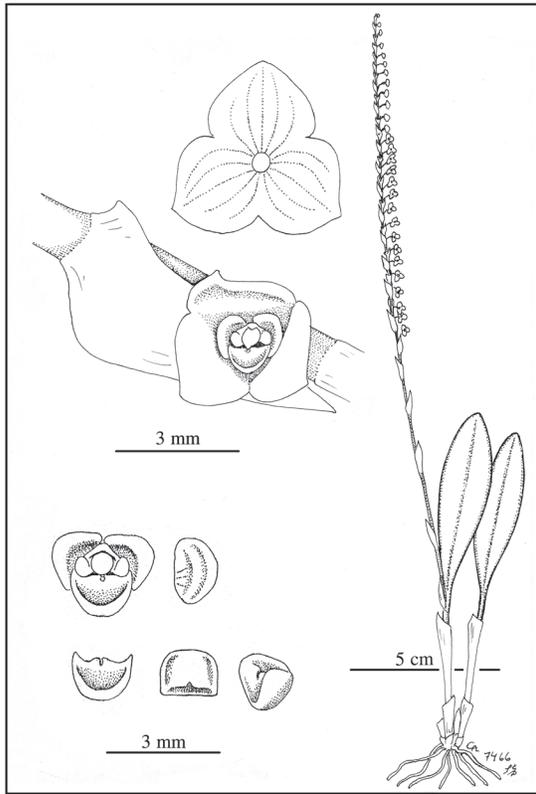


FIGURE 17. *Stelis dynamica* Luer & R. Escobar

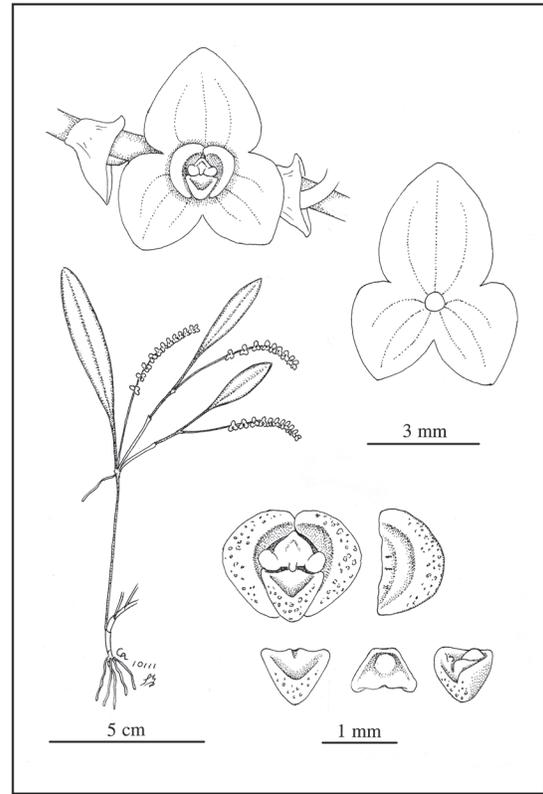


FIGURE 18. *Stelis ejuncida* Luer & R. Escobar

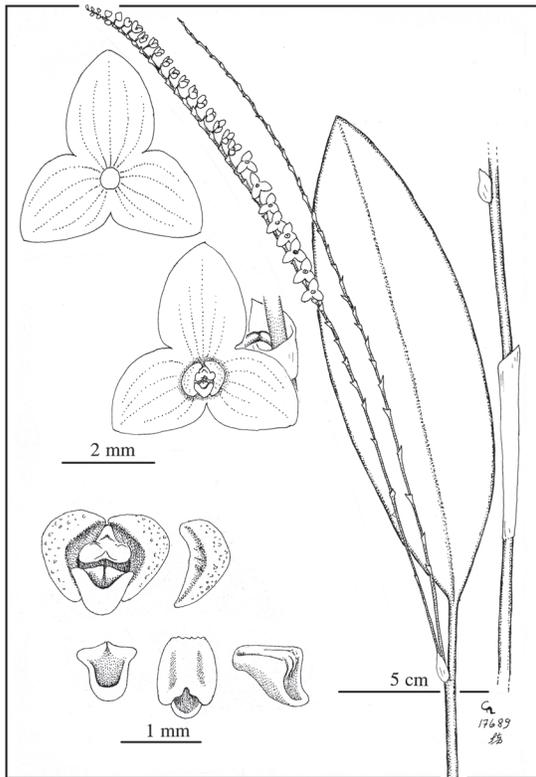


FIGURE 19. *Stelis ellipsophylla* Luer & R. Escobar

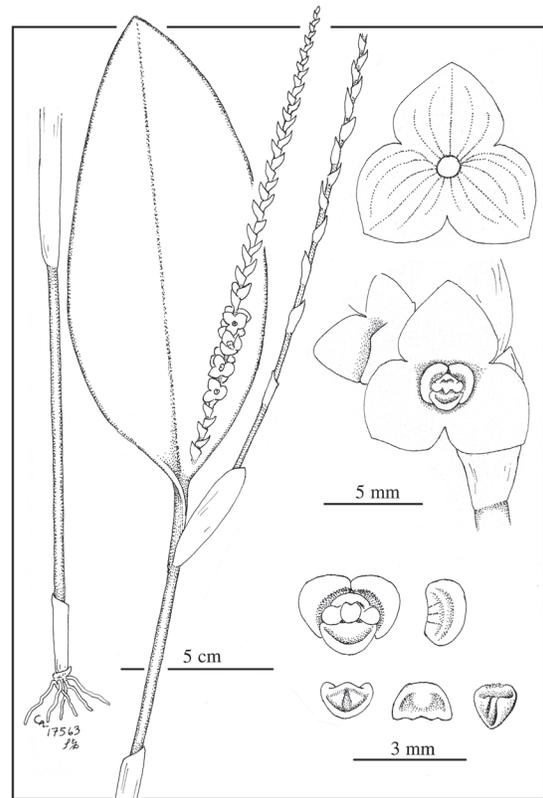


FIGURE 20. *Stelis enormis* Luer & R. Escobar

This very large species is characterized by a strong ramicaul; a large, petiolate leaf; a large spathe from which a many-flowered, large-bracted inflorescence slightly less than a half meter long emerges; obtuse, multiveined sepals; 3-veined petals; and a thick lip with rounded apex.

Plant very large, epiphytic, densely caespitose. Ramicauls erect, stout, to 27 cm tall, with a loose tubular sheath on the middle third, another 2 sheaths below and at the base. *Leaf* erect, coriaceous, ovate, subacute, 20 cm long including a petiole, 2.5 cm long, the blade 7 cm wide in the dry state, cuneate below to the petiole. *Inflorescence* single; to 45 cm tall, the raceme erect, congested, distichous, many-flowered; floral bracts imbricating, oblique, acute, 10 mm long below to 4 mm long toward the tip; pedicels ca. 5 mm long; ovary 3 mm long; peduncle ca. 10 cm long, subtended by a spathe 4 cm long, from a node below the apex of the ramicaul; *sepals* yellow, glabrous, transversely ovate, obtuse, connate to near the middle, the dorsal sepal 4.5 mm long, 5.5 mm wide, 5 veined, the lateral sepals 4 mm long, 5 mm wide, 5-veined with an accessory pair; *petals* brown, semilunate, 1 mm long, 1.5 mm wide, 3-veined, concave below a thick, rounded apex, with a transverse carina; *lip* brown, type A, subquadrate, 1 mm long, 1.5 mm wide, 1 mm long, shallowly concave below the bar with only a faint outline of a glenion, broadly obtuse at the apex, the dorsum convex with a low, rounded callus, the base broadly truncate, hinged to the base of the column; *column* stout, ca. 1 mm long and wide, the anther and the stigmatic lobes apical.

Etymology: From the Latin *enormis*, “immense, huge” referring to the enormous habit.

This unusually large species cultivated by Colomborquídeas, is known from only one ramicaul with leaf and inflorescence, the ramicaul having been cut at the base. The ramicaul is clad near the middle by a short sheath; the huge, ovate leaf is petiolate, and with a large, foliaceous spathe; the inflorescence is nearly half a meter long; large, imbricating floral bracts cover the strict rachis; and the sepals are transversely ovate, the dorsal sepal being 5-veined. The type A lip is basically similar to those of several other large species, especially the frequent and variable *Stelis grandiflora* Lindl.

Stelis ephippium Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA, Norte de Santander: Alto de Santa Inéz, 2100 m, 13 May 1984, C. Luer, J. Luer & R. Escobar 10323 (MO). Fig. 21–22.

This large species is characterized by stout ramicauls; obtuse, elliptical leaves far surpassed by a many-flowered raceme; an acute, 3-veined dorsal sepal; obtuse lateral sepals; 3-veined petals; and a concave lip with a central, erect callus.

Plant large, epiphytic, densely caespitose. Ramicauls erect, stout, 4–5 cm long, with a loose tubular sheath from below the middle, another 2 sheaths below and at the base. *Leaf* erect, coriaceous, elliptical, obtuse to rounded at the tip, 7–12 cm long including a petiole 1.5–2 cm long, the blade 2–2.7 cm wide in the dry state, cuneate below to the petiole. *Inflorescence* single; 20–25 cm tall, the raceme erect,

congested, distichous, many-flowered; floral bracts oblique, acute, 3–4 mm long; pedicels 2 mm long; ovary 1–1.5 mm long; the peduncle 7–8 cm long, subtended by a spathe ca. 1 cm long, from a node below the apex of the ramicaul; *sepals* dark purple, glabrous, the dorsal sepal ovate, acute, 5 mm long, 3 mm wide, 3-veined with an incomplete lateral pair, the lateral sepals broadly ovate, oblique, obtuse, 3 mm long, 3.5 mm wide, 3–4-veined; *petals* yellow with purple edge, transversely ovate, 1.2 mm long, 2 mm wide, 3-veined, concave below a thick, rounded apex, with a transverse carina; *lip* yellow with purple edge, subquadrate, 1.75 mm long, 1.4 mm wide, 1 mm deep, concave below a thick, protruding, rounded, solid callus, with a superficial glenion on the anterior surface, the apex rounded, the dorsum filled with the thick, erect, ovoid callus that extends from the base to include the bar, to within the space within the apical margin, the base truncate, hinged to the base of the column; *column* stout, ca. 1.5 mm long and wide, the anther and the stigmatic lobes apical.

Etymology: From the Latin *ephippium*, “a saddle” in allusion to the shape of the lip.

Paratypes: COLOMBIA. Santander: Alto de Santa Inéz, ca. 2500 m, coll. by E. Valencia, fl. in cult., at Colomborquídeas 23 May 1995, C. Luer 17600 (Holotype: SEL); Alto de Santa Inéz, ca. 2500 m, probably coll. by E. Valencia, fl. in cult., at Colomborquídeas, 16 May 1993. C. Luer 16878 (Holotype: SEL).

This handsome species is characterized by rather large, elliptical leaves with shorter ramicauls and a long, multiflowered raceme with a proportionately small spathe. The sepals are unequal and dark purple, the dorsal sepal being ovate, acute and 3-veined, or incompletely 5-veined, with the lateral sepals being broadly ovate and obtuse. The lip is a modified type A with an erect, ovoid callus, with a superficial glenion on the anterior surface, filling the middle of the lip. The large callus suggests a saddle, the callus rising in the center, being the horn.

A collection cultivated by Tsubota varies with a wider leaf, a proportionately longer ramicaul, and a lip with a cleft bar replacing the protruding, solid callus, the horn of the saddle.

Stelis eucalypta Luer, nom. nov. to replace *Stelis infundibulosa* (Luer) Luer = *Crocodelanthe infundibulosa* (Luer) Luer, 2009, nom. illeg., not *Stelis infundubulosa* (Luer) Pridgeon & M.A. Chase, 2001. TYPE: COLOMBIA, Chocó: San José del Palmar, Cerro Torrá, mesa below the summit, 2500 m, 25 Aug. 1988, P.A. Silverstone-Sopkin 4793 (CUVC), C. Luer illustr. 21259. Fig. 23.

Plant small to medium in size, epiphytic, caespitose; roots slender. Ramicauls erect, more or less stout, 2–6 cm long, enclosed by a tubular sheath from below the middle and 2–3 other sheaths at the base. *Leaf* erect, thickly coriaceous, narrowly elliptical, subacute to acute, 2–9 cm long, 0.5–1 cm wide dry, contracted below into an indistinctly subpetiolate base. *Inflorescence* single; 3–14 cm tall, the raceme erect, subclax to congested, distichous, many-flowered with most flowers open simultaneously; floral bracts conspicuous, purple, broadly infundibular, oblique, acute, 4–6 mm long

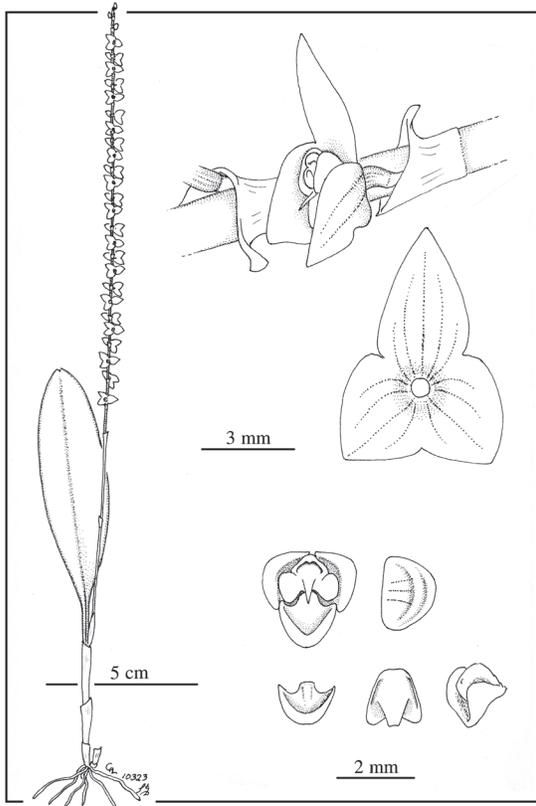


FIGURE 21. *Stelis ephippium* Luer & R. Escobar

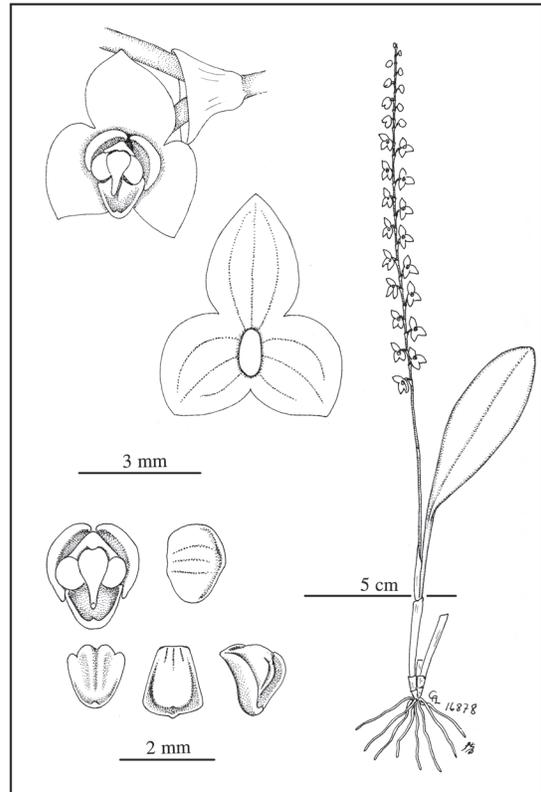


FIGURE 22. *Stelis ephippium* Luer & R. Escobar

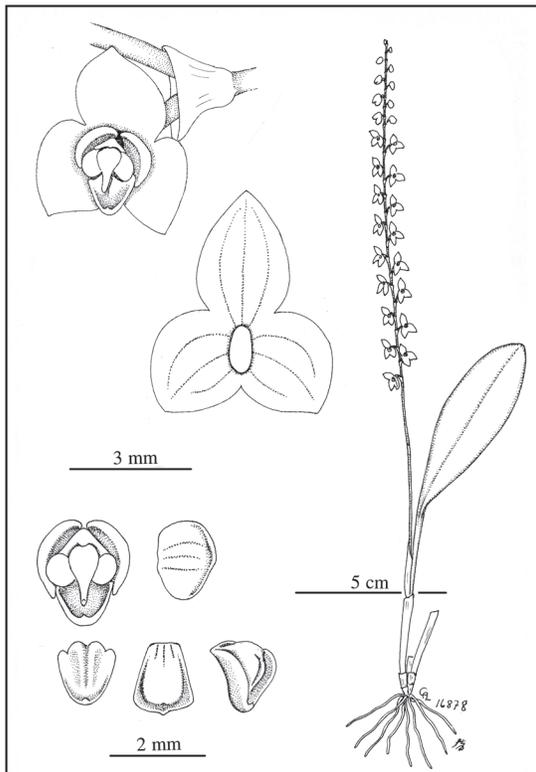


FIGURE 23. *Stelis eucalypta* Luer

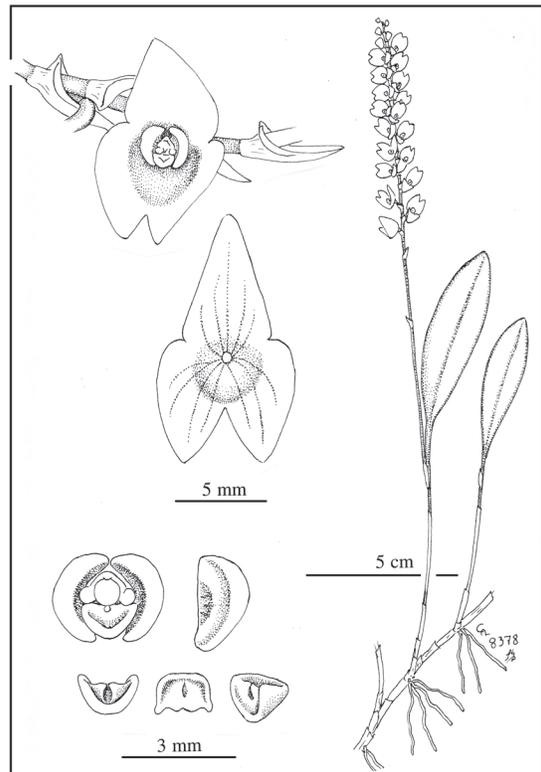


FIGURE 24. *Stelis euprepes* Luer & R. Escobar

and wide; pedicels 2–3 mm long; ovary 1–1.5 mm long; peduncle 0.5–3 cm long, subtended by a slender spathe 4–5 mm long, from a node below the apex of the ramicaul; flowers red-violet, purple, green or yellow; *sepals* similar, widely spread to semiexpanded, shortly pubescent, ovate, obtuse, 2–3 mm long, 2.3–2.5 mm wide, 3-veined, connate basally, the lateral sepals slightly oblique; *petals* transversely oblong, 0.75–1 mm long, 1–1.5 mm wide, 3-veined, the apex broadly rounded with a thickened margin, shallowly concave, no transverse callus seen; *lip* subquadrate, 0.6 mm long, 1 mm wide, 0.6 mm deep, shallowly concave below the bar with an indistinct glenion, the apex broadly rounded, the dorsum with a rounded callus, the base truncate, hinged to the base of the column; *column* semiterete, ca. 1 mm wide and long, the anther and the bilobed stigma apical.

Etymology: From the Greek *eucalyptos*, “well sheathed,” referring to the rachis well covered by floral bracts.

Paratype: Valle del Cauca: El Cairo, Serranía de los Paraguas, 2040 m, 2 April 1988, P.A. Silverstone-Sopkin 3989 (CUVC, MO).

Other collections: COLOMBIA. Antioquia: Frontino, Alto de Cuevas, 2050 m, 4 May 1983, C. Luer, J. Luer & R. Escobar 8942, 8960 (Holotype: SEL); above Frontino toward Nutibara, 1900 m, 5 May 1983, C. Luer, J. Luer & R. Escobar 9028 (Holotype: SEL); Yarumal, Llanos de Cuiba, 2750 m, 12 September 1984, C. Dodson & R. Escobar 15263, 15269 (Holotype: SEL); El Carmen, Alto de San Lorenzo, 2600 m, 17 September 1984, C. Dodson & R. Escobar 15318, 15324 (MO). Risaralda: near San Clemente, 2100 m, 20 April 1982, C. Luer, J. Luer & R. Escobar 7465 (Holotype: SEL).

This handsome species is characterized by an erect, distichous raceme with conspicuous, purple, inflated floral bracts, from which the small, “ordinary” flower protrudes. Vegetatively, the size is variable, as is the raceme, from sublaex to markedly congested, at which time the flower remains only partially expanded. The pedicel is more or less elongated within the large, translucent bract; the sepals are obtuse, 3-veined and pubescent; the petals are broad and 3-veined; and the concave lip is a simple type A.

Stelis euprepes Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Cauca: Popayán, Páramo de Las Barbillas, SE of Popayán, 3150 m, 13 November 1982, C. Luer & R. Escobar 8378 (Holotype: SEL). Fig. 24.

This long-repent species is distinguished by elliptical leaves with equally long ramicauls; a simultaneously many-flowered raceme of relatively large flowers with the dorsal sepal 5-veined; 3-veined petals; and a shallowly concave lip with glenion and rounded apex.

Plant medium in size, epiphytic, repent, the rhizome stout, 2–3 cm between ramicauls; roots slender. Ramicauls ascending-erect, slender, 5–6 cm long, with a close, tubular sheath on the middle third, and another 1–2 sheaths below and at the base. *Leaf* erect, coriaceous, elliptical, acute, petiolate, 7–9 cm long including the petiole 1.5–2.5 cm long, the blade 1–2 cm wide in the dry state, cuneate below to the petiole. *Inflorescence* single; to 18 cm tall, the raceme erect, distichous, crowded, simultaneously many-flowered;

floral bracts oblique, acute, acuminate, 6 mm long; pedicels 1.5 mm long; ovary 2 mm long; peduncle 7–9 cm long, from a node at the tip of the ramicaul, with a spathe 1–1.5 cm long; *sepals* light green, suffused with rose, glabrous, expanded, ovate, the dorsal sepal narrowly obtuse at the tip, the sides more or less recurved, connate to lateral sepals about a fourth the length, 7 mm long, 5 mm wide, 5-veined, the lateral sepals oblique, connate and shallowly concave to near the middle, the apices parallel, but not in apposition, 6 mm long, 4 mm wide, 4-veined; *petals* yellow-green, thick, transversely semilunate, concave, thickened on the rounded margin of the apex, with a transverse callus, 1.5 mm long, 2.5 mm wide, 3-veined; *lip* subquadrate, type A, 1 mm long, 2.5 mm wide, 1 mm deep, shallowly concave below a low bar with a glenion, the apex rounded with a narrow margin, the dorsum slightly concave, the base truncate, hinged to the base of the column; *column* clavate, 1.5 mm wide and long, the anther and the bilobed stigma apical.

Etymology: From the Greek *euprepes*, “charming,” referring to qualities of a flowering plant.

This long-repent species is characterized by slender ramicauls produced at intervals of about two centimeters along a stout, creeping rhizome. Elliptical, petiolate leaves are surpassed by a crowded, large-flowered raceme with acuminate floral bracts, and with the peduncle as long as the leaf. The lateral sepals are shallowly concave and connate to near the middle, but the apices are free and parallel, not in apposition.

Stelis famelica Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Antioquia: Medellín, Cerro Padre Amaya, 2800 m, 21 Apr. 1983, C. Luer, J. Luer & R. Escobar 8768 (Holotype: SEL). Fig. 25.

This medium-sized, caespitose species is characterized by narrowly oblong, obtuse leaves with shorter ramicauls; a single, long, many-flowered raceme of gaping flowers with an erect, 3-veined dorsal above a concave synsepal; and a subquadrate lip with a deeply concave glenion and a hemispherical callus on the dorsum.

Plant medium in size, epiphytic, densely caespitose; roots slender. Ramicauls erect, stout, 2.5–3.5 cm long, with a loose, tubular sheath from below the middle, and another 1–2 sheaths below and about the base; *Leaf* erect, thickly coriaceous, elliptical, obtuse to rounded at the tip, 4–7 cm long including a petiole 1 cm long, the blade 0.8–1.1 cm wide in the dry state, cuneate below into the petiole. *Inflorescence* single; 16–22 cm tall, the raceme erect, strict, second, congested, simultaneously flowered; floral bracts oblique, acute, 2–2.5 mm long; pedicels 1.5 mm long; ovary 1 mm long; the peduncle 4–5 cm long, subtended by a slender spathe ca. 1.5 cm long, from a node below the apex of the ramicaul; flowers white; *sepals* glabrous, the dorsal sepal ovate, subacute, 4.5 mm long, 2.5 mm wide, 3-veined, connate basally to the synsepal, the lateral sepals ovate, subacute, oblique, connate to above the middle into a concave, ovoid synsepal with recurved margins, 3.5 mm long, 4.5 mm wide expanded, 6-veined; *petals* transversely ovate, 0.6 mm long, 1.1 mm wide, 3-veined, concave, the apical margin, rounded, thickened, with an indistinct

transverse callus; *lip* subquadrate, 0.6 mm long, 0.75 mm wide, 0.5 mm deep, concave below a widely cleft bar with a concave glenion, the apex rounded, the margins thin, the dorsum with a rounded, midline callus; the base truncate, hinged to the base of the column; *column* ca. 0.75 mm broad and long, the anther and stigmatic lobes apical.

Etymology: From the Latin *famelicus*, "hungry, famished" in allusion to the fancied appearance of the flowers to the open mouths of baby birds waiting to be fed.

The flowers this species are similar to those of *Stelis lacertina* Luer & R. Escobar described herein, but vegetatively the plants differ markedly. The ramicauls are less than half as long with proportionately smaller, narrow leaves. The inflorescence consists of a longer, single, instead of multiple racemes, and the flowers are white, instead of green. The base of the dorsal sepal is not connate to the synsepal to form a retrorse mentum. The petals and lip are very similar.

Stelis fascinata Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Putumayo: between La Cocha and Sibundoy. 2700 m, 30 July 1978, C. Luer, J. Luer & R. Escobar 3160 (Holotype: SEL). Fig. 26.

This large, repent species is distinguished by a long inflorescence that far exceeds a narrowly elliptical leaf; yellow flowers with the dorsal sepal 3-veined and the synsepal multiveined; thick, 3-veined petals; and an ovoid lip with a prominently cleft glenion.

Plant large, epiphytic, repent, the rhizome thick, 1–1.5 cm long between ramicauls; roots slender. Ramicaul erect, stout, 9–15 cm long, with a tubular sheath from near the middle, another sheath below the middle, and one at the base. *Leaf* erect, coriaceous, narrowly oblong-ovate, narrowly obtuse, 7–12 cm long, 1.2–1.5 cm wide in the dry state, cuneate below into a petiole 1–1.5 cm long. *Inflorescence* single; to 35 cm long, the raceme erect, secund, densely many-flowered; floral bracts infundibular, acute, 3 mm long; pedicels 2 mm long; ovary 2 mm long; the peduncle 8–15 cm long, subtended by a slender spathe 1–1.5 cm long, from a node below the apex of the ramicaul; flowers yellow; *sepals* glabrous, the dorsal sepal ovate, convex, obtuse, 9 mm long, 4.5 mm wide, 3-veined, connate to the synsepal 1 mm, the lateral sepals connate to near subacute tips into a concave synsepal, 6.5 mm long, 7 mm wide, indistinctly 8-veined, with sides recurved; *petals* thick, transversely ovate, 1.25 mm long, 1.5 mm wide, 3-veined, with the apical margin obtuse, broadly thickened, with a transverse carina; *lip* ovoid, 1 mm long, 1 mm wide, 0.75 mm deep, deeply concave below a cleft bar within the thickened margins of the subacute apex, the dorsum thickened with a broad callus; *column* 1 mm broad and long, the anther and stigmatic lobes apical.

Etymology: From the Latin *fascinatus*, "fascinating," referring to the floral morphology.

This species from the Central Cordillera is related to *Stelis caliensis* Luer from the Department of Cauca in the Western Cordillera. Unfortunately, *Stelis caliensis* is known from only a single, incomplete collection with the ramicaul broken off five centimeters below the abscission layer.

Nevertheless, *Stelis fascinata* is distinguished by narrower leaves and a much longer raceme with a much longer peduncle. Instead of dark purple, the flowers are yellow, and the dorsal sepal is 3-veined instead of 5–7-veined. The lips of the two concepts are similar.

Stelis fissurosa Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Risaralda: Pereira, Ucumarí, Regional Nature Reserve, 2400 m, fl. in cult. at "La Pastora," May 1992, A. de Wilde 058 (Holotype: SEL), C. Luer illustr. 21919. Fig. 27.

This medium-sized species is characterized by thick, narrowly linear leaves and a many-flowered raceme about as long; acute, glabrous, ovate sepals; 3-veined petals; and a deeply hollowed out lip beneath a deeply cleft, shelf-like bar.

Plant medium in size, epiphytic, caespitose. Ramicauls erect, relatively stout, 2.5–3.5 cm long, with a loose, tubular sheath from below the middle, and another 1–2 sheaths at the base. *Leaf* erect, thickly coriaceous, narrowly linear, acute, 5–7 cm long, 0.5–0.8 cm wide in the dry state, narrowed below into an indistinct petiole ca. 1 cm long. *Inflorescence* 1–2; 7–10 cm tall, the racemes erect, subflexuous, congested, distichous in liquid to secund when dry and pressed, many-flowered with most flowers open simultaneously; floral bracts oblique, acute, 2 mm long; pedicels 1.5 mm long; ovary 1.5 mm long; peduncle ca. 1 cm long, subtended by a slender spathe 6–7 mm long, from a node at the apex of the ramicaul; color of flowers unknown; *sepals* glabrous, expanded, ovate, acute, connate basally, 3-veined, the dorsal sepal 3 mm long, 2 mm wide, the lateral sepals 3.5 mm long, 2.5 mm wide; *petals* transversely ovate, 0.5 mm long, 1 mm wide, 3-veined, the apex broadly obtuse, thickened, concave below a transverse carina; *lip* subovoid, deeply hollowed out, 1 mm long, 0.5 mm wide, 0.6 mm deep, the apex obtuse, acuminate, thin, the bar deeply cleft above a deep cavity, apex acuminate, obtuse, thin, the dorsum cleft to the base, the base truncate connate to the base of the column; *column* stout, ca. 0.5 mm long and wide, the anther and the stigmatic lobes apical.

Etymology: From the Latin *fissurosus*, "well-developed cleft," referring to the deeply cleft dorsum of the lip.

This medium-sized species with thick, narrowly linear leaves produces a crowded, subflexuous, many-flowered, crowded raceme about as long. The sepals are ovate, glabrous and acute, with the dorsal sepal slightly smaller than the lateral sepals. The petals are thick and 3-veined. The lip is deeply concave below a deeply cleft bar. The apex is acuminate, thin and obtuse.

Stelis fluxflorum Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Antioquia: Sonsón, between Sonsón and La Ceja, 2400 m, 29 April 1983, C. Luer, J. Luer & R. Escobar 8876 (Holotype: SEL). Fig. 28.

This large, caespitose species is distinguished by multiple, many-flowered racemes that more or less equal acute, elliptical leaves in length; ovate sepals with the dorsal 5-veined; 3-veined petals with acuminate, lateral angles; and a lip with a descending dorsum with a rounded callus.

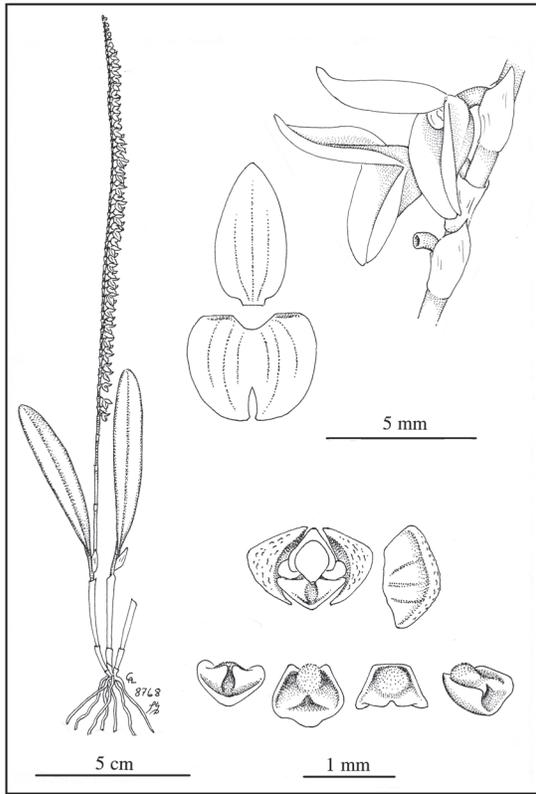


FIGURE 25. *Stelis famelica* Luer & R.Escobar

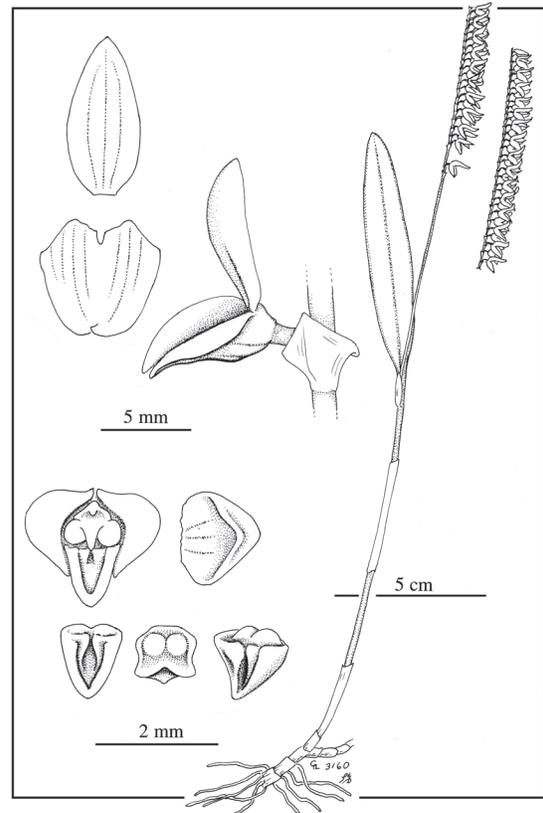


FIGURE 26. *Stelis fascinata* Luer & R.Escobar

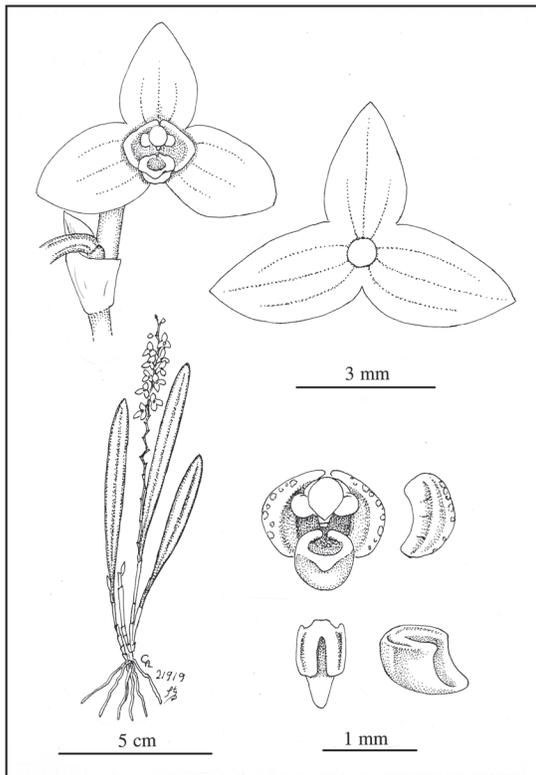


FIGURE 27. *Stelis fissurosa* Luer & R.Escobar

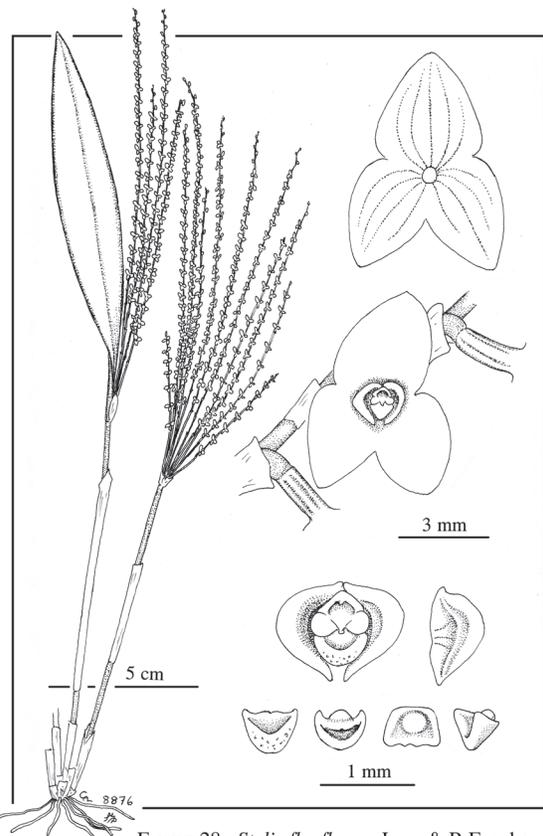


FIGURE 28. *Stelis fluxiflorum* Luer & R.Escobar

Plant large, epiphytic, densely caespitose, roots slender. Ramicauls erect, fasciculate, slender, 8–20 cm long, with a tubular sheath on the middle third, and another 1–2 sheaths below and at the base. *Leaf* erect, coriaceous, elliptical, acute, 11–16 cm long including a petiole 1.5–2 cm long, the blade 1.5–2.2 cm wide in dry state, cuneate below into the petiole. *Inflorescence* 5–14; 8–15 cm tall, the racemes strict, crowded, simultaneously many-flowered, floral bracts tubular, obtuse, 2 mm long; pedicels 1.5 mm long; ovary 1.75 mm long; the peduncle ca. 1 cm long, from a node above the apex of the ramicaul, with a spathe ca. 1 cm long; *sepals* yellow, suffused with purple, glabrous, expanded, ovate, subacute, connate below the middle, the dorsal sepal 4 mm long, 3.5 mm wide, the lateral sepals 3.5 mm long, 2.75 mm wide; *petals* yellow-green, transversely lunate with the basal angles slightly acuminate, the apex broadly obtuse and thickened on the margin, and with a transverse carina, 1 mm long, 1.5 mm wide, 3-veined; *lip* yellow-green, subquadrate, type A, 0.6 mm long, 0.8 mm wide, 0.5 mm deep, concave below the bar with a slight notch and within the rounded apex with a broad margin, the dorsum 45° deflexed with a rounded callus, base truncate, hinged to the base of the column; *column* clavate, ca. 1 mm wide and long, the anther and the bilobed stigma apical.

Etymology: From the Latin *flux florum*, “a flood of flowers,” referring to the racemes.

This tall species is most remarkable for the large number of many-flowered inflorescences that are produced simultaneously, but the racemes, up to 14 in number barely surpass the acute leaf. The medium-sized flowers with 5-veined dorsal sepals are not exceptional; the petals are 3-veined with a sharp transverse carina and slightly acuminate basal angles; and the lip is a common variation of type A, but with the dorsum sloping downward.

Stelis frondifera Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Antioquia: Yarumal, Raton Pelado, above of Yarumal, 2650 m, 1 May 1984, *C. Luer, J. Luer & R. Escobar 10051* (Holotype: SEL). Fig. 29–30.

This large, repent species is distinguished by numerous, slender ramicauls with a narrow, elliptical leaf; a single raceme; single-veined petals; and a minute, subquadrate lip with a minutely apiculate tip on the rounded margin, and with a proportionately large, smooth, central callus.

Plant large, epiphytic, repent, the rhizome slender, up to 20 cm long, 0.2–3 cm long between ramicauls; roots slender. Ramicauls ascending, erect, slender, 5–8 cm long, enclosed by a tubular sheath above the middle, another 1–2 sheaths below the middle and at the base. *Leaf* erect, coriaceous, narrowly elliptical, acute, 8–12 cm long, 0.5–1.2 cm wide in the dry state, narrowed below to the subpetiolate base. *Inflorescence* single; 15–20 cm long, the raceme erect, congested, distichous, many-flowered with many flowers open simultaneously; floral bracts oblique, acute, 2–2.5 mm long; pedicels 1 mm long; ovary 1 mm long; the peduncle ca. 2 cm long, subtended by a slender spathe 1 cm long, from a node below the apex of the ramicaul; flowers light yellow; *sepals* glabrous, ovate, subacute, 3-veined, the dorsal sepal

2.5–3 mm long, 1.8–2 mm wide, the lateral sepals antrorse, 2 mm long, 1.8 mm wide; *petals* membranous, transversely oblong, concave, broadly rounded at the apex, the margin narrowly thickened, subverrucose, 0.5 mm long, 0.75–1 mm wide, 1-veined; *lip* subquadrate, 0.5–0.6 mm long, 0.6–0.8 mm wide, 0.4 mm deep, concave within the broadly obtuse, minutely apiculate margin surrounding a proportionately large, smooth, rounded callus that fills the disc extending to the base, the base broadly truncate, hinged to the base of the column; *column* ca. 0.8 mm long and wide, the anther and the stigmatic lobes apical.

Etymology: From the Latin *frondifer*, “branch-bearing,” referring to the numerous ramicauls.

Paratype: COLOMBIA. Antioquia: Yarumal, Santa Rosa de Osa, above Estadero Manicomio, 2580 m, 14 Mar. 1989, *C. Luer, J. Luer & S. Dalström & W. Teague 14144* (Holotype: SEL).

This medium-sized to large, creeping species is characterized by a slender rhizome with slender, ascending ramicauls, either closely spaced, or two centimeters apart, apparently depending upon local conditions. The leaves are narrowly elliptical, and far surpassed by a single, much longer, small-flowered raceme. The sepals are subacute and 3-veined, the lateral sepals antrorse; the petals are membranous and single-veined; and the minutely apiculate lip is filled with a large, rounded callus.

Stelis glomifera Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Antioquia: Frontino, above the airport below El Plateado, 1820 m, 3 May 1983, *C. Luer, J. Luer & R. Escobar 8977* (Holotype: SEL). Fig. 31–32.

This small species is distinguished by a flexuous raceme that bears one flower successively; a 5-veined dorsal sepal and semiconnate lateral sepals forming a synsepal; and a lip with a broad, semilunate margin, and a small, orbicular callus on the dorsum.

Plant small, epiphytic, caespitose; roots slender. Ramicauls erect, 1–1.5 mm long, enclosed by a loose, tubular sheath from below the middle and another at the base. *Leaf* erect, coriaceous, elliptical, obtuse to rounded at the tip, 3–4.5 cm long including a petiole 0.5–1.5 mm long, the blade 1–1.5 cm wide in the dry state. *Inflorescence* single; 3–13 cm long, the raceme erect to arching, flexuous, successively single-flowered; floral bracts oblique, acute, 1–2 mm long; pedicels 2 mm long; ovary 1 mm long; peduncle 1.5–3 cm long, from a node at the apex of the ramicaul; *sepals* glabrous, the dorsal sepal purple, erect, broadly ovate, obtuse, 4.5–7 mm long, 5–6 mm wide, 5-veined, sometimes branching into 7 veins, connate 1–2 mm, the lateral sepals yellow, sometimes suffused with purple, broadly ovate, oblique, obtuse, connate near the middle, but adherent to the tip to form a deeply concave synsepal, 3.5–5 mm long, 3.5–4 mm wide, each 4- or 5-veined; *petals* purple, transversely semilunate to obovate, concave below the broad, rounded apex and concave below a transverse carina, 1–1.5 mm long, 1.5–2 mm wide, 3-veined. *Lip* purple, subquadrate, 0.8–1 mm long, 0.8–1.2 mm wide, 0.6 mm deep, concave below the bar, the anterior surface smooth,

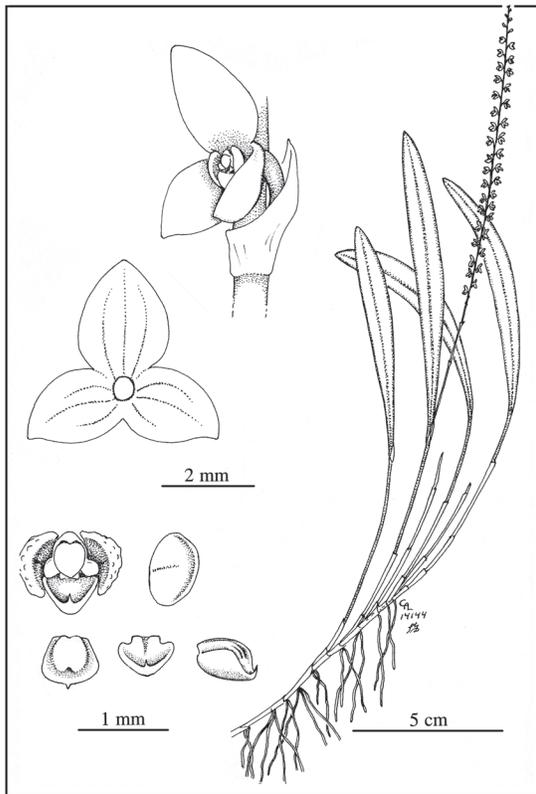


FIGURE 29. *Stelis frondifera* Luer & R. Escobar

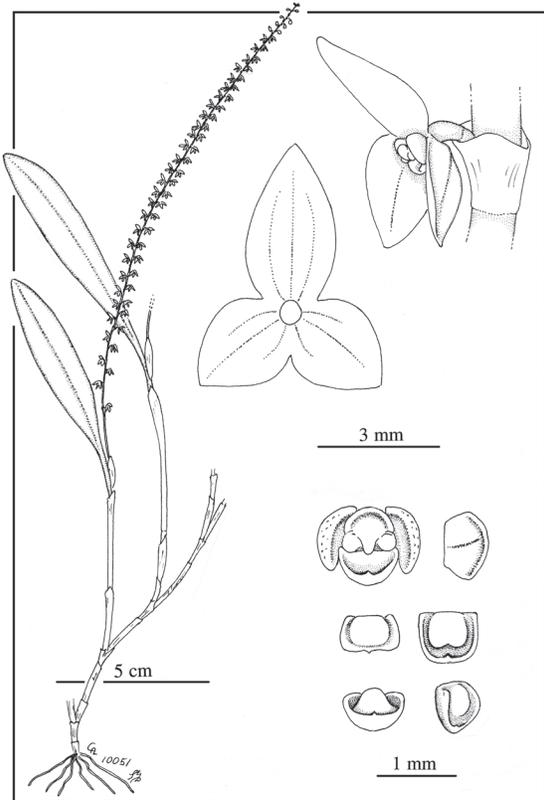


FIGURE 30. *Stelis frondifera* Luer & R. Escobar

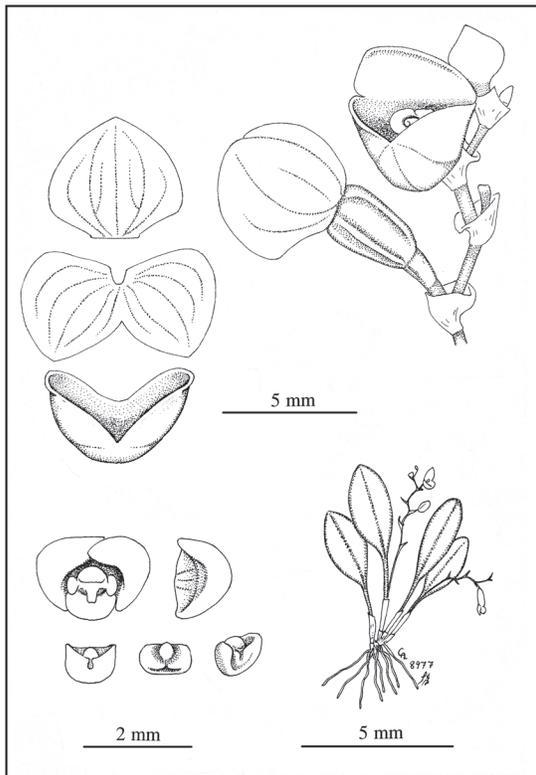


FIGURE 31. *Stelis glomifera* Luer & R. Escobar

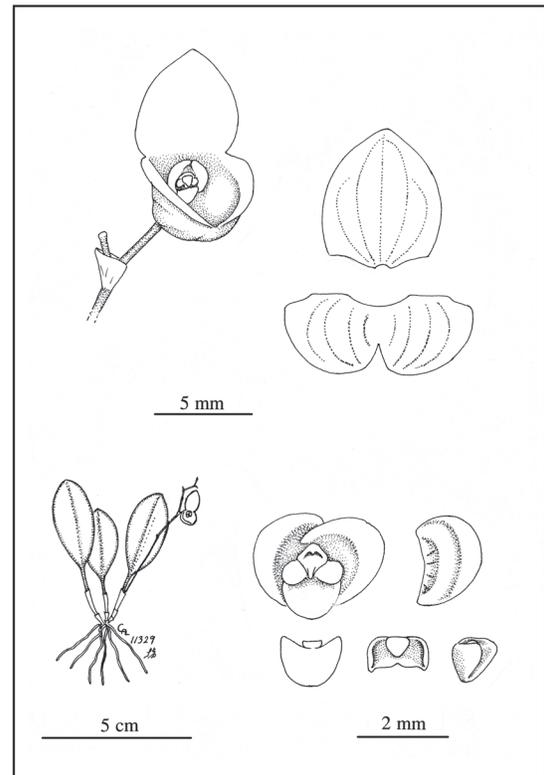


FIGURE 32. *Stelis glomifera* Luer & R. Escobar

the apex broadly rounded, the dorsum slightly concave, with a central, subspherical callus, the base truncate, hinged to the base of the column; *column* clavate, ca. 0.8 mm long and wide, the anther and the bilobed stigma apical.

Etymology: From the Latin *glomifer*, "ball-bearing," referring to the ball-like callus on the lip.

Paratypes: COLOMBIA. Risaralda: Pueblo Rico, 1800–2000 m, collector unknown, fl. in cult. at Colombrorquídeas, 11 May 1985, *C. Luer 11329* (SEL); Chocó: San José del Palmar, 2400 m, collected and fl. in cult. by Antonio Gonzalez, October 1996 *C. Luer 18424* (SEL); Valle del Cauca: collected locally, 1000 m, fl. in cult. by Orquídeas del Valle, 15 March 1997 *C. Luer 18431* (SEL).

This small species is widely distributed in the Western Cordillera of Colombia. It is characterized by a successively single-flowered raceme that gradually equals, then exceeds the leaf with an arching, lengthening, flexuous rachis. The dorsal sepal is dark purple while the synsepal is yellow, or variously marked or suffused with purple. A distinct subspherical callus is present on the dorsum of the lip.

The flowers of this species are similar to those of *Stelis gongylophora* Luer & R. Escobar described herein, but the latter is a large plant with multiple, simultaneously flowered racemes.

Stelis gongylophora Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Antioquia: La Unión, 5 km W of Mesopotamia, 2400 m, 8 April 1988, *C. Luer, J. Luer, & R. Escobar 13071* (Holotype: SEL). Fig. 33.

This large species is distinguished by a several, subclaxly flowered racemes shorter to nearly as long as an elliptical, petiolate leaf; a 5-veined dorsal sepal; a shallowly concave synsepal; and a shallowly concave, semilunate lip, with a suborbicular callus that nearly fills the dorsum.

Plant large, epiphytic, caespitose; roots slender. Ramicauls erect, 10–18 cm long, with a tubular sheath from below the middle and another 1–2 sheaths below and at the base. *Leaf* erect, coriaceous, elliptical, subacute, 9–13 cm long including a petiole 2–3 cm long, the blade 2–3.5 cm wide in the dry state. *Inflorescence* 2–5 simultaneous; 7–8 cm long, the racemes erect, strict, subclax. mostly simultaneously many-flowered, nearly to the base; floral bracts oblique, acute, 2 mm long; pedicels 1.5 mm long; ovary 1.5 mm long; the peduncle ca. 1 cm long, with a spathe 7 mm long, from a node at the apex of the ramicaul; flowers light green; *sepals* glabrous, the dorsal sepal erect, broadly ovate, obtuse, 4 mm long, 3.5 mm wide, 5-veined, the lateral sepals broadly ovate, oblique, obtuse, connate near the apex to form a shallowly concave synsepal, 2 mm long, 4.5 mm wide; *petals* transversely semilunate, concave below a broadly rounded apex, and concave below a transverse carina, 1 mm long, 1.3 mm wide, 3-veined; *lip* obovoid, 0.75 mm long, 1 mm wide, 0.5 mm deep, shallowly concave below a smooth, rounded bar, the apex broadly rounded with a minimally thickened margin, the dorsum filled with a semiorbicular callus, the base truncate, hinged to the base of the column; *column* clavate, ca. 1 mm long and wide, the anther and the bilobed stigma apical.

Etymology: From the Greek *gongylophora*, "ball-bearing," referring to the ball-like callus on the lip.

This large species is characterized by several, simultaneous, subclaxly flowered racemes that are shorter, or nearly as long, as an elliptical, petiolate leaf. The dorsal sepal is 5-veined, or seven-veined if a pair of incomplete attempts to make a vein are counted. The apex of the lip is shallowly concave and broadly rounded. While a smooth, semiorbicular callus occupies the dorsum.

Stelis humidensis Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Antioquia: La Humido, 1500 m, collector unknown, August 1980, fl. in cult. at Colombrorquídeas, 23 May 1995, *C. Luer 17575* (Holotype: SEL). Fig. 34.

This tall, densely caespitose species is distinguished by a slender ramicauls each with an acute elliptical leaf surpassed by one or two congested, small-flowered racemes; obtuse, glabrous, 3-veined sepals; 3-veined petals; and a lip with a large, concave glenion.

Plant large, epiphytic, densely caespitose; roots slender. Ramicaul erect, slender, 6–10 cm long, with a tubular sheath from below the middle, another 2 sheaths below and at the base. *Leaf* erect, coriaceous, narrowly elliptical, acute, 8–11.5 cm long, 1.2–1.5 cm wide in the dry state, cuneate below into a petiole 2 cm long. *Inflorescence* 1–2; 12–15 cm long, the racemes erect, distichous, densely many-flowered; floral bracts oblique, acute, 2.5 mm long; pedicels 2.5 mm long; ovary 1 mm long; the peduncle ca. 4 cm long, subtended by a slender spathe ca. 1 cm long, from a node below the apex of the ramicaul; *sepals* yellow-green, glabrous, broadly ovate, obtuse, 3-veined, connate to near the middle, the dorsal sepal 3 mm long, 2.8 mm wide, the lateral sepals 2 mm long, 2 mm wide; *petals* green, thick, transversely semilunate, 1 mm long, 1.5 mm wide, the apical margin rounded, thickened, 3-veined below a transverse carina; *lip* green, subquadrate, 0.75 mm long, 1.3 mm wide, 0.6 mm deep, concave below the bar and within the thickened margin of the rounded apex, the bar with a large, concave glenion that is continuous with a rounded callus on the dorsum, the base truncate, hinged to the base of the column; *column* stout, ca. 1 mm broad and long, the anther and stigmatic lobes apical.

Etymology: Named for La Humido, where this species was collected.

This caespitose species has no single feature that distinguishes it from other similar-appearing species. It keys out to *Stelis medinae* Luer & Hirtz in the *Stelis of Ecuador*, Part Four, Icones Pleurothallidarum, but it differs from the latter by proportionately longer ramicauls; petiolate leaves; and broader, ovate, obtuse, glabrous sepals.

Stelis imperialis Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Cauca: Popayán, Páramo de Las Barbillas, SE of Popayán, 3150 m, 13 November 1982, *C. Luer & R. Escobar 8380* (Holotype: SEL). Fig. 35–36.

This large species is distinguished by tall, stout ramicauls, occasionally proliferating; elliptical, petiolate leaves; one to three simultaneous, large-flowered racemes; a 5-veined

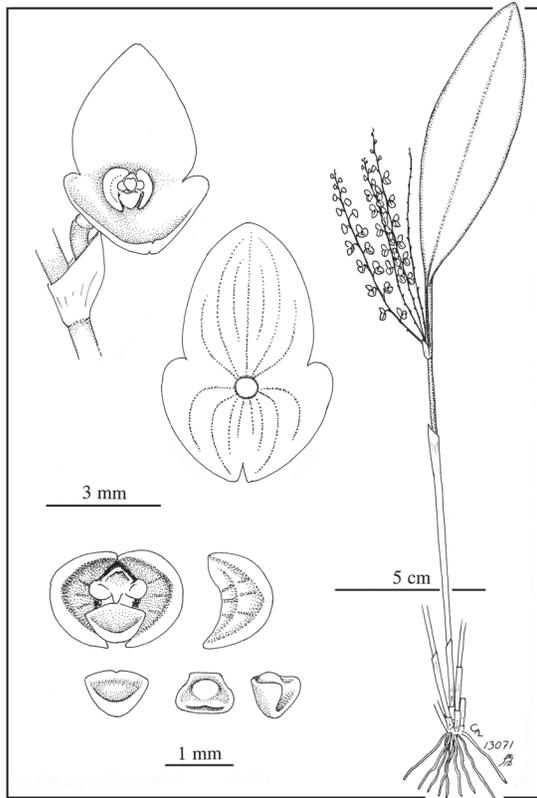


FIGURE 33. *Stelis gongylophora* Luer & R.Escobar

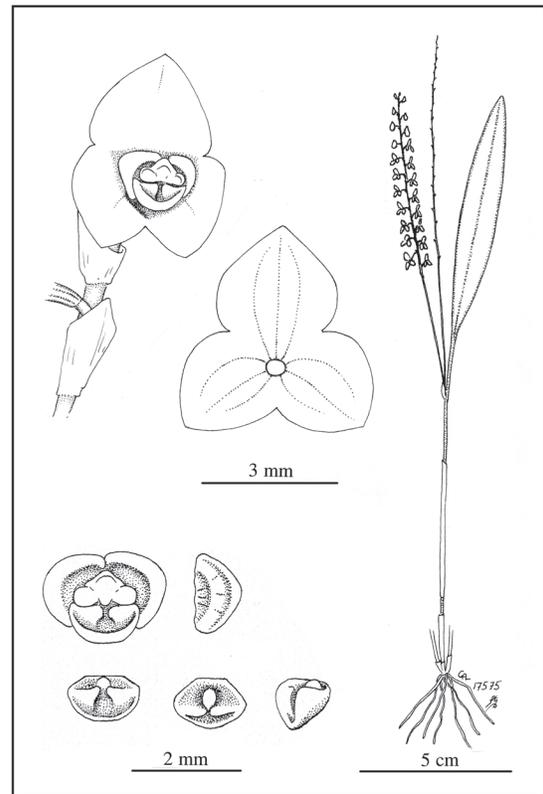


FIGURE 34. *Stelis humidensis* Luer

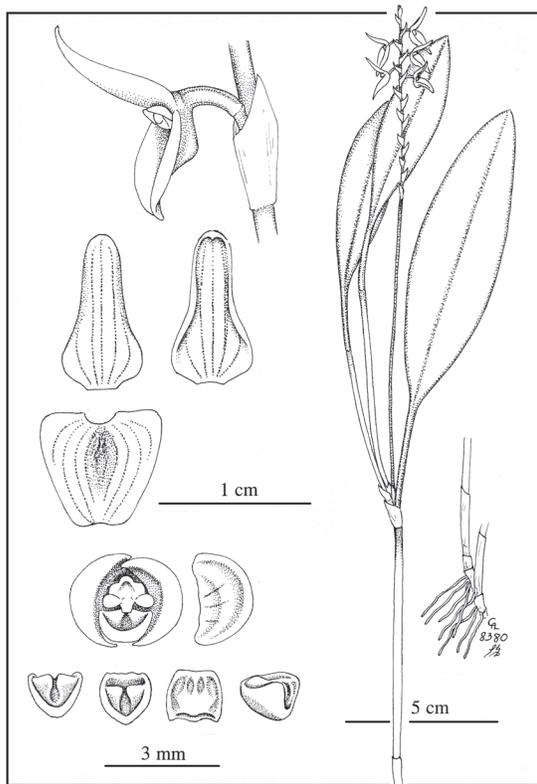


FIGURE 35. *Stelis imperialis* Luer & R.Escobar

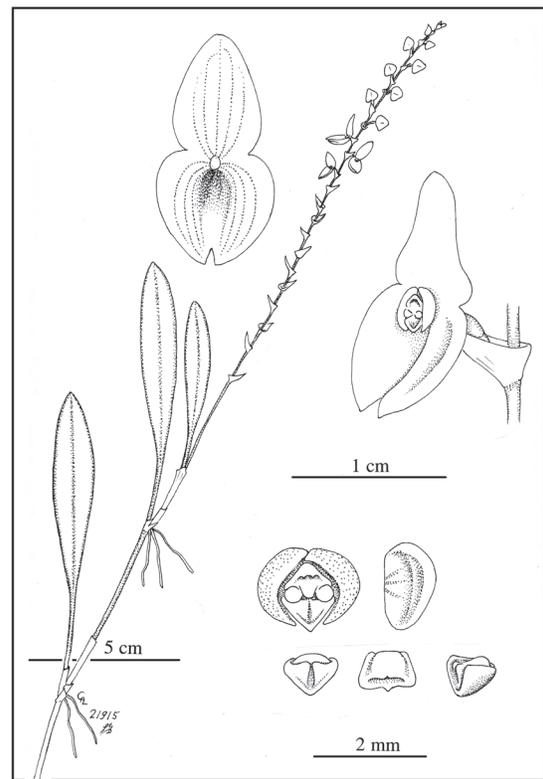


FIGURE 36. *Stelis imperialis* Luer & R.Escobar

dorsal sepal; an ovoid, multiveined synsepal with a basal mentum; 3-veined petals; and an obtuse lip with a glenion.

Plant large, epiphytic, caespitose; roots slender. Ramicauls stout, erect, 12–21 cm long, with a tubular sheath from near the middle and another 1–2 below and at the base, occasionally producing a plantlet at the abscission layer. *Leaf* erect, coriaceous, elliptical, acute to subacute, 8–15 cm long including a petiole 2–3 cm long, the blade 2–3.5 cm wide in the dry state. *Inflorescence* 1–3 simultaneous; 12–15 cm long, the racemes erect, strict, sublax. many-flowered; floral bracts oblique, acute, 8 mm long below to 5 mm long above; pedicels ca. 5 mm long; ovary 3–4 mm long; the peduncle 3–5 cm long, from a node below the apex of the ramicaul; *sepals* green, or green suffused and dotted with purple, glabrous, the dorsal sepal erect, ovate with recurved margins, obtuse with an incurved tip, 10 mm long, 6 mm wide, 6-veined, the lateral sepals connate into a ovate synsepal with recurved margins and a basal mentum, 8 mm long, 8 mm wide, 10-veined; *petals* yellow, transversely semilunate, concave, the apex rounded with thickened margin, 1.5 mm long, 2.3 mm wide, 3-veined, with a transverse carina; *lip* yellow, subquadrate, 1 mm long, 1.3 mm wide, 1.3 mm deep, concave below the bar with a glenion, the apex obtuse with a thickened margin, the dorsum slightly concave with the three veins thickened, the base truncate, hinged to the base of the column; *column* clavate, ca. 1 mm long and wide, the anther and bilobed stigma apical.

Etymology: From the Latin *imperialis*, referring to an imperial status among its fellow species.

Paratype: COLOMBIA. Cauca: Popayán, Páramo de Las Barbillas, SE of Popayán, 3150 m, 13 November 1982, C. Luer & R. Escobar 3379 (Holotype: SEL).

This large species is characterized by stout ramicauls that occasionally proliferate a plantlet at the apex with the leaf and one to three inflorescences. The sepals of one collection were green and suffused and dotted with purple. The flowers of a simultaneous collection were totally green. The floral bracts are long and acute; the dorsal sepal is erect and 5-veined; the synsepal is concave with recurved sides and a basal mentum; the petals are thick and 3-veined; and the lip is type A with a large glenion.

Stelis inamoena Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Norte de Santander: Páramo de Jurisdicciones, 3150 m, 10 November 1981, C. Luer, J. Luer & R. Escobar 6653 (Holotype: SEL). Fig. 37.

This medium-sized species is distinguished by clumps of slender ramicauls along an ascending rhizome; narrowly elliptical leaves; a few lax racemes as long as or longer than the leaf; minute flowers with obtuse, 3-veined sepals; single-veined petals; and a subquadrate, obtuse lip less than half a millimeter long.

Plant medium-sized, epiphytic, with densely caespitose components along a relatively stout, ascending rhizome 2–3 mm thick; roots slender. Ramicauls erect, slender, 6–10 cm long, with a tubular sheath from below the middle and another above the base. *Leaf* erect, coriaceous, narrowly elliptical, acute to subacute, 6–8 cm long, with a petiole 0.5–1 cm long, the blade 0.7–0.9 cm wide in the dry state,

narrowly cuneate into the petiole. *Inflorescence* 3–8, but not all simultaneous; 8–10 cm long, the racemes erect, strict, lax. many-flowered, distichous, with most flowers open simultaneously; floral bracts oblique, acute, 3 mm long below, 1 mm long above; pedicels 2–3 mm long; ovary 1 mm long; the peduncle ca. 1 cm long, with a spathe ca. 0.8 cm long, from a node below the apex of the ramicaul; flowers yellow-white; *sepals* glabrous, ovate, obtuse, 3-veined, connate below the middle, the dorsal sepal 1.4 mm long, 1.2 mm wide, the lateral sepals 1.2 mm long, 1 mm wide; *petals* thin obovate, broadly obtuse, shallowly concave, 0.75 mm long, 0.75 mm wide, 1-veined; *lip* subquadrate, 0.4 mm long, 0.3 mm wide, 0.2 mm deep, concave below the bar, the apex obtuse, the dorsum featureless, the base truncate, hinged to the base of the column; *column* clavate, ca. 0.4 mm wide and long, the anther apical, the stigmatic lobes within the margins of the clinandrium.

Etymology: From the Latin *inamoenus*, “not pretty by the describer’s standards,” referring to the untidy habit and tiny, simple flowers.

This medium-sized species produces untidy clusters of overlapping, caespitose components along stout, ascending rhizomes. Slender racemes of tiny flowers that hug the rachis are irregularly produced, and do not usually exceed the narrow leaves. The sepals are minute and 3-veined; the petals are thin and single-veined. The simple type A lip is less than half a millimeter long.

Stelis inedita Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Norte de Santander, Páramo de Jurisdicciones, 2570 m, 30 April 1982, C. Luer, J. Luer & R. Escobar 7655 (Holotype: SEL). Fig. 38.

This large, caespitose species is distinguished by one or two racemes much longer than an elliptical, petiolate leaf; a 3-veined dorsal and a concave synsepal, the sepals, ovaries, floral bracts and rachis with multiple, scattered deposits of an unidentified substance.

Plant large, epiphytic, caespitose; roots slender. Ramicauls erect, relatively stout, 4–6 cm long, with a loose, tubular sheath from below the middle and another 1–2 sheaths below and at the base. *Leaf* erect, coriaceous, elliptical, obtuse, petiolate, 6–10 cm long including a petiole 1.5 cm long, the blade 1.5–2 cm wide in dry state, cuneate below into the petiole. *Inflorescence* 1–2; 10–16 cm long, the racemes erect, strict, congested, secund, simultaneously many-flowered; floral bracts oblique, obtuse, 3 mm long; pedicels 1.5 mm long; ovary 1 mm long; the peduncle ca. 2 cm long, with a spathe 1 cm long, from a node below the apex of the ramicaul; *sepals* glabrous, light-yellow-green with multiple, irregular deposits of an unknown substance, the dorsal sepal ovate, subacute, 5 mm long, 2.5 mm wide, 3-veined, the lateral sepals ovate, obtuse, connate to above the middle, forming a deeply concave, ovoid synsepal, 4 mm long, 4 mm wide, 6-veined; *petals* transversely ovate, thick, concave, 0.8 mm long, 1 mm wide, 3-veined, the apex rounded, with a thick margin, with a transverse carina; *lip* subquadrate, 0.8 mm long, 0.8 mm wide, 0.4 mm deep, concave below the bar with a broad glenion, the apex obtuse, the dorsum convex centrally, microscopically pubescent,

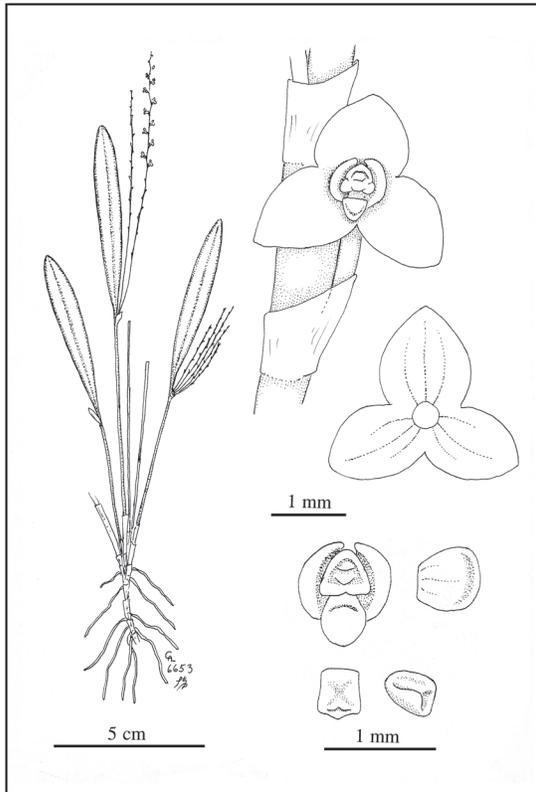


FIGURE 37. *Stelis inamoena* Luer & R. Escobar

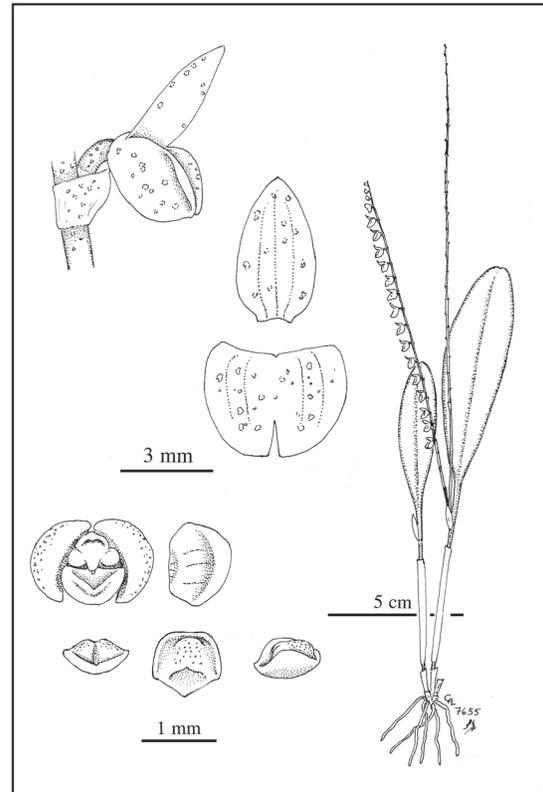


FIGURE 38. *Stelis inedita* Luer & R. Escobar

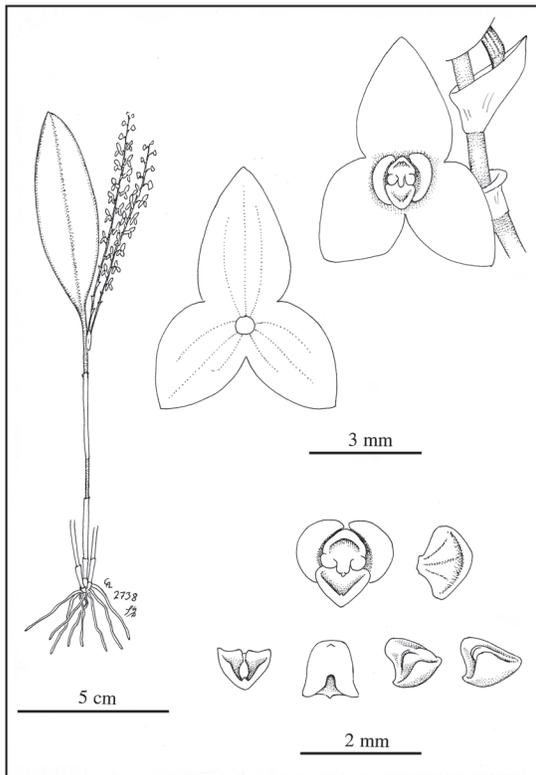


FIGURE 39. *Stelis ipialesensis* Luer & Hirtz

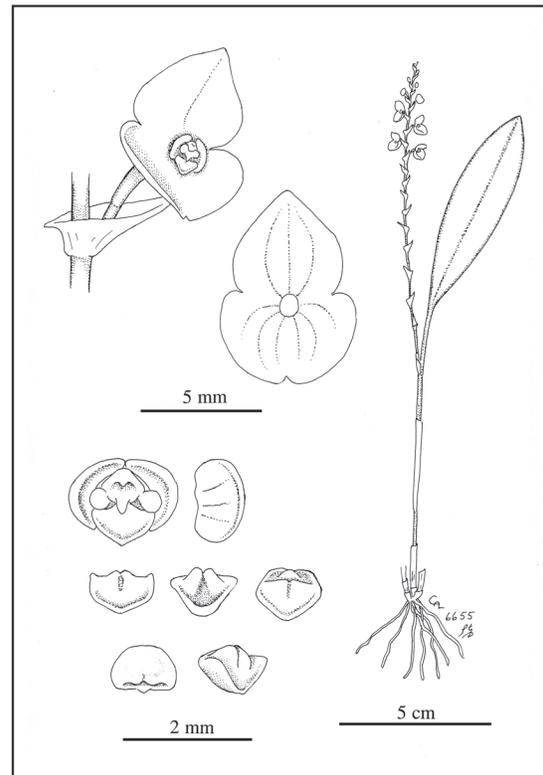


FIGURE 40. *Stelis jurisdiccensis* Luer & R. Escobar

the base truncate, hinged to the base of the column; *column* clavate, 0.8 mm wide and long, with the anther and the bilobed stigma apical.

Etymology: From the Latin *ineditus*, “unknown, unpublished,” referring to the substance deposited within the sepals, as well as other parts of the inflorescence.

This large species of section *Humboldtia*, found in both the Eastern and Central Cordillera of Colombia, is not remarkable except for small, irregular, scattered deposits of an unidentified substance found within the sepals, floral bracts and rachis. The inflorescence is a second raceme with sepals 4–5 mm with the lateral sepals lightly adherent or partially connate into a concave synsepal. Both the sepals and petals are 3-veined. The lip is type A, obtuse and with a glenion.

Stelis ipialesensis Luer & Hirtz, *sp. nov.* TYPE: COLOMBIA. Nariño: SE of Ipiales toward La Victoria, 3800 m, 22 Feb. 1978, C. Luer, J. Luer & A. Hirtz 2738 (Holotype: SEL). Fig. 39.

This medium-sized, caespitose species is characterized by two to three subclax racemes slightly shorter than an elliptical leaf; glabrous 3-veined sepals and petals; and an ovoid, obtuse lip with a cleft bar and a truncate apex with a minute, broadly acuminate apiculum.

Plant medium in size, epiphytic, densely caespitose, roots slender. Ramicauls erect, slender, 6–8 cm long, with a close, tubular sheath from below the middle and another 1–2 sheaths below and at the base. *Leaf* erect, coriaceous, elliptical, acute, 6–8 cm long including a petiole 1.5–2 cm long, the blade 1.7–2 cm wide in dry state, cuneate below into the petiole. *Inflorescence* 2–3 simultaneous; 5–7 cm long, the racemes erect, strict, subcongested, distichous, many-flowered with most flowers open simultaneously; floral bracts oblique, acute, 2–2.5 mm long; pedicels 1.5 mm long; ovary 1.5 mm long; the peduncle ca. 1 cm long, with a spathe ca. 0.5 cm long, from a node below the apex of the ramicaul; flowers red-purple; *sepals* glabrous, ovate, 3-veined, connate below the middle, the dorsal sepal acute, 4 mm long, 2.5 mm wide, the lateral sepals subacute, 3 mm long, 2.5 mm wide; *petals* transversely ovate, broadly obtuse, concave below the narrowly thickened margin, 0.8 mm long, 1.25 mm wide, 3-veined, without a transverse carina; *lip* subquadrate, 0.6 mm long, 0.8 mm wide, 0.8 mm deep, concave below a widely cleft bar with a glenion, the apex truncate with a minute, broadly acuminate apiculum, the dorsum featureless, the base truncate, hinged to the base of the column; *column* clavate, ca. 1 mm wide and long, the anther and bilobed stigma apical.

Etymology: Named for the community of Ipiales near where this species was collected.

This species from southernmost Colombia in the Central Cordillera produces densely caespitose, slender ramicauls with acute, elliptical leaves, and a few, simultaneous, subclaxly flowered racemes nearly as long as the leaves. The sepals are ovate and 3-veined. The petals are 3-veined and transverse with a barely thickened apical margin. The lip is subquadrate with a widely cleft bar and a truncate apex with a minute, broadly acuminate apiculum.

Stelis juridicciensis Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Norte de Santander, Páramo de Jurisdicciones, 3130 m, 10 November 1981, C. Luer, J. Luer & R. Escobar 6655 (Holotype: SEL). Fig. 40.

This medium-sized, caespitose species is characterized by one or two inflorescences about as long as the leaf; acute floral bracts as long as the 3-veined sepals, the lateral sepals connate into a shallow synsepalum; thin, 3-veined petals; and a lip with the bar thick, elevated, and shallowly sulcate.

Plant medium in size, epiphytic, densely caespitose, roots slender. Ramicauls erect, slender, 7–9 cm long, with a close, tubular sheath on the middle third, and another 1–2 sheaths below and at the base. *Leaf* erect, coriaceous, elliptical, acute, 9–11 cm long including a petiole ca. 2.5 cm long, the blade 1.5–2 cm wide in dry state, cuneate below into the petiole. *Inflorescence* 1–2; 8–11 cm long, the raceme erect, strict, subclax, distichous, successively flowered; floral bracts oblique, acute, 4–5 mm long; pedicels 1.5 mm long; ovary 2 mm long; the peduncle ca. 1.5 cm long, with a spathe 6–7 mm long, from a node below the apex of the ramicaul; *sepals* pale yellow-green, glabrous, the dorsal sepal ovate, subacute, 4 mm long, 2.5 mm wide, 3-veined, connate below the middle to the lateral sepals, the lateral sepals connate into a shallowly concave, transversely ovate, obtuse synsepal, 3.5 mm long, 6 mm wide, 6-veined; *petals* yellow-green, thin, transversely ovate, broadly rounded at the apex with a thin margin. 0.75 mm long, 1.4 mm wide, 3-veined; *lip* yellow-green, subquadrate, 0.6 mm long, 1 mm wide, 0.6 mm deep, the bar thick, elevated, shallowly sulcate with a faint glenion, shallowly concave within the obtuse apex, the dorsum with a low, rounded callus, the base truncate, hinged to the base of the column; *column* clavate, ca. 1 mm wide and long, the anther and bilobed stigma apical.

Etymology: Named for the Páramo de Jurisdicciones in the Eastern Cordillera of Colombia where the species was collected.

This species from the Eastern Cordillera produces densely caespitose, slender ramicauls with acute, elliptical leaves, and one or two subclaxly flowered racemes about as long as the leaves. The dorsal sepal is ovate and 3-veined, the lateral sepals are connate into a shallowly concave, transversely ovate, obtuse synsepal. The petals are thin and 3-veined. The bar of the lip is thick, elevated, and shallowly sulcate.

Stelis lalinensis Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Tolima: La Linea, road to the TV antenna between Ibagué and Armenia, 3500 m, 20 October 1982, C. Luer & R. Escobar 8492 (Holotype: SEL). Fig. 41.

This medium-sized, caespitose species is characterized by slender ramicauls longer than acute, elliptical leaves and one or two racemes near the length of the leaves; ovate, 5-veined dorsal sepals; 3-veined petals; and a rounded lip.

Plant medium in size, epiphytic, densely caespitose; roots slender. Ramicauls slender, erect, 5–10 cm long, enclosed by a close, tubular sheath from below the middle, and another 1–2 sheaths below and at the base. *Leaf* erect, coriaceous, elliptical, acute, 5–7 cm long including a petiole ca. 1.5 cm long, the blade 1.5–2 cm wide in the dry state,

cuneate below to the petiole. *Inflorescence* 1–2; 6–8 cm tall, the racemes erect, strict, distichous, subdensely many-flowered; floral bracts oblique, acute, 3–3.5 mm long; the pedicel 1.5 mm long; ovary 1.5 mm long; the peduncle ca. 1 cm long, from the apex of a ramicaul with a spathe ca. 8 mm long; *sepals* yellow, suffused with brown externally below the middle, microscopically pubescent, broadly ovate, obtuse, the dorsal sepal 4 mm long, 5 mm wide, 5-veined, the lateral sepals 3 mm long, 4.5 mm wide, 4-veined; *petals* transversely elliptical, 1.6 mm long, 1.75 mm wide, 3-veined, concave, the apical margin rounded, thickened, with a transverse carina; *lip* subquadrate, 1 mm long, 1.4 mm wide, 1 mm deep, concave below a shallowly sulcate bar, the apex rounded with thickened margin, the dorsum with a low, trilobed callus, the base truncate, hinged to the column-foot; *column* stout, ca. 1 mm long and wide, the anther and stigmatic lobes apical.

Etymology: Named for La Linea, the power line between Ibagué and Armenia.

This high altitude, medium-sized, caespitose species, with slender ramicauls longer than an elliptical leaf, has no distinctive character. One or two rather large-flowered racemes approach or pass the tip of the leaf. The broad, obtuse sepals and thick, 3-veined petals are similar to those of *Stelis grandiflora* Lindl, but there, all similarities cease. The apex of a type A lip rounded, and the dorsum is thick with a low, trilobed callus.

Stelis magnesialis Luer & Hirtz, *sp. nov.* TYPE: COLOMBIA. Nariño: E of Ricaurte, above abandoned Magnesium mine, 1800 m, 1 November 1979, C. Luer, J. Luer & A. Hirtz 4520 (Holotype: SEL). Fig. 42.

This small, caespitose species is characterized by slender ramicauls; equally long, elliptical leaves; a twice longer raceme of small flowers with obtuse, 3-veined sepals, with the lateral sepals antrorse; thin, flabellate petals; and a subquadrate, truncate lip with a short, obtuse apiculum between obtuse, lateral corners.

Plant small, epiphytic, caespitose. Ramicauls erect, slender, 5–6 cm long, with a close, tubular sheath from below the middle, and another 1–2 sheaths below and at the base. *Leaf* erect, coriaceous, narrowly elliptical, obtuse, 5–6 cm long including a petiole 1.5 cm long, the blade 1 cm wide in the dry state, cuneate below into the petiole. *Inflorescence* single; 10–11 cm long, the raceme erect, secund, congested, with many flowers open simultaneously; floral bracts oblique, subacute, 2–2.5 mm long; pedicel 1 mm long; ovary 1 mm long; the peduncle ca. 1 cm long, subtended by a slender spathe 6–7 mm long, from a node near the apex of the ramicaul; flowers yellow; *sepals* microscopically pubescent, elliptical, subacute, 3-veined, connate to the base, the dorsal sepal erect, 2 mm long, 1.25 mm wide, the lateral sepals antrorse, 2 mm long, 1.25 mm wide; *petals* thin, flabellate, truncate, thickened toward the apex 0.5 mm long, 0.75 mm wide, faintly 3-veined; *lip* subquadrate, 0.5 mm long, 0.6 mm wide, 0.3 mm deep, the apex truncate trilobulate, a minute, obtuse apiculum flanked by similar, rounded, lateral corners, concave below a thick,

cleft bar, the sides of the cleft becoming apposed on the dorsum before separating for a microscopically pubescent callus above the base, the base truncate, connate to the base of the column; *column* stout, ca. 0.5 mm long and wide, the anther and the stigmatic lobes apical.

Etymology: Named for habitat associated with a Magnesium mine.

This small, caespitose species with equally long leaves and ramicauls, and a twice longer, secund raceme of small flowers. The sepals are ovate with the laterals antrorse. The petals are truncate and faintly 3-veined. The lip is subquadrate the apex truncate and trilobulate, a short, obtuse apiculum bring flanked by similar, obtuse corners.

Stelis majuscula Luer, *sp. nov.* TYPE: COLOMBIA. Cundinamarca: Bogotá, near Usaquén, 2600–2700 m. 1939, Lorenzo Uribe U. 385 (Holotype: AMWS), C. Luer illustr. 21967. Fig. 43.

This species with narrow, linear leaves and a congested raceme with prominent floral bracts, is similar to *Stelis cochlearis* Garay, but with larger, 5-veined sepals, instead of 3-veined sepals; and a lip with a round, anterior callus below a thick, channeled bar, instead of a smooth, concave lip with a thin bar.

Plant medium in size, epiphytic, probably caespitose (ramicauls broken off at the base). Ramicauls erect, slender, 8–9 cm long, with 2–3 loose, tubular sheaths. *Leaf* erect, coriaceous, linear, subacute, 9–10 cm long, gradually narrowed below into an ill-defined petiole, ca. 1 cm long, the blade 0.8 cm wide in dry state. *Inflorescence* single; 11 cm long, the raceme erect, congested, strict, distichous; floral bracts oblique, acuminate, acute, 8 mm long below to 5 mm long toward the tip; pedicels 2 mm long; ovary 2 mm long; peduncle ca. 2 cm long, from a node near the apex of the ramicaul; *sepals* color unknown, pubescent, ovate, obtuse, expanded, and connate below the middle, 5-veined, the dorsal sepal 5 mm long, 4.5 mm wide, the lateral sepals 4 mm long, 4.5 mm wide; *petals* transversely ovate, concave below the broadly obtuse, thickened, apical margin, with a transverse carina, 1.5 mm long, 2 mm wide, 3-veined; *lip* subhemispherical with the apex rounded, 1.5 mm long, 2 mm wide, 1.5 mm deep, the bar thick, shortly but deeply cleft above a rounded callus between the cleft and the anterior margin, the lateral angles rounded and expanded, the dorsum with a low, inconspicuous, basal callus, connate to the base of the column; *column* stout, ca. 1.5 mm long and wide, the anther and the stigmatic lobes apical.

Etymology: From the Latin *majusculus*, “somewhat larger,” referring to the flowers, compared to those of *Stelis cochlearis* Garay.

With narrow leaves and a congested raceme with prominent floral bracts, this species of the Eastern Cordillera is similar to *Stelis cochlearis* Garay of the Central Cordillera. The flowers of the former are larger with 5-veined sepals, instead of 3-veined sepals. Instead of a deeply concave lip with smooth surfaces below a thin bar, a rounded callus is present on the anterior surface between a shortly cleft, thick bar and the anterior margin.

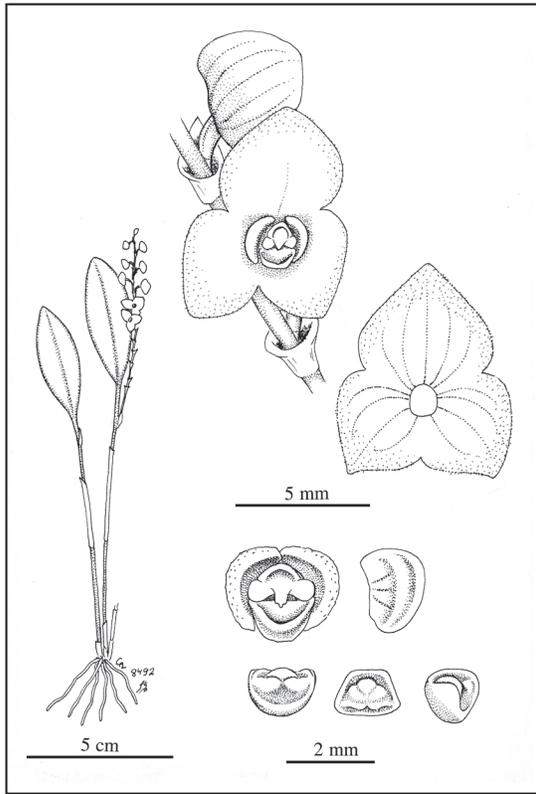


FIGURE 41. *Stelis lalinensis* Luer & R. Escobar

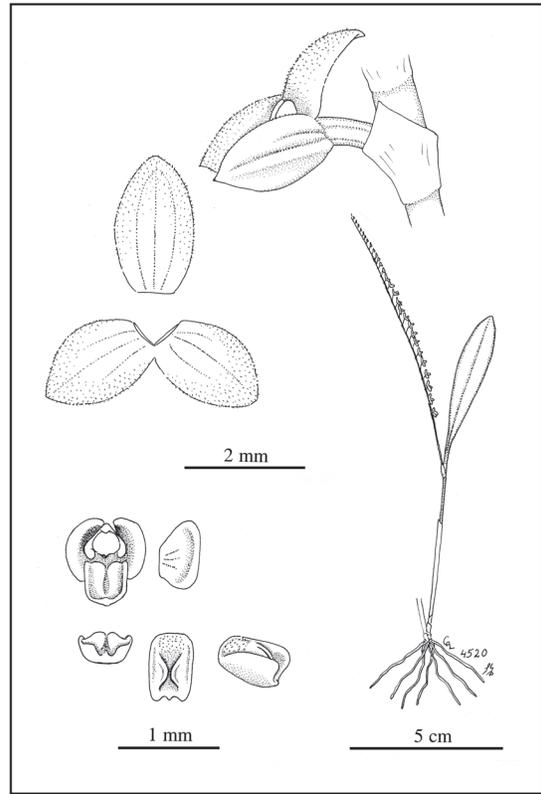


FIGURE 42. *Stelis magnesialis* Luer & Hirtz

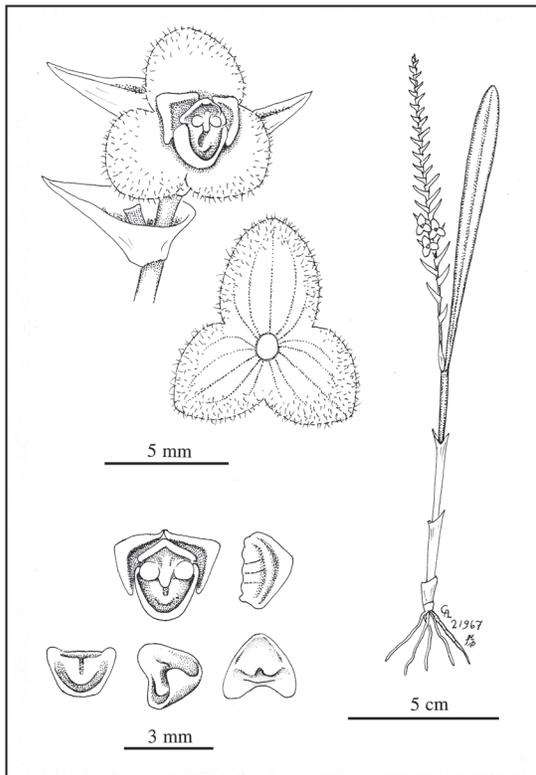


FIGURE 43. *Stelis majuscula* Luer

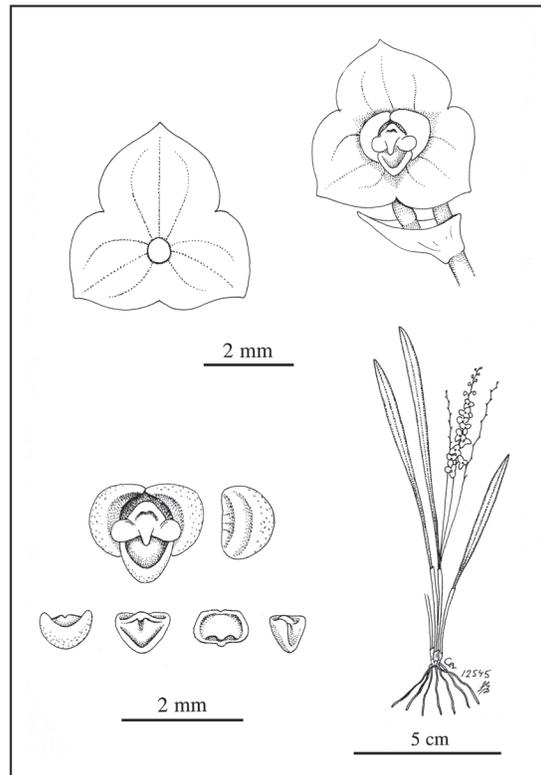


FIGURE 44. *Stelis morula* Luer & R. Escobar

Stelis morula Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Putumayo: E of the pass E of San Francisco toward Mocoa, 2100 m, 27 Jan. 1987, C. Luer, J. Luer, R. Escobar et al. 12545 (Holotype: SEL). Fig. 44.

This medium-sized, caespitose species is characterized by acute, narrowly linear-elliptical leaves longer than the ramicaul and one to four racemes of dark purple flowers; ovate, glabrous, broadly ovate, 3-veined sepals; 3-veined petals; and a subquadrate, obtuse lip with a sulcate bar.

Plant medium in size, epiphytic, densely caespitose; roots slender. Ramicauls erect, slender, 2–3.5 cm long, enclosed by a close, tubular sheath from below the middle and another sheath at the base. *Leaf* erect, coriaceous, narrowly linear-elliptical, acute, 5–8 cm long, including a petiole 1.5–2 cm long, the blade 0.4–0.6 cm wide in the dry state, narrowed below into the petiole. *Inflorescence* 1–4; 9–10 cm tall, the racemes erect, congested, distichous, subflexuous, many-flowered, with many flowers open simultaneously; floral bracts oblique, acute, 2.5–3 mm long; pedicels 1 mm long; ovary 1 mm long; the peduncle 2–3 cm long, from a node at the apex of the ramicaul; flowers dark purple; *sepals* glabrous, expanded, broadly ovate, obtuse, 3-veined, the dorsal sepal 2.3 mm long, 2.6 mm wide, the lateral sepals 2 mm long, 2.3 mm wide; *petals* transversely ovate, concave, the apex broadly rounded with a thickened margin, with a transverse carina, 0.75 mm long, 1.25 mm wide, 3-veined; *lip* subquadrate, type A, 0.5 mm long, 0.8 mm wide, 0.6 mm deep, concave below a sulcate bar, the apex obtuse, the dorsum lowly convex, the base truncate, hinged to the base of the column; *column* clavate, ca. 1 mm long and wide, the anther and the stigmatic lobes apical.

Etymology: From the Latin *morulus*, “black like a mulberry,” referring to the flowers.

This species characterized by one to four simultaneous, subflexuous racemes that are shorter than narrow, linear-elliptical leaves; dark purple flowers with glabrous, 3-veined sepals that are slightly acuminate at their tips; thick, 3-veined petals; and a type A lip with the apex obtuse, and a sulcate bar with the dorsum slightly convex.

Stelis nemoralis Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Norte de Santander, Páramo de Jurisdicciones, 2300 m, 30 April 1982, C. Luer, J. Luer & R. Escobar 7689 (Holotype: SEL). Fig. 45.

This large, caespitose species is distinguished by one or two loosely flowered racemes much longer than an elliptical, petiolate leaf; obtuse, 3-veined sepals and petals; and a subquadrate lip with a bulbous tip.

Plant large, epiphytic, caespitose; roots slender. Ramicauls erect, relatively stout, 7–9 cm long, with a tubular sheath from below the middle and another 1–2 sheaths below and at the base. *Leaf* erect, coriaceous, elliptical, obtuse, petiolate, 9–13 cm long including a petiole 2 cm long, the blade 2–2.8 cm wide in the dry state, cuneate below into the petiole. *Inflorescence* 1–2; 10–14 cm long, the racemes erect, strict, loose, distichous, with many flowers open simultaneously; floral bracts oblique, obtuse,

2 mm long; pedicels 1.5 mm long; ovary 1 mm long; the peduncle 1–2 cm long, with a spathe 5 mm long, from a node below the apex of the ramicaul; *sepals* sparsely pubescent, light green, ovate, obtuse, 3-veined, connate below the middle, the dorsal sepal 3 mm long, 3 mm wide, the lateral sepals 2.5 mm long, 3 mm wide; *petals* transversely ovate, thick, 0.6 mm long, 1.2 mm wide, 3-veined, concave below the rounded apex with a thick margin, with a transverse carina; *lip* subquadrate, 0.8 mm long, 1.2 mm wide, 0.8 mm deep, concave below the bar with a narrow glenion, the apex rounded with a central, bulbous swelling, the dorsum slightly convex centrally, the base truncate, hinged to the base of the column; *column* clavate, 1.2 mm wide and long, with the anther and the bilobed stigma apical.

Etymology: From the Latin *nemoralis*, “of the woods,” referring to the forest habitat.

This large species has no remarkable feature to distinguish it from numerous other species, except for a bulbous swelling at the tip of an otherwise simple, type A lip, which might very well be variable.

Stelis obscula Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Santander: Bucaramanga, between Bucaramanga and Berlin, 2800 m, 27 Apr. 1982, C. Luer, J. Luer & R. Escobar 7600 (Holotype: SEL). Fig. 46.

This medium-sized species is distinguished by a congested, ascending-caespitose habit; stout, ramicauls with overlapping leaves; two or three longer, tiny-flowered racemes; thick, obtuse sepals; thick single-veined petals; and a minute, thick lip.

Plant medium in size, epiphytic, densely ascending-caespitose, roots slender, the rhizome 5 mm thick. Ramicauls erect, stout, 2–3 mm thick, 5–8 cm long, with a loose, tubular sheath from below the middle, and 1–2 other sheaths below and about the base. *Leaf* erect, coriaceous, elliptical, subacute, 6–7 cm long, including a petiole less than 1 cm long, the blade 1–1.8 cm wide in dry state, cuneate below into the petiole. *Inflorescence* 2–4; 12–17 cm long, the raceme erect, distichous, congested, simultaneously many-flowered; floral bracts tubular, obtuse, 1.5 mm long, 1 mm wide; pedicels 1 mm long; ovary 1 mm long; the peduncle 1.5–2 cm long, from a spathe 8 mm long below the apex of the ramicaul; flowers yellow-white; *sepals* glabrous, thickened, ovate, obtuse, 3-veined, connate near the base, the dorsal sepal 1.3 mm long, 1 mm wide, the lateral sepals, oblique, 1 mm long, 0.9 mm wide; *petals* elliptical, the apex broadly rounded with a thick margin, concave, without a transverse carina, 0.5 mm long, 0.6 mm wide, 1-veined; *lip* thick, subquadrate, 0.5 mm long, 0.4 mm wide, 0.4 mm deep, concave below a thick bar, the apex rounded, the dorsum microscopically pubescent toward the base, the base truncate, hinged to the base of the column; *column* clavate, ca. 0.5 mm wide and long, the anther and the bilobed stigma apical.

Etymology: From the Latin *obesculus*, “a little fat one,” referring to the thick, floral parts.

This strong species is characterized by a densely ascending-caespitose habit with a thick rhizome and stout

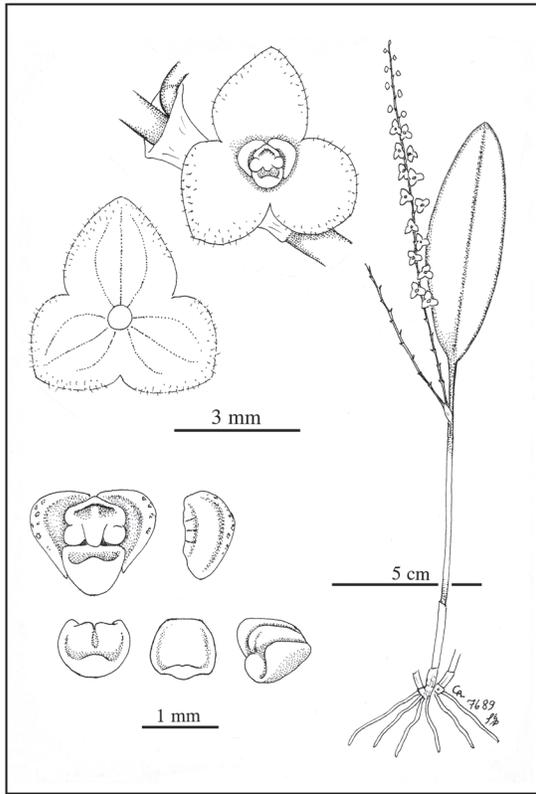


FIGURE 45. *Stelis nemoralis* Luer & R. Escobar

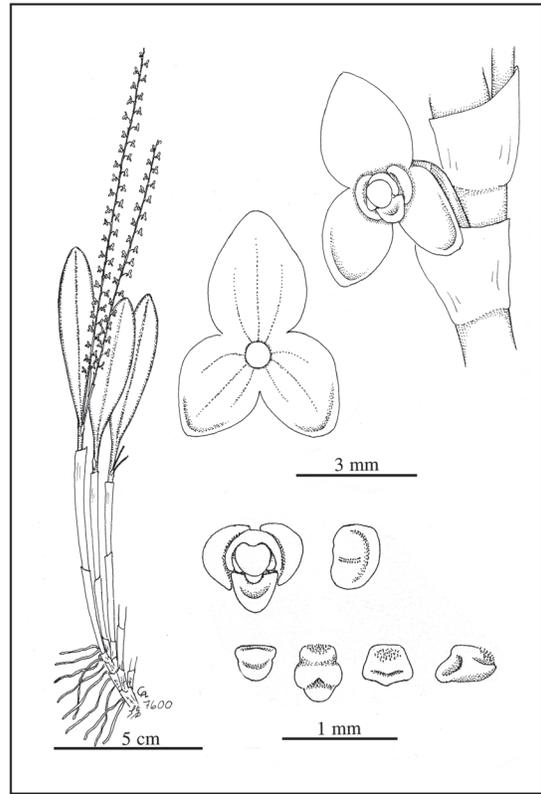


FIGURE 46. *Stelis obscula* Luer & R. Escobar

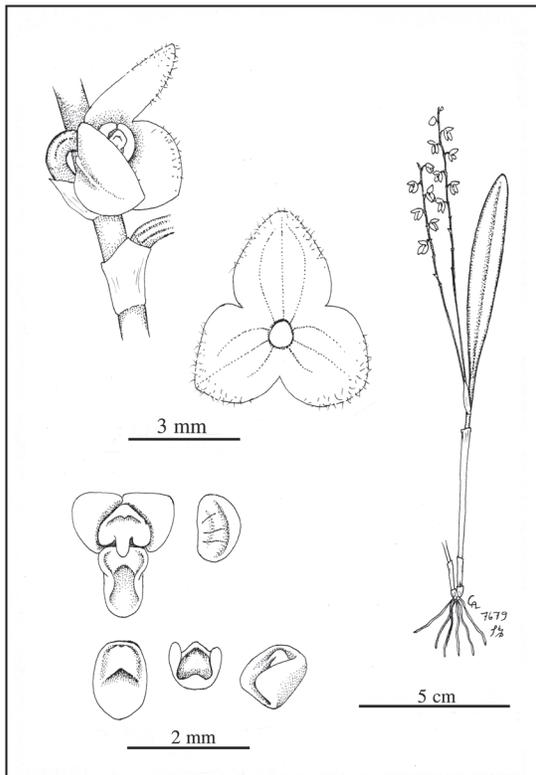


FIGURE 47. *Stelis palifera* Luer & R. Escobar

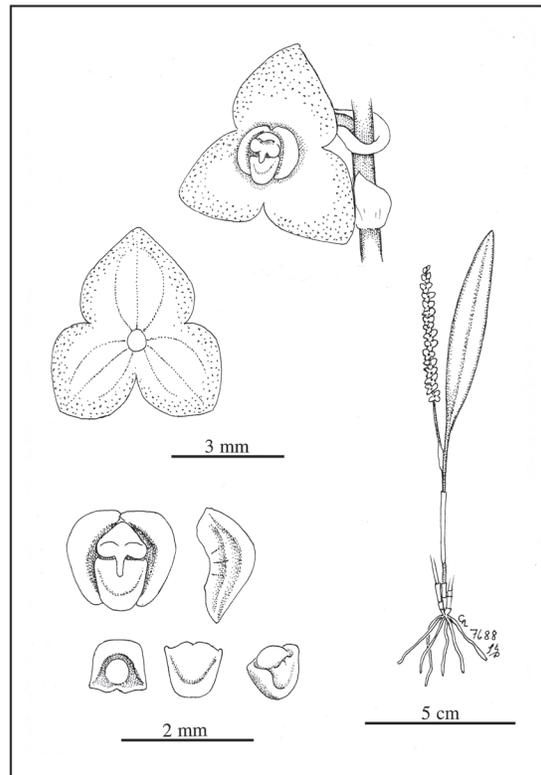


FIGURE 48. *Stelis pilicrepa* Luer & R. Escobar

ramicauls with overlapping leaves. Two or three long, congested racemes bear numerous, minute, fleshy flowers with obtuse, 3-veined sepals and concave, single-veined petals. The minute, fleshy lip is concave below a thick bar.

Stelis palifera Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Norte de Santander, Páramo de Jurisdicciones, 2300 m, 30 April 1982, C. Luer, J. Luer & R. Escobar 7679 (Holotype: SEL). Fig. 47.

This medium-sized, caespitose species is characterized by one or two racemes slightly longer than narrow, elliptical leaves; sparsely pubescent sepals with the lateral sepals antrorse and more or less connivent; thick, 3-veined petals; and an elliptical lip concave below the central bar and with the sides thin and erect.

Plant medium-sized, epiphytic, caespitose; roots slender. Ramicauls erect, slender, 6–8 cm long, with a loose, tubular sheath from below the middle, and another 2 sheaths below and at the base. *Leaf* erect, coriaceous, elliptical, acute to subacute, 7–10 cm long including a petiole ca. 1.5 cm long, the blade 0.8–1.2 cm wide in the dry state, cuneate below into the petiole. *Inflorescence* 1–2 simultaneous; 7–12 cm long, the racemes erect, distichous, loose, strict; floral bracts oblique, obtuse, 2.5 mm long; pedicels 1.5 mm long; ovary 1.5 mm long; the peduncle 3–4 cm long, subtended by a spathe 1.2 cm long, from a node below the apex of the ramicaul; flowers yellow-green; *sepals* pubescence fine, sparse, the dorsal sepal ovate, obtuse, 3-veined, connate below the middle, 3 mm long, 2.6 mm wide, the lateral sepals antrorse, broadly ovate, 2.6 mm long, 2.6 mm wide; *petals* thick, transversely ovate, 0.75 mm long, 1.2 mm wide, 3-veined, concave below the rounded apex with a thick margin, with a transverse carina; *lip* suboblong, 1.25 mm long, 0.75 mm wide, 0.5 mm deep, concave below the bar near the middle of the lip, the apex rounded with the sides erect, also rounded, the dorsum smooth, the base truncate, hinged to the base of the column; *column* stout, ca. 0.75 mm long and wide, the anther and the stigmatic lobes apical.

Etymology: From the Latin *palifer*, “scoop bearing,” referring to the shape of the lip.

The habit of this medium-sized, caespitose species with a many-flowered inflorescence longer than the leaf is similar to a myriad of other species, but the flowers with antrorse, more or less connivent lateral sepals, and the scoop-like lip are distinctive. The margins of the recurved sides of the obtuse apex of the lip are smooth and not thickened. A low, shelf-like bar lies cross the center.

Stelis pilicrepa Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Norte de Santander; Páramo de Jurisdicciones, 2900 m, 30 April 1982, C. Luer, J. Luer & R. Escobar 7686 (Holotype: SEL). Fig. 48.

This medium-sized, caespitose species is characterized by single, simultaneously flowered raceme slightly shorter than an elliptical leaf; glabrous, 3-veined sepals 3 mm long and wide; triangular, thick, 3-veined petals; and a lip with a hemispherical callus filling the dorsum.

Plant medium-sized, epiphytic, densely caespitose; roots slender. Ramicauls erect, slender, 5–9 cm long, enclosed

by a tubular sheath from below the middle, and another 1–2 sheaths below and at the base. *Leaf* erect, coriaceous, elliptical, acute, 7–8 cm long including a petiole 1.5–2 cm long, the blade 0.8–1.4 cm wide in the dry state, cuneate below to the petiole. *Inflorescence* single; 5–6 cm long, the raceme erect, many-flowered, congested in two opposite facing rows; floral bracts oblique, acute, 2 mm long; pedicel 1 mm long; ovary 1 mm long; the peduncle 1–1.5 cm long, with a spathe 6 mm long from a node below the apex of a ramicaul; flowers purple; *sepals* glabrous with scattered cells, 3-veined, the dorsal sepal ovate, obtuse, 3 mm long and wide, the lateral sepals ovate, obtuse, oblique, 2.5 mm long and wide; *petals* semilunate with slightly acuminate angles, the apex broadly rounded with the margin thickened, 1 mm long, 2 mm wide, 3-veined below a transverse carina; *lip* subquadrate, 0.8 mm long, 1 mm wide, 0.8 mm deep, very shallowly concave below the bar, the apex rounded, the dorsum with a suborbicular callus, the base truncate, hinged to the column-foot; *column* stout, ca. 1 mm long and wide, the anther yellow, apical with the stigmatic lobes.

Etymology: From the Latin *pilicrepa*, “a ball player,” referring to the suborbicular callus that fills the dorsum of the lip.

This caespitose species is characterized by a congested raceme shorter than elliptical leaves. The sepals are ovate and glabrous, and the petals are thick and 3-veined. The lip is subquadrate with a rounded apex, and the anterior surface barely, if all, concave. Like a ball, a suborbicular callus lies half buried on the dorsum.

This species is similar to *Stelis coccidifera* Luer & R. Escobar described herein, but differs with a single raceme; twice larger flowers; and a large, hemispherical callus that fills the dorsum of the lip.

Stelis prodigiosa Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Tolima: S slope of Mt. Tolima, N of Ibagué, 2600 m, 21 April 1982, C. Luer, J. Luer & R. Escobar 7497 (Holotype: SEL). Fig. 49.

This large, caespitose species of section *Humboldtia* is distinguished by slender ramicauls; long-petiolate leaves; several racemes that exceed the leaf; a 7-veined, dorsal sepal and a concave synsepal; thick, 3-veined petals; and a proportionately small lip with an erect bar with a rounded callus on the anterior surface.

Plant large, epiphytic, caespitose; roots slender. Ramicauls erect, slender, 8–10 cm long, with a tubular sheath above the middle, and another 2 sheaths below the middle and about the base. *Leaf* erect, coriaceous, elliptical, acute, long-petiolate, 10–17 cm long including the petiole 3–4 cm long, the blade 2–2.7 cm wide in the dry state, cuneate below into the petiole. *Inflorescence* 3–5; 15–25 cm long, the racemes erect, secund, lax, many-flowered, floral bracts oblique, acute, 4–5 mm long; pedicels 4 mm long; ovary 2 mm long; the peduncle 6–8 cm long, with a spathe ca. 7 mm long below the apex of the ramicaul; *sepals* glabrous, the dorsal sepal purple, ovate, obtuse, 8 mm long, 6 mm wide, 7-veined, connate 1–2 mm to the lateral sepals, the lateral sepals yellow, microscopically ciliate, connate to the tip into a deeply concave, ovoid, subacute synsepal, 8 mm

long, 10 mm wide expanded, 10-veined; *petals* dark purple, thick, transversely semilunate, concave, the apex broadly rounded with a thick margin, and with a transverse carina, 1.5 mm long, 2.5 mm wide, 3-veined; *lip* dark purple, thick, subquadrate, 1.3 mm long, 1 mm wide, 0.6 mm deep, the bar elevated centrally with a rounded callus on the anterior surface above the round apex with a short apiculum, the back surface of the erect bar short above a deep, broadly rounded base with multiple, microscopic crystals, attached to the column; *column* clavate, ca 1 mm wide and long, the anther and the proportionately large stigmatic lobes apical.

Etymology: From the Latin *prodigiosus*, "extraordinary," referring to the lip.

This species is distinguished by slender ramicauls and long-petiolate leaves surpassed by secund racemes of relatively large, bilabiate flowers with a 7-veined dorsal sepal. The petals are large and thick while the lip is proportionately small. The bar of the lip is tall centrally with a round, central callus above the minutely apiculate apical margin.

Stelis putumayoënsis Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Putumayo: between La Cocha and Sibundoy, 2700 m, 30 July 1978, C. Luer, J. Luer, R. Escobar *et al.* 3081 (Holotype: SEL). Fig. 50

This large, caespitose species is distinguished by a two to four many-flowered racemes much longer than acute, elliptical-ovate leaves; long, acute floral bracts; medium-sized flowers with the sepals glabrous, 3-veined, the lateral sepals connate into a deeply concave synsepal; semilunate, 3-veined petals; and a subquadrate lip with a rounded apex and a shortly cleft bar.

Plant large, epiphytic, densely caespitose; roots slender. Ramicauls erect, 14–18 cm long, with a tubular sheath from below the middle and another 1–2 sheaths below and at the base. *Leaf* erect, coriaceous, elliptical-ovate, acute, 8–9.5 cm long including a petiole 1.5 cm long, the blade 2.5–3 cm wide in the dry state. *Inflorescence* 2–4 simultaneous; 15–20 cm long, the racemes erect, strict, congested, distichous, many-flowered, with many flowers open simultaneously; floral bracts oblique, slender, acute, 10 mm long, to 5 mm long toward the tip; pedicels 2–3 mm long; ovary 2 mm long; peduncle 2–3 cm long, from a node below the apex of the ramicaul; *sepals* red-brown, glabrous, the dorsal sepal erect, ovate, obtuse, 4.5 mm long, 3 mm wide, 3-veined, connate basally, the lateral sepals ovate, concave, connate to the tip into a deeply concave synsepal, each sepal 4 mm long, 2.5 mm wide; *petals* yellow, transversely ovate, concave, the apex rounded with a broad margin, 1 mm long, 1.5 mm wide, 3-veined, with a transverse carina; *lip* yellow, subquadrate, 0.6 mm long, 1 mm wide, 0.75 mm deep, concave below a shortly cleft bar without an obvious glenion, the apex rounded, the dorsum smooth, slightly convex, the base truncate, hinged to the base of the column; *column* clavate, ca. 1 mm wide and long, the anther and the bilobed stigma apical.

Etymology: Named for Putumayo, the southernmost department of Colombia, where this species occurs.

With long, many-flowered racemes with long, acute

floral bracts, and a concave synsepal, this large species is superficially similar to *Stelis purpurea* (Ruiz & Pav.) Willd. However, the sepals are a little smaller and only 3-veined, with an obtuse, instead of acute, dorsal sepal, and the bar of the lip differs with a short cleft and a smooth dorsum.

Stelis sceptrumrubrum Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Norte de Santander, Páramo de Jurisdicciones, 2750 m, 30 April 1982, C. Luer, J. Luer & R. Escobar 7670 (Holotype: SEL). Fig. 51.

This medium-sized, caespitose species is distinguished by an inflorescence with a congested, secund, purple-flowered raceme about as long as the peduncle that exceeds a broadly, elliptical leaf that is about as long as either the peduncle or the raceme; a 5-veined dorsal sepal; 3-veined petals; and a relatively large, subquadrate lip with a shallowly sulcate, central callus.

Plant medium-sized, densely caespitose, epiphytic; roots slender. Ramicauls erect, stout, 3–5.5 cm long, enclosed by a fugacious sheath and 2–3 tubular sheaths below and at the base. *Leaf* erect, coriaceous, elliptical, subacute at the tip, 7–9 cm long including the petiole 1.5 cm long, the blade 2–2.5 cm wide in the dry state, cuneate below into the petiole. *Inflorescence* single; 14–16 cm long, the raceme erect, congested, secund, many-flowered with most flowers open simultaneously; floral bracts oblique, obtuse, 3 mm long, 2 mm broad; pedicels 1.5 mm long; ovary 1 mm long; the peduncle 6–7 cm long, subtended by a spathe 1.5 mm long, from a node below the apex of the ramicaul; flowers purple; *sepals* glabrous, convex, the dorsal sepal ovate, acute to subacute, 5 mm long, 4 mm wide, 5-veined, the lateral sepals broadly ovate, oblique, obtuse, 3 mm long, 4 mm wide, connate below the middle; *petals* transversely ovate, broadly rounded at the apex with a narrowly thickened margin, 1.3 mm long, 2 mm wide, 3-veined, without a transverse carina; *lip* subquadrate, 1.6 mm long, 2 mm wide, 1.5 mm deep, concave below the bar with a sulcate callus extending from the base to near the rounded, concave apex, the base truncate, hinged to the base of the column; *column* stout, 1.5 mm long and wide, the anther and the bilobed stigma apical.

Etymology: From the Latin *scptrumrubrum*, "baton rouge, (red baton)" referring to the inflorescence.

This robust, caespitose species is distinguished by a congested, secund raceme of flowers with convex sepals, suggesting a solid, red baton. The dorsal sepal is 5-veined, the lateral sepals are 4-veined, and the petals are 3-veined. The subquadrate lip is remarkable with a central, sulcate callus overlying the bar.

Stelis scutellifera Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Cundinamarca: near pass between Bogotá and Fusagasuga, 2800 m, 22 April 1982, C. Luer, J. Luer & R. Escobar 7516 (Holotype: SEL). Fig. 52.

This large, caespitose species is characterized by slender to stout ramicauls; one or two many-flowered, inflorescences shorter than elliptical leaves; broadly ovate, shortly pubescent sepals with the dorsal sepal 5-veined; 3-veined petals; and a lip with a deep glenion.

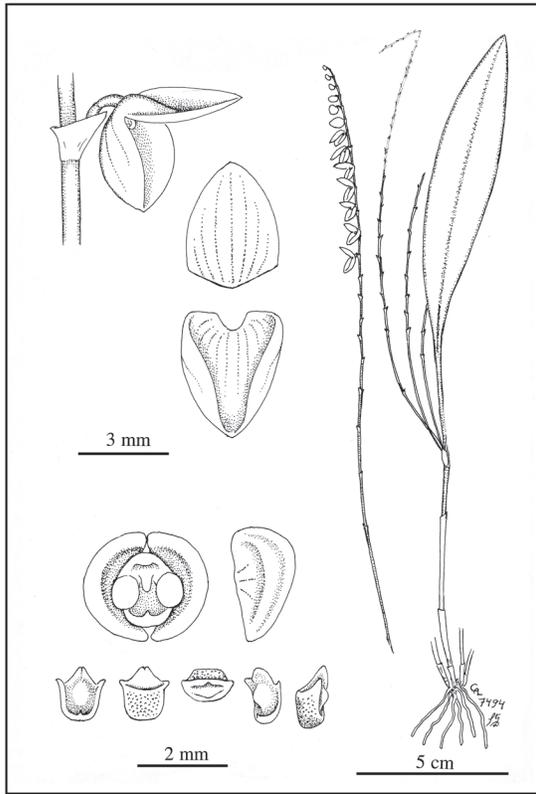


FIGURE 49. *Stelis prodigiosa* Luer & R.Escobar

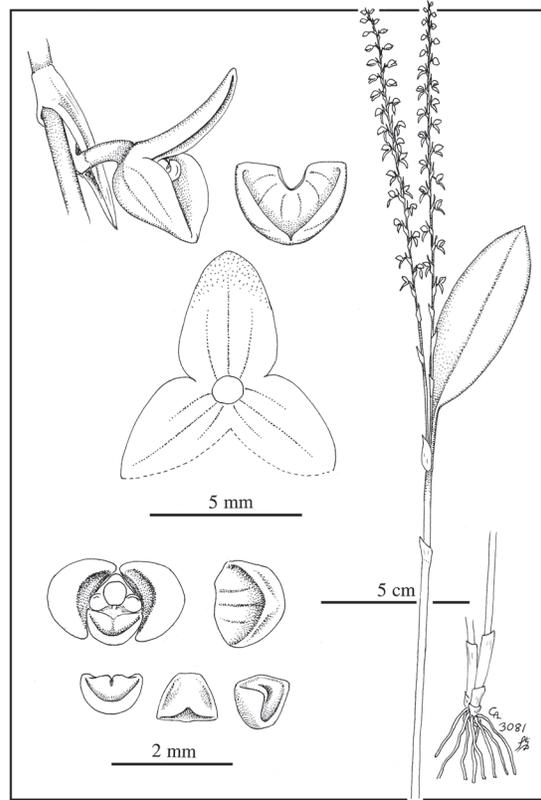


FIGURE 50. *Stelis putumayoënsis* Luer & R.Escobar

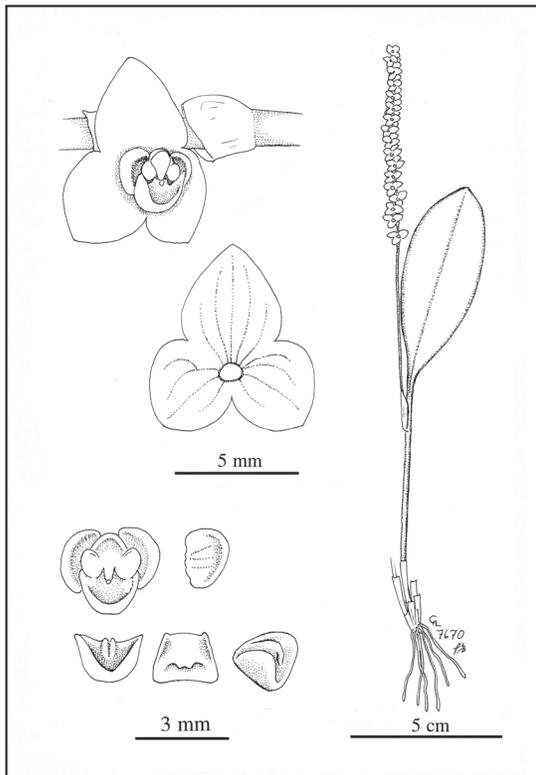


FIGURE 51. *Stelis sceptrumrubrum* Luer & R.Escobar

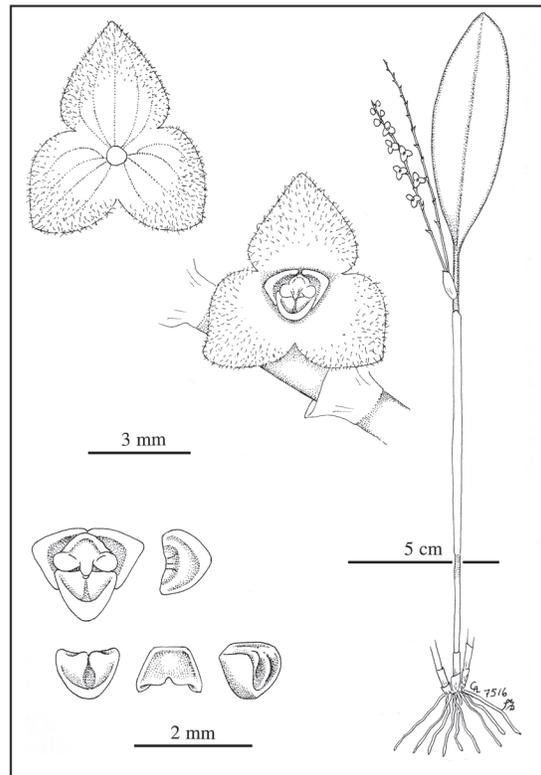


FIGURE 52. *Stelis scutellifera* Luer & R.Escobar

Plant large, epiphytic, caespitose; roots slender. Ramicauls erect, slender, but stout in larger plants, 6–14 cm long, with a tubular sheath from below the middle, and another 2 sheaths below and about the base. *Leaf* erect, coriaceous, elliptical, acute to subacute, petiolate, 9–11 cm long including the petiole 1.5–2 cm long, the blade 1.5–2.5 cm wide in the dry state, cuneate below into the petiole. *Inflorescence* 1–2; 8 cm long, the raceme erect, distichous, laxly many-flowered, floral bracts oblique, acute, 3–4 mm long; pedicels 2–3 mm long; ovary 2 mm long; the peduncle 2–3 cm long, with a spathe 1 mm long below the apex of the ramicaul; *sepals* yellow, shortly pubescent, expanded, broadly ovate, subacute, connate below the middle, the dorsal sepal 3.3 mm long, 3.3 mm wide, 5-veined, the lateral sepals oblique, 3 mm long, 3 mm wide, 4-veined; *petals* dark purple, transversely ovate, concave, the apex broadly obtuse with a thick margin, with a transverse carina, 0.75 mm long, 1 mm wide, 3-veined; *lip* dark purple, subquadrate, 0.75 mm long, 1 mm wide, 0.75 mm deep, concave below a thick, shallowly cleft bar with a deep glenion, the apex broadly rounded with the margin thickened, the dorsum slightly convex; *column* clavate, ca 1 mm long and wide, the anther and the stigmatic lobes apical.

Etymology: From the Latin *scutellifer*, “little target bearing,” referring to the dark purple central apparatus surrounded by yellow sepals.

This large, caespitose species is distinguished by a combination of morphological features that are not unusual: stout ramicauls in larger plants; elliptical leaves, and one or two inflorescences that do not exceed the leaves; broad, obtuse, shortly pubescent sepals with the dorsal sepal 5-veined; 3-veined petals; and a thick, subquadrate, type A lip with a deep glenion. The dark purple central apparatus seems to be the bull’s eye of a yellow target.

Stelis triplaris Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Norte de Santander: Páramo de Jurisdicciones, 2750 m, 30 April 1982, C. Luer, J. Luer & R. Escobar 7665 (Holotype: SEL). Fig. 53.

This small, caespitose species bears one or two racemes of flowers with three expanded, similar, narrowly ovate, acute sepals; single-veined petals; and a lip with a small, convex, obtuse lip.

Plant small, epiphytic, densely caespitose; roots slender. Ramicauls erect, slender, 2–4 long, with a tubular sheath from below the middle third, and another sheath below and at the base. *Leaf* erect, coriaceous, elliptical, subacute, 4–5 cm long including a petiole 1–1.5 cm long, the blade 0.7–1 cm wide in dry state, cuneate below into the petiole. *Inflorescence* 1–2; 9–13 cm long, the raceme erect, subclax, secund, mostly simultaneously flowered; floral bracts oblique, inflated, acute, 3 mm long; pedicels 2 mm long; ovary 1.5 mm long; the peduncle 3–6 cm long, from a node near the apex of the ramicaul; *sepals* light green externally, gray within, purple at the base, glabrous, expanded, narrowly ovate, acute, 3-veined, connate basally, the dorsal sepal 4 mm long, 2 mm wide, the lateral sepals 3.5 mm long, 2 mm wide; *petals* light purple, transversely ovate, concave, the

broadly obtuse apical margin thickened, 0.6 mm long, 0.76 mm wide, 1-veined; *lip* light purple, type C, subquadrate, with apex obtuse to minimally acuminate at the tip, 0.6 mm long, 0.8 mm wide, 0.4 mm deep, convex within the margins, shallowly concave within the apex below a shallow sulcus, the dorsum convex, the base truncate, hinged to the base of the column; *column* clavate, ca. 0.8 mm wide and long, the anther and stigmatic lobes apical.

Etymology: From the Latin *triplaris*, “threefold,” referring to the three, acutely ovate sepals.

This small, densely caespitose species is characterized by a subacute, elliptical leaf surpassed by a subclax, secund raceme of flowers with expanded, narrowly ovate, acute sepals. The petals are single-veined, and the small, convex, subquadrate lip is a variation of type C.

Stelis tritriangulata Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Cauca: (S of Popayan) “Paletara,” forest NE of “Hiano,” 3100–3300 m, 15–17 June 1922, F.W. Pennell 7001 (Holotype: AMES), C. Luer illustr. 21963. Fig. 54.

This medium-sized species is distinguished by an erect, long-repent rhizome, and a raceme that exceeds a narrowly elliptical leaf; 3-veined, subacute sepals with the lateral sepals semiconnate and antrorse; thick, triangular petals with the apex acute; and a lip triangular below the middle with the apex acute.

Plant medium in size, epiphytic, long-repent, scandent, the rhizome slender, erect, 1.5–4 cm long between ramicauls; roots slender. Ramicauls ascending, erect, 2–4.5 cm long, with 1–2 evanescent sheaths; *Leaf* erect, coriaceous, narrowly elliptical, acute, 6–9 cm long including a petiole 1–1.5 cm long, the blade 1–1.7 cm wide in the dry state. *Inflorescence* single; 8–10 cm long, the raceme erect, strict, subclax, distichous, with many flowers open simultaneously; floral bracts oblique, obtuse, 3 mm long, 3 mm broad; pedicels 2 mm long; ovary 1 mm long; peduncle 2–3 cm long, with a spathe less than 1 mm long, from a node at the apex of the ramicaul; *sepals* yellow, glabrous, elliptical-ovate, subacute, 3-veined, the dorsal sepal erect, connate basally, 5.5 mm long, 4 mm wide, the lateral sepals oblique, semiconnate, antrorse, 5.5 mm long, 7 mm wide together; *petals* purple, transversely triangular, concave, below the thick, acute apex, 1 mm long, 1.5 mm wide, 3-veined; *lip* purple, rhomboid, 1 mm long, 1 mm wide, 0.5 mm deep, concave below the bar, with a superficial glenion, the apex triangular, the dorsum convex with an low, rounded callus, the base narrowly truncate, hinged to the base of the column; *column* clavate, ca. 1 mm wide and long, the anther and the bilobed stigma apical.

Etymology: From the Latin *tritriangulata*, “three-triangled,” referring to the two petals and lip.

This long-repent species is characterized by a rhizome that produces at intervals a short, erect ramicaul with an acute, elliptical leaf with a subclaxly flowered raceme. The sepals are elliptical-ovate with the lateral sepals connate into a synsepal. The apices of the thick petals and the apex of the lip are triangular and acute.

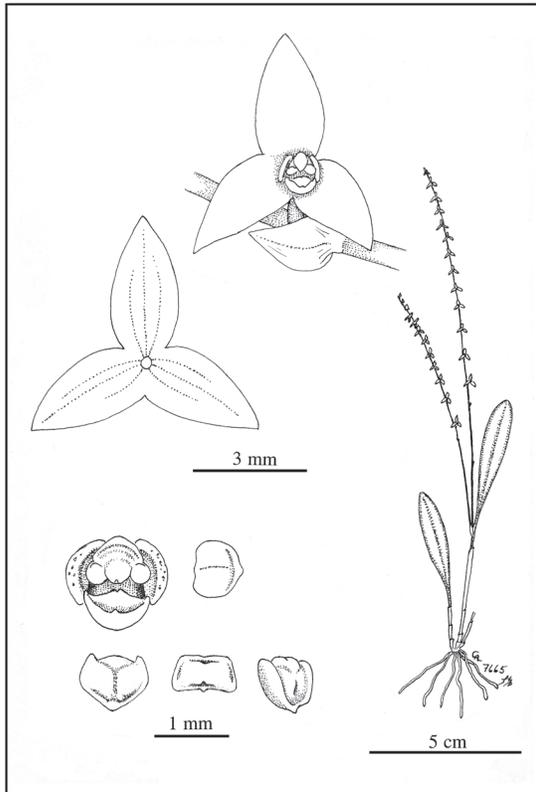


FIGURE 53. *Stelis triplaris* Luer & R. Escobar

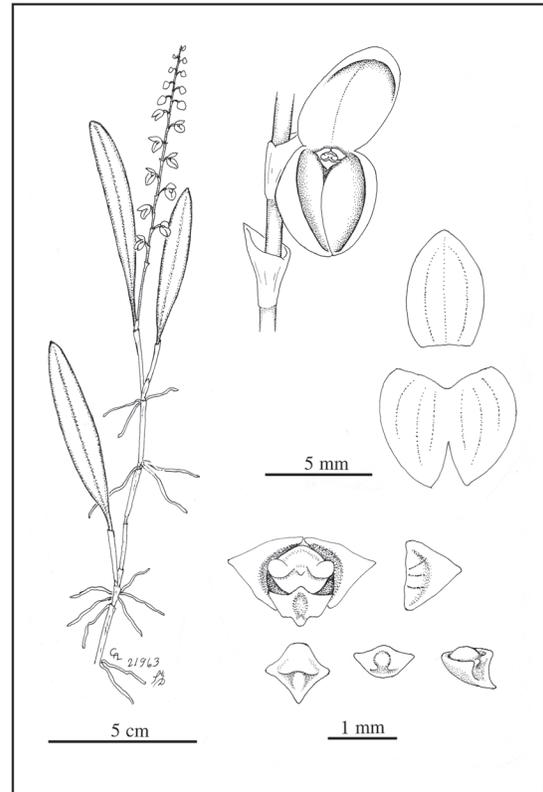


FIGURE 54. *Stelis tritriangulata* Luer & R. Escobar

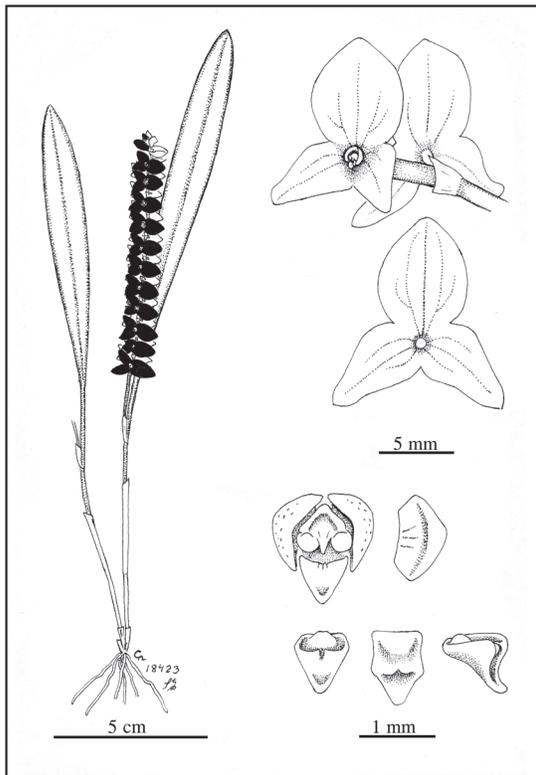


FIGURE 55. *Stelis uribeorum* Luer & R. Escobar

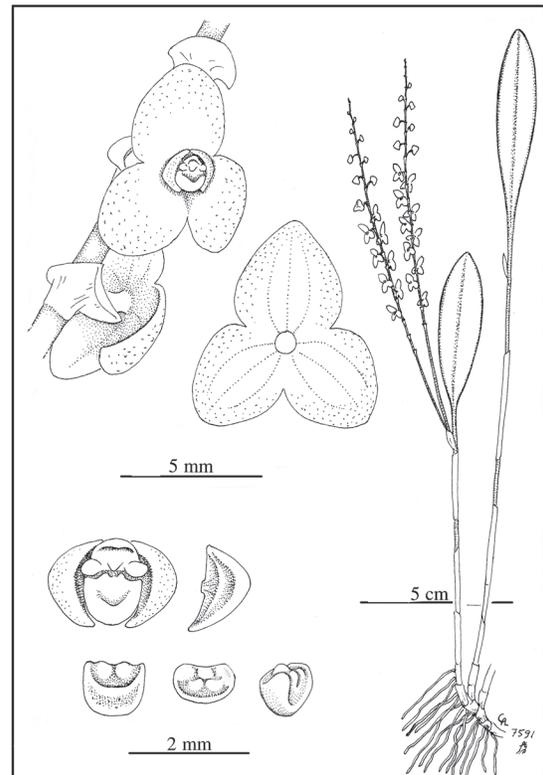


FIGURE 56. *Stelis validipes* Luer & R. Escobar

Stelis uribeorum Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Probably Valle del Cauca: without collection data, fl. in cult. by Orquídeas del Valle, 21 March 1997, C. Luer 18423 (Holotype: MO). Fig. 55.

This species is similar to *Stelis megaloglossa* Luer, but differs with inflorescences not longer than the leaf, and larger, glabrous flowers with ovate, spreading, nearly free lateral sepals.

Plant large, epiphytic, caespitose; roots slender. Ramicauls slender, erect, 6–8 cm long, enclosed by a loose, tubular sheath from below the middle, and 1–2 tubular sheaths below and at the base. *Leaf* erect, coriaceous, narrowly elliptical, acute, petiolate, 13–15 cm long, including a petiole 3–4 cm long, the blade 1.5–1.8 cm wide when dry, narrowed below to the petiole. *Inflorescence* single; 8–12 cm long, the raceme erect, congested, many-flowered, in 2 opposite-facing rows; floral bracts tubular, obtuse, 2 mm long; pedicels 1 mm long; ovary 1 mm long; the peduncle 1.5–2 cm long, subtended by a marrow spathe 1 cm long, from a node below the apex of the ramicaul; flowers shiny dark purple; *sepals* glabrous, the dorsal sepal broadly ovate, broadly obtuse to rounded at the apex, 8 mm long, 6 mm wide, incompletely 5-veined, the lateral sepals ovate, narrowly obtuse, oblique, 6 mm long, 4 mm wide, 3-veined, connate less than 1 mm; *petals* transversely ovate, 0.6 mm long, 1 mm wide, 3-veined, concave, the apex broadly obtuse with the margin minimally thickened, without a transverse carina; *lip* a modified type A, subquadrate, the bar shortly channeled between rounded halves that descend onto the dorsum, the apex acute with the tip rounded, 0.6 mm long, 0.6 mm wide, 0.6 mm deep, the dorsum with a low, rounded callus at the base, the base truncate, hinged to the base of the column; *column* semiterete, ca. 0.6 mm long and wide, the anther and the bilobed stigma apical.

Eponymy: Named for Andrea and Juan Carlos Uribe of Orquídeas del Valle, Cali, Colombia, in whose nursery this species was being cultivated.

This species and the closely related *Stelis megaloglossa* Luer are unusual members of section *Nexipous*. *Stelis uribeorum* is characterized by a narrow, elliptical leaf and a shorter, double-ranked raceme of shiny, dark purple flowers. The rows crowded flowers with a large, rounded dorsal sepal are reminiscent of shelves lined with a collection of human skulls in a museum. The smaller lateral sepals are connate below the middle. The central apparatus is minute, the petals are 3-veined, and the apex of the lip is triangular.

Stelis uribeorum is similar to *Stelis megaloglossa*, but it

is distinguished from the latter by the raceme that does not exceed the leaf, and larger flowers with twice larger, spreading lateral sepals that are connate only toward the base.

Stelis validipes Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Santander: Bucaramanga, between Bucaramanga and Berlin, 2800 m, 27 April 1982, C. Luer, J. Luer & R. Escobar 7591 (Holotype: SEL). Fig. 56.

This large, shortly repent species is characterized by erect ramicauls borne by a thick, ascending rhizome; elliptical leaves; two or three much longer, many-flowered racemes; obtuse sepals with large, scattered cells; 3-veined petals; and a rounded lip with a rounded callus on the dorsum.

Plant large, epiphytic, shortly ascending-repent, the rhizome stout, 4–5 mm thick, ca. 5 mm between ramicauls; roots slender. Ramicauls erect, slender, 8–16 cm long, with a close tubular sheath from above the middle, and another 1–2 sheaths below and at the base. *Leaf* erect, coriaceous, elliptical, acute to subacute, petiolate, 7–9 cm long including a petiole 1.5–2 cm long, the blade 1.3–1.8 cm wide in the dry state, cuneate below into the petiole. *Inflorescence* 2–3 simultaneous; 11–17 cm tall, the raceme erect, strict, distichous, many-flowered; floral bracts oblique, obtuse, dilated, 2.5–3 mm long and wide; pedicels 1.5 mm long; ovary 1.5 mm long; the peduncle 2–4 cm long, from a node below the apex of the ramicaul; *sepals* rose colored, with large, scattered cells, broadly ovate, obtuse, 3-veined, connate in lower fourth, the dorsal sepal 4 mm long, 4 mm wide, the lateral sepals 3 mm long, 3.5 mm wide; *petals* transversely semilunate, 0.75 mm long, 1.5 mm wide, 3-veined, broadly rounded and thick at the apex, concave below a transverse carina; *lip* subquadrate, 0.75 mm long, 1 mm wide, 0.5 mm deep, shallowly concave below a thick, bigibbous bar with an indistinct glenion, the apex rounded with a broad margin, the dorsum with a central, rounded callus between the gibbous halves of the bar, the base truncate, hinged to the base of the column; *column* clavate, ca. 1 mm wide and long, the anther and stigmatic lobes apical.

Etymology: From the Latin *validipes*, “strong-footed,” referring to the thick rhizome.

This large, ascending-species is distinguished by tall, slender ramicauls produced along a thick rhizome, elliptical leaves and two or three much longer racemes. The relatively large sepals are sparsely studded within with large cells. The lip is type A with a broad, rounded apex, and a bigibbous bar with a subspherical callus between the humps of the bar.

LITERATURE CITED

LUER, C. A. 2016a. *Icones Stelidarum (Orchidaceae) Colombiae*. Harvard Papers in Botany 21, No. 1: 59–92.

———. 2016b. *Icones Stelidarum (Orchidaceae) Colombiae II*. Harvard Papers in Botany 21, No. 2: 193–225.