

## ICONES STELIDARUM (ORCHIDACEAE) COLOMBIAE IV<sup>1</sup>

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**Abstract.** An additional fifty new species of *Stelis* (Orchidaceae) from Colombia are described and illustrated in this the fourth 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. (Orchidaceae) for Colombia, an additional 50 new species are described and illustrated in the fourth part of this series.

***Stelis alboviolacea*** Luer, *sp. nov.* TYPE: COLOMBIA. Chocó: San José del Palmar, Cerro Torrá, mesa below the summit, 2500 m, 17 August 1988, P.A. Silverstone-Sopkin 4532 (Holotype: MO; Isotype: CUV), C. Luer illustr. 21983. Fig. 1.

This species is characterized by a stout, long-repent rhizome; erect ramicauls with acute, elliptical leaves surpassed by a secund raceme of flowers with a dark purple dorsal sepal and a white synsepal.

*Plant* medium to large, epiphytic, long-repent, the rhizome stout, 4–10 cm long between ramicauls; roots slender. Ramicauls stout, erect, 3–6 cm long, enclosed by tubular, evanescent sheaths. *Leaf* erect, coriaceous, elliptical, acute, petiolate, 4–6.5 cm long, 1–1.5 cm wide in dry state, contracted below into a slender petiole ca. 1.5 cm long. *Inflorescence* single; to 17 cm long, the raceme erect, congested, strict, secund, many-flowered with most flowers open simultaneously; floral bracts purple, oblique, acute, 3 mm long; pedicels 1.5 mm long; ovary 1.5 mm long; peduncle 1.5–2 cm long, subtended by a spathe within the sheath, from a node below the apex of the ramicaul; flowers bicolorous; *sepals* glabrous, the dorsal sepal red-violate, antrorse, elliptical, obtuse, concave, 5–6 mm long, 2.5 mm wide, 3-veined, connate basally, the lateral sepals white, connate into an obtuse, ovoid synsepal, 4–4.5 mm long, 4–5 mm wide unexpanded; *petals* transversely oblong, 0.5 mm long, 0.75 mm wide, 3-veined, the apex broadly rounded with a thickened margin, concave; *lip* trilobed, ca. 0.5 mm long, 0.6 mm wide, 0.5 mm deep, the lateral lobes rounded, the apical lobe thick and rounded, the dorsum thickened with a low, central callus, the base truncate, hinged to the base of the column; *column* semiterete, ca. 0.5 mm wide and long, the anther and the bilobed stigma apical.

**Etymology:** From the Latin *alboviolaceus*, “white-violet,” referring to the colors of the sepals.

This long-repent, distinct species of section *Humboldtia* is characterized by a red-purple dorsal sepal that is longer than a white, ovoid synsepal over which it hovers. Unfortunately,

the flowers do not rehydrate well, leaving details of the minute central apparatus poorly visualized. The petals are concave and three-veined with the thickened, rounded margin. The minute lip is apparently transversely bilobed with the lateral lobes rounded and larger than the middle lobe.

***Stelis aleanophila*** Luer, *sp. nov.* TYPE: COLOMBIA. Putumayo: Mocoa, Río Mocoa. 700–900 m, collected by J.M. Serna, 26 August 1977, fl. in cult. by the Robledos, 21 November 1981, C. Luer 6739 (Holotype: SEL). Fig. 2.

This medium-sized, densely caespitose species is characterized by acute, narrowly elliptical leaves exceeded by a single raceme; acute, ovate, glabrous three-veined sepals with the lateral sepals antrorse; single-veined, cuneate petals; and a subquadrate lip with an apiculate, truncate apex.

*Plant* medium in size, epiphytic, densely caespitose; roots slender. Ramicauls erect, slender, 4–5 cm long, enclosed by a close, tubular sheath from below the middle and 2 other sheaths below and at the base. *Leaf* erect, coriaceous, narrowly elliptical, acute, 6–8 cm long, including a petiole 1.5–2 cm long, the blade thick, 0.8–1 cm wide in the dry state, narrowly cuneate below into the petiole. *Inflorescence* solitary; 10–14 cm tall, the raceme erect, strict, congested, distichous, many-flowered, with many flowers open simultaneously; floral bracts oblique, acute, 2 mm long; pedicels 1.5 mm long; ovary 1 mm long; the peduncle 2–3 cm long, with a slender spathe ca. 1 cm long, from a node near the apex of the ramicaul; flowers light yellow; *sepals* glabrous, ovate, subacute, connate to near the base, 3-veined, the dorsal sepal 2.3 mm long, 1.5 mm wide, the lateral sepals parallel, 2.5 mm long, 1.5 mm wide; *petals* thin, broadly cuneate, the truncate apex minimally thickened, 0.5 mm long, 0.8 mm wide, 1-veined; *lip* subquadrate, 0.6 mm long, 0.6 mm wide, 0.5 mm deep, concave below a thick, bigibbous, shallowly cleft bar, the apex truncate, with a short, triangular apiculum, the dorsum slightly convex, the base truncate, hinged to the base of the column; *column* clavate, ca. 0.5 mm long and wide, the anther and the stigmatic lobes apical.

**Etymology:** From the Greek *aleanophilus*, “lover of warm places,” referring to the lowland habitat.

The author is grateful to the staff of MO and SEL for making their specimens available for study, to S. Dalström for inking the figures presented herein, all based on pencil drawings by the author, and to the generosity of the Pleurothallid Alliance for making the inking possible. Adam Karremans reviewed an early version of the text and Antonio Toscano de Brito scrutinized the proofs.

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This species from lowland, southeastern Colombia is characterized by densely caespitose, slender ramicauls that bear narrow, elliptical leaves that are exceeded by a many-flowered raceme of small flowers. The sepals are ovate, subacute and three-veined, with the laterals antrorse, mimicking a synsepal. The petals are cuneate and single-veined. The lip is subquadrate with a thick, notched bar, and a truncate apex with a small, triangular apiculum.

**Stelis amilotensis** Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Tolima: Alto de Pozo, W of Ibagué, 3000 m, 20 April 1982, C. Luer, J. Luer & R. Escobar 7479 (Holotype: SEL). Fig. 3.

This large, caespitose species is characterized by slender ramicauls; elliptical leaves with one or two many-flowered inflorescences more or less equally long; broadly ovate, glabrous sepals with the dorsal sepal five-veined; thick, three-veined petals; and a broad, shallow lip with a round, dorsal callus.

*Plant* large, epiphytic, caespitose; roots slender. Ramicauls erect, slender, 5–14 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, petiolate, 7–11 cm long including the petiole 1.5–2 cm long, the blade 2–2.8 cm wide in the dry state, cuneate below into the petiole. *Inflorescence* 1–2; 7–11 cm long, the racemes erect, distichous, congested, many-flowered, floral bracts oblique, acute, 4 mm long; pedicels 3 mm long; ovary 1.25 mm long; the peduncle ca. 2 cm long, with a spathe ca. 6 mm long below the apex of the ramicaul; flowers yellow; *sepals* glabrous, expanded, broadly ovate, obtuse, connate below the middle, the dorsal sepal 5 mm long, 6 mm wide, 5-veined, the lateral sepals oblique, 4 mm long, 4.5 mm wide, 4-veined; *petals* transversely elliptical, concave, the apex broadly rounded with a thick margin, and with a transverse carina, 1 mm long, 1.8 mm wide, 3-veined; *lip* subquadrate, 0.8 mm long, 1.6 mm wide, 0.8 mm deep, shallowly concave below a thick, shallowly cleft bar, the apex broadly rounded, the margin narrowly thickened, the dorsum with a rounded callus between the cleft and the truncate base; *column* clavate, ca 1.5 mm wide, 1 mm long, the anther and the stigmatic lobes apical.

**Eponymy:** Named for Tolima (with backward spelling) where the species is found.

This large, caespitose species is distinguished by a combination of morphological features that are not unusual: slender ramicauls, elliptical leaves, and one or two inflorescences that equal or shortly exceed the leaves; broad, obtuse, glabrous sepals with the dorsal sepal five-veined; thick, three-veined petals; and a wide but shallow, type A lip with a round, dorsal callus between a thick, shallowly cleft bar and the base. This combination of morphological features sets *Stelis amilotensis* apart from all others.

**Stelis bialaria** Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Norte de Santander: Alto de Santa Inez, 2150 mm, 13 May 1984, C. Luer, J. Luer & R. Escobar 10351 (Holotype: MO). Fig. 4.

This small, ascending-caespitose species is distinguished by long-petiolate leaves borne by shorter ramicauls with loose, tubular sheaths; a longer, successively several-flowered raceme; broad, nearly subcircular sepals; ovate, obliquely inserted, single-veined petals; and an obtuse lip with a small, suborbicular callus on the dorsum.

*Plant* small, epiphytic, densely ascending-caespitose; roots slender. Ramicauls erect, slender, 5–10 mm long, enclosed by a loose, tubular sheath from below the middle and another 1–2 sheaths below. *Leaf* erect, coriaceous, elliptical, subacute, petiolate, 2–3 cm long including the petiole ca. 1 mm long, the blade 3–4 mm wide in the dry state, cuneate below to the petiole. *Inflorescence* single; 2.5–3 cm long, the raceme erect, strict, successively several-flowered; floral bracts acute, oblique, 1.5 mm long; pedicels 1 mm long; ovary 1 mm long; the peduncle ca. 1.5 cm long, from a node at the apex of the ramicaul; *sepals* glabrous, the transversely ovate or subcircular, broadly obtuse, connate to near the middle, 3-veined, the dorsal sepal light green, 1.8 mm long, 1.8 mm wide, the lateral sepals light purple, 1.3 mm long, 1.3 mm wide; *petals* obliquely positioned, purple, ovate, concave, 1 mm long, 1 mm wide, 1-veined, the apex obtuse, with the margin thickened, with crystalline deposits; *lip* purple, type-A, thick, subquadrate, 0.5 mm long, 0.6 mm wide, 0.5 mm deep, shallowly concave below the bar, shallowly cleft, the apex rounded with a thickened margin, the dorsum slightly concave, with a small, orbicular callus, the base truncate, hinged to the base of the column; *column* small, ca. 0.3 mm long and wide, the anther and the bilobed stigma apical.

**Etymology:** From the Latin *bialarius*, “with two wings,” referring to the petals.

This very small, caespitose species is distinguished by elliptical, petiolate leaves only slightly exceeded by a strict, successively several-flowered raceme. The broadly obtuse sepals appear subcircular, the dorsal sepal, light green, and the lateral sepals, light purple. The ovate, single-veined petals are inserted obliquely to appear as a pair of wings protruding from behind the column. The type A lip is distinguished by a small, orbicular callus on the dorsum.

**Stelis blandita** Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Santander: Bucaramanga, between Bucaramanga and Berlin, 3200 m, 27 April 1982, C. Luer, J. Luer & R. Escobar 7606 (Holotype: SEL). Fig. 5.

Except for the rather large golden yellow flowers, this caespitose species has no distinctly different vegetative character, but the lip with a thick, center that lifts the bar with a looped callus above the rounded margins differs from all the others.

*Plant* small or medium in size, epiphytic, densely caespitose. Ramicauls erect, 2–4 cm long, with a tubular sheath from near the middle, and another 1–2 sheaths below and at the base. *Leaf* erect, coriaceous, elliptical, acute to rounded at the tip, 3.5–5 cm long including a petiole ca. 0.5 cm long, the blade 0.8 cm wide in the dry state, cuneate below into the petiole. *Inflorescence* single; 12–14 cm long, the raceme erect, strict, subclax, distichous; floral

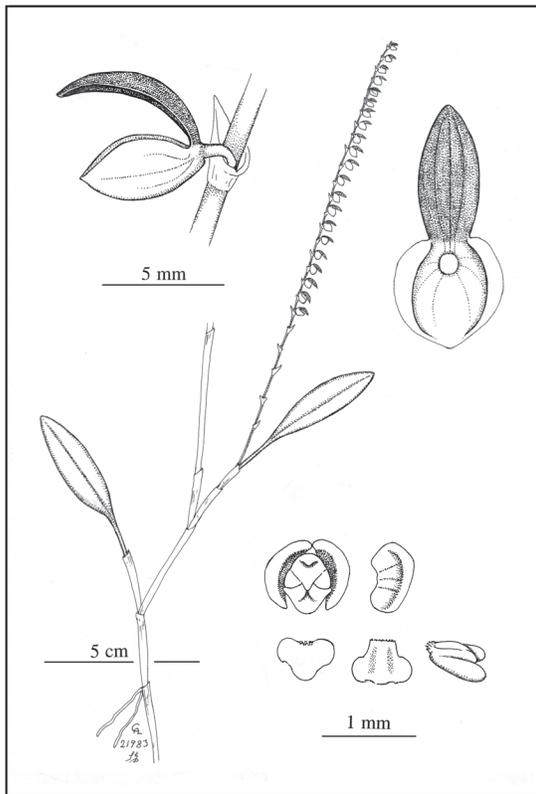


FIGURE 1. *Stelis alboviolacea* Luer

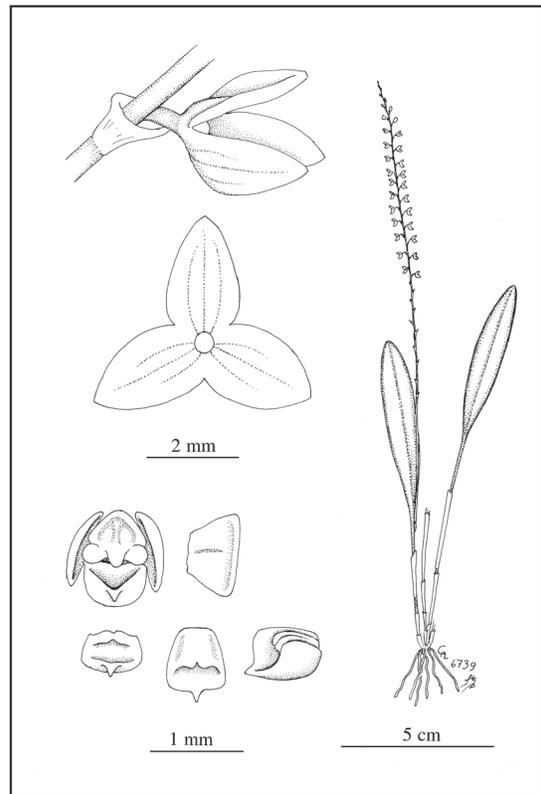


FIGURE 2. *Stelis aleanophila* Luer

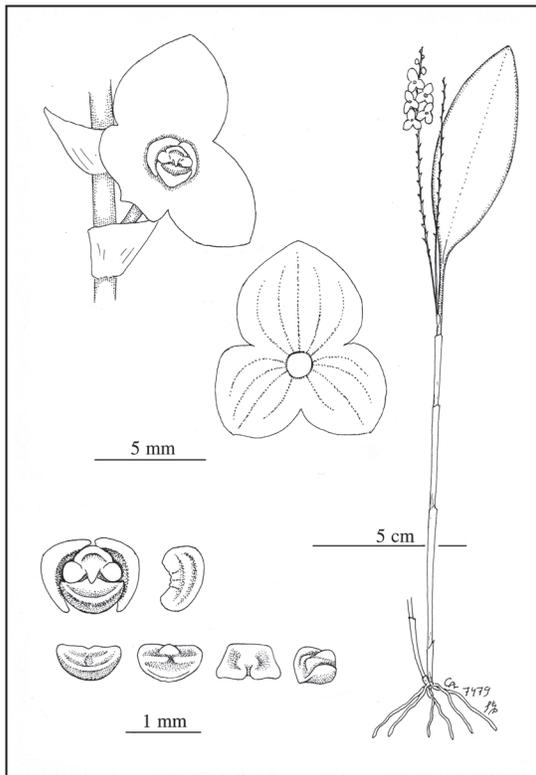


FIGURE 3. *Stelis amilotensis* Luer & R.Escobar

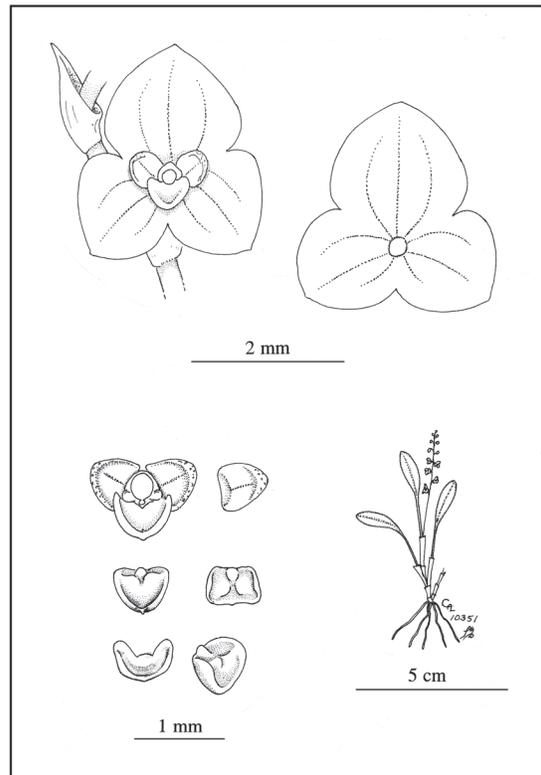


FIGURE 4. *Stelis bialaria* Luer & R.Escobar

bract tubular, obtuse, 2 mm long, 2 mm wide; pedicels 2 mm long; ovary 1.5 mm long; the peduncle ca. 3 cm long, subtended by a spathe 5 mm long, from a node near the apex of the ramicaul; *sepals* golden yellow, glabrous, 3-veined, the dorsal sepal ovate, obtuse, 4.5 mm long, 4 mm wide, the lateral sepals broadly ovate, subcircular, 3.5 mm long, 4 mm wide, connate near the middle; *petals* green, transversely ovate, 1.5 mm long, 2 mm wide, 3-veined, convex below the rounded apex with a narrowly thickened margin, without a transverse carina; *lip* green with purple edge, subquadrate, 1.5 mm long, 1.5 mm wide, 1 mm deep, concave below a thickened center that elevates a shallowly cleft bar above the level of the rounded sides, the cleft being delimited by a thickened, loop-like margin, the apex of the lip rounded with a thickened margin, the dorsum slightly descending, featureless, the base truncate, connate to the base of the column; *column* stout, ca. 1.5 mm long and wide, the anther and the stigmatic lobes apical.

**Eponymy:** From the Latin *blanditus*, "charming," referring to the pretty inflorescence.

This small or medium-sized, caespitose species is pretty with rather large, golden yellow flowers, but otherwise not remarkable except for the lip. The lip is thick centrally, rising above the rounded sides and a rounded bar with a glenion appearing like a margined, loop-like depression.

**Stelis chasmiphora** Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Putumayo: between Sibundoy and Mocoa, near Km. 88, 2200 m, 20 January 1979, C. Luer, J. Luer & O. Ospina 3720 (Holotype: SEL). Fig. 6.

This medium-sized, caespitose species is characterized by an elliptical-oblong leaf slightly surpassed by a distichous raceme of small flowers with short-pubescent sepals; thick, 3-veined petals; and a subquadrate lip deeply concave between separated halves of a divided bar.

*Plant* medium-sized, epiphytic, densely caespitose. Ramicauls erect, slender, 4–7 cm long, with a tubular sheath from below the middle, and another 2 sheaths below and at the base. *Leaf* erect, coriaceous, oblong-elliptical, obtuse, 6–7 cm long including a petiole 1.5–2 cm long, the blade 1–1.4 cm wide in the dry state, cuneate below to the petiole. *Inflorescence* solitary; 6–7 cm long, the raceme erect, distichous, many-flowered; floral bracts oblique, acute, 2–2.5 mm long; pedicels 1–1.5 mm long; ovary 1 mm long; the peduncle ca. 1.5 mm long, subtended by a slender spathe 1 cm long, from a node below the apex of the ramicaul; flowers pale yellow; *sepals* shortly pubescent, ovate, obtuse, three-veined, connate below the middle, the dorsal sepal 3 mm long, 2.75 mm wide, the lateral sepals oblique, 2.3 mm long, 2 mm wide; *petals* transversely ovate, concave, 0.75 mm long, 1 mm wide, 3-veined, the apex rounded, thick; *lip* subquadrate, 1 mm long, 1 mm wide, 0.75 deep, deeply concave below a widely divided bar with a rounded callus interposed, the tip obtusely angled and slightly incurved, the dorsum with a space before the round, basal callus flanked by the halves of the bar, the base broadly truncate, pubescent, hinged to the base of the column; *column* stout, ca. 1.2 mm long and wide, the anther and the stigmatic lobes apical.

**Etymology:** From the Greek *chasmiphor*, "bearing a chasm," referring to the cavity between the halves of the bar.

This caespitose species is characterized by a small-flowered, distichous raceme that slightly exceeds the leaf. The sepals are short-pubescent and the petals are thick and three-veined. The lip is a variation the type A with the halves of the bar widely and deeply separated with a rounded callus from the base interposed.

**Stelis chiliantha** Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Santander: forest between Santa Barbara and Guaca, 2400 m, 6 November 1981, C. Luer & R. Escobar 6599 (Holotype: SEL). Fig. 7.

This medium-sized, caespitose species is characterized by a few inflorescences longer than narrow leaves, faintly veined dorsal sepals, single-veined lateral sepals and petals, and a minute lip shallowly concave below an indistinctly bigibbous bar.

*Plant* medium in size, epiphytic, densely caespitose. Ramicauls erect, slender, 4–6 cm long, with a tubular sheath from below the middle, and another 1–2 tubular sheaths below at the base. *Leaf* erect, coriaceous, elliptical-oblong, subacute, 6–8 cm long including a petiole less than 1 cm long, the blade 0.8–1 cm wide in the dry state, cuneate below to the petiole. *Inflorescence* 2–3 simultaneous; 11–14 cm long, the racemes erect, congested, distichous, many-flowered; floral bracts oblique, subacute, 1.5 mm long; pedicels 1 mm long; ovary 0.6 mm long; the peduncle 1–1.5 cm long, subtended by a spathe 6–10 mm long, from a node below the apex of the ramicaul; flowers yellow-white; *sepals* glabrous, fleshy, not widely expanded, ovate, subacute, connate basally, the dorsal sepal 1.5 mm long, 1 mm wide, faintly 3-veined, the lateral sepals 1.3 mm long, 0.8 mm wide, 1-veined; *petals* transversely ovate, 0.5 mm long, 0.6 mm wide, 1-veined, shallowly concave below a slightly thickened, rounded apex; *lip* subquadrate, 0.5 mm long, 0.4 mm wide, 0.3 mm deep, concave below a faintly bigibbous bar, the apex rounded, the base rounded, hinged 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 Greek *chilianthos*, "thousand-flowered," referring to the numerous, minute flowers produced simultaneously.

This medium-sized, caespitose species is distinguished by two or three densely and minutely many-flowered racemes longer than narrow, elliptical-oblong leaves. The sepals are fleshy ovate, subacute with the lateral sepals single-veined; the petals are subcircular and also single veined. The lip is minute, obtuse and shallowly concave below a faintly bigibbous bar.

**Stelis coccidifera** Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Cauca: between Paispamba and Chapa, 2500 m, 16 November 1982, C. Luer, J. Luer & R. Escobar 8454 (Holotype: SEL). Fig. 8.

This slender, caespitose species is characterized by acute, elliptical, petiolate leaves and two or three strict

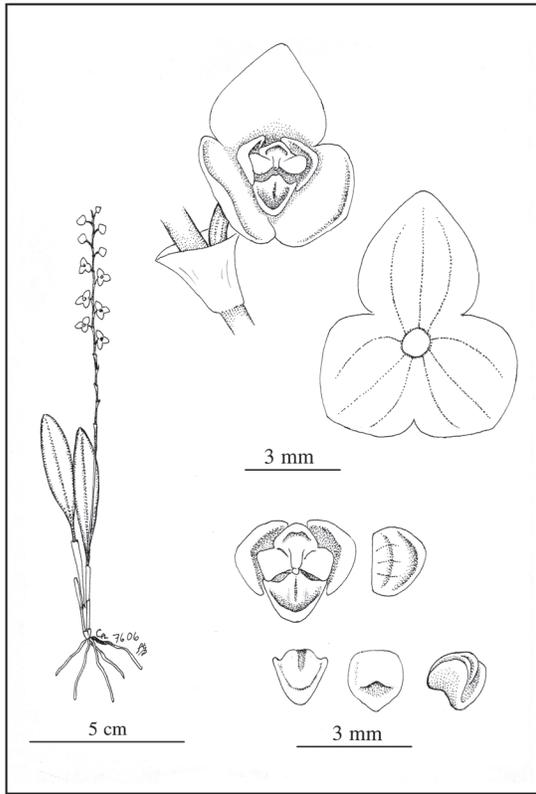


FIGURE 5. *Stelis blandita* Luer & R. Escobar

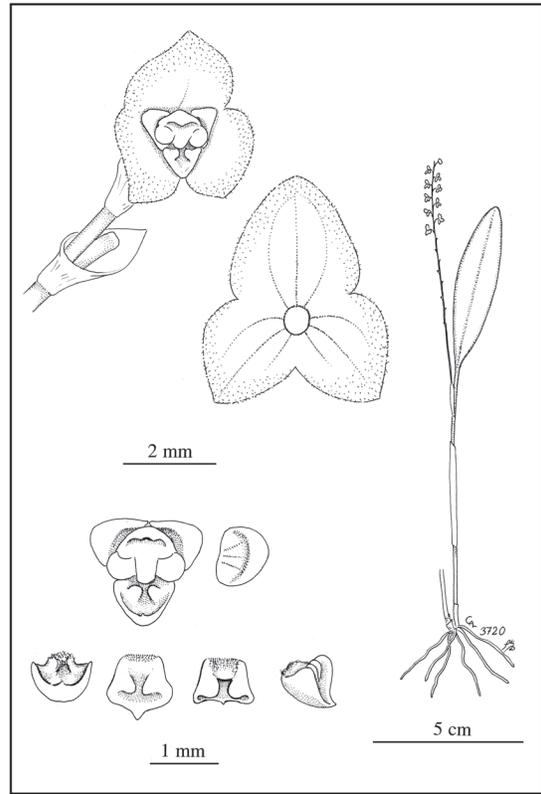


FIGURE 6. *Stelis chasmiflora* Luer & R. Escobar

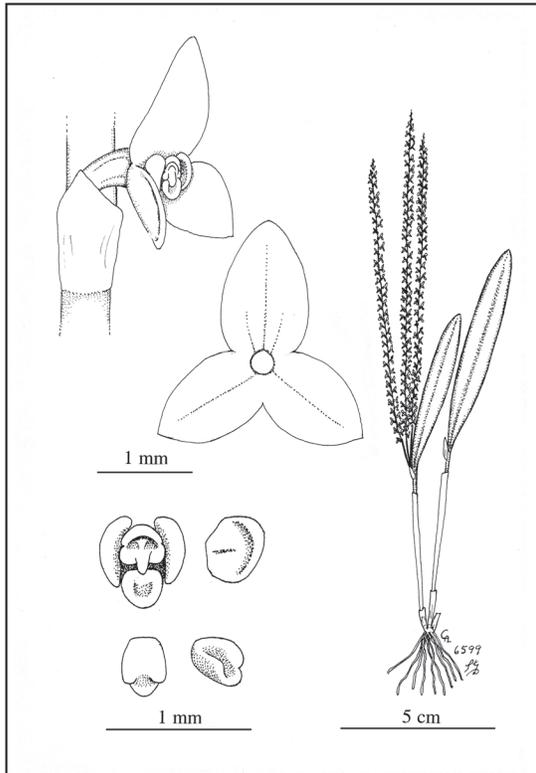


FIGURE 7. *Stelis chiliantha* Luer & R. Escobar

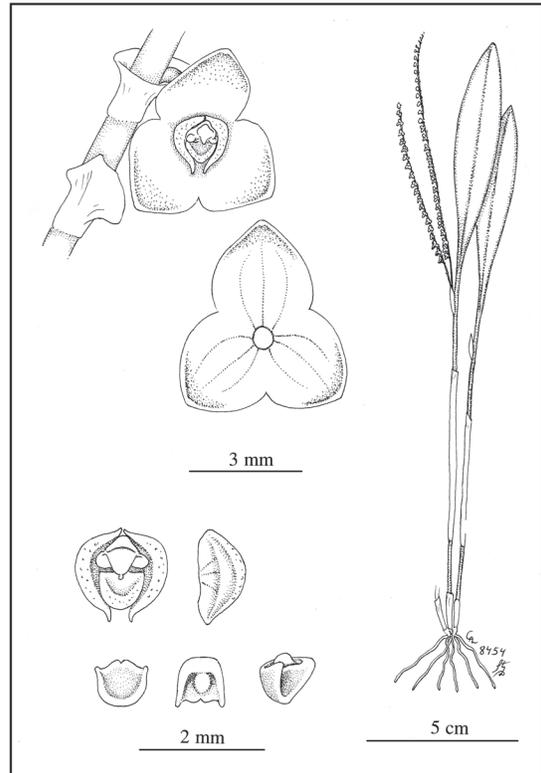


FIGURE 8. *Stelis coccidifera* Luer & R. Escobar

racemes about equally long with ovate, three-veined sepals; thick, broad, three-veined petals; and a smaller lip with a suborbicular callus on the descending dorsum.

*Plant* medium or large, epiphytic, densely caespitose. Ramicauls erect, slender, 7–11 cm long, with a tubular sheath from below the middle, and another 1–2 sheaths below and at the base. *Leaf* erect, coriaceous, elliptical, acute, 8–10 cm long including a slender petiole 1–2 cm long, the blade 1.2–1.5 cm wide in the dry state, cuneate below into the petiole. *Inflorescence* 2–3; 8–11 cm long, the racemes erect, strict, congested, secund, many-flowered with many flowers open simultaneously, floral bracts oblique, dilated, obtuse, 2 mm long, 2 mm wide; pedicels 1.5 mm long; ovary 1 mm long; the peduncle ca. 1 cm long, subtended by a spathe 10 mm long, from a node near the apex of the ramicaul; flowers dark purple; *sepals* sparsely microscopically pubescent, broadly ovate, obtuse, 1.5 mm long, 1.5 mm wide, 3-veined, connate below the middle; *petals* transversely semilunate, 0.75 mm long, 1.7 mm wide, 3-veined below a transverse carina, the apical margin rounded and thickened; *lip* subquadrate, 0.6 mm long, 0.75 mm wide, 0.75 mm deep, shallowly concave below the bar, the apex rounded with a slightly thickened margin, the dorsum descending with a central, suborbicular callus, the base truncate, connate 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 *coccidifer*, “bearing a berry,” referring to the suborbicular callus on the dorsum of the lip.

This slender, caespitose species is distinguished by elliptical leaves accompanied by two or three, congested, more or less secund racemes of small dark purple flowers. The sepals are broadly ovate and three-veined, and the petals are transversely semilunate, thick and about as wide as a sepal. The smaller lip is a modified type A with a suborbicular callus on a sloping dorsum.

**Stelis conchipetala** Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Norte de Santander, Páramo de Jurisdicciones, 2600 m, collected 10 November 1981, fl. in cult. at Selby Gardens 81-2665, 16 February 1982, *C. Luer* 6838 (Holotype: SEL). Fig. 9.

This medium-sized, caespitose species is characterized by a loosely flowered raceme longer than obtuse, elliptical leaves; long-pubescent, subacute, three-veined sepals; concave, semilunate, three-veined petals; and a thick, subcircular lip with the dorsum deflexed nearly the length of the lip.

*Plant* medium-sized, epiphytic, caespitose; roots slender. Ramicauls erect, slender, 2–3.5 cm long, with a tubular sheath from below the middle, and another sheath below at the base. *Leaf* erect, coriaceous, elliptical, obtuse to rounded at the tip, 6–9 cm long including a petiole 2–3 cm long, the blade 1.5–2 cm wide in the dry state, cuneate below into the petiole. *Inflorescence* single; 12–15 cm long, the raceme suberect, flexible, subflexuous, distichous, loose; floral bracts oblique, acute, 4 mm long; pedicels 2 mm long; ovary 2 mm long; the peduncle 2–4 cm long, subtended by a slender spathe ca. 5 mm long, from a node below the

apex of the ramicaul; *sepals* expanded, dull purple with a long, fine, white pubescence, elliptical-ovate, obtuse, three-veined, free to near the base, the dorsal sepal 5 mm long, 4 mm wide, the lateral sepals 4 mm long, 3.5 mm wide; *petals* transversely semilunate, 1.2 mm long, 2.3 mm wide, 3-veined, concave within the rounded apex with a distinct, narrow margin, without a transverse carina; *lip* subcircular, thick, 2 mm long, 1.5 mm wide, 1.8 mm deep, shallowly concave and smooth below the bar, the apex rounded with a narrow margin, the dorsum deflexed from the bar and descending nearly the length of the lip, hinged to the base of the column; *column* clavate, 2 mm long, 1.6 mm wide, the anther and the stigmatic lobes apical.

**Etymology:** From the Latin *conchipetalus*, “with shell-like petals,” referring to the bivalvate shape of the large petals.

This medium-sized, caespitose species is distinguished by rather large flowers in a loose, subflexuous raceme longer than the leaf. The leaves are obtuse to nearly rounded at the tip; the sepals are subacute with a long, fine pubescence; and the large petals are semilunate and concave with a narrow margin. The lip is thick with the dorsum deflexed from the transverse bar and extending nearly the length of the lip.

**Stelis culmosa** Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Santander: Bucaramanga, between Bucaramanga and Berlin, 2800 m, 27 April 1982, *C. Luer*, *J. Luer* & *R. Escobar* 7601 (Holotype: SEL). Fig. 10.

This species is characterized by great bundles of slender ramicauls with narrowly elliptical leaves; two or three racemes; glabrous sepals with the dorsal sepal five-veined; and a lip with a suborbicular callus below the bar on the anterior surface.

*Plant* medium to large, epiphytic, densely caespitose, roots slender. Ramicauls erect, slender, 7–11 cm long, with a tubular sheath from near the middle and another 2 sheaths below and at the base. *Leaf* erect, coriaceous, narrowly elliptical, acute, 5–8 cm long including a petiole 1–1.5 cm long, the blade 0.4–0.6 cm wide in the dry state, narrowed below into the petiole. *Inflorescence* 2–3, 8–12 cm long, the racemes erect, distichous, mostly simultaneously many-flowered, the peduncle 2–3 cm long, from a node below the abscission layer; floral bracts dilated, obtuse, 3–4 mm long, 2 mm wide; pedicels 3 mm long; ovary 2 mm long; *sepals* color notes lost, expanded, minutely short-pubescent, ovate, obtuse, 3-veined, connate below the middle, the dorsal sepal 4.5 mm wide, 4 mm wide, the lateral sepals 4 mm long, 3.75 mm wide; *petals* transversely ovate, concave, the broadly obtuse apex thickened, 0.75 mm long, 1.25 mm wide, 3-veined; *lip* subquadrate, 1 mm wide, 0.75 mm long, 0.5 mm deep, narrowly concave within the rounded apex, the bar elevated, shallowly channeled, with a hemispherical callus on the anterior surface, the dorsum descending, featureless, hinged to the base of the column; *column* clavate, ca. 1 mm wide and long, the anther and stigmatic lobes apical.

**Etymology:** From the Greek *culmosus*, “full of stems,” referring to the masses of clustered ramicauls.

This densely caespitose species is characterized by two or three many-flowered racemes that surpass narrowly

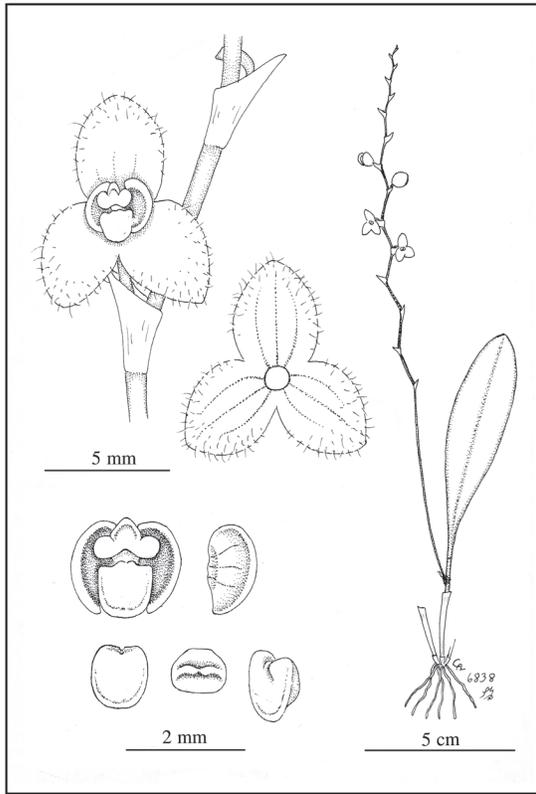


FIGURE 9. *Stelis conchipetala* Luer & R. Escobar

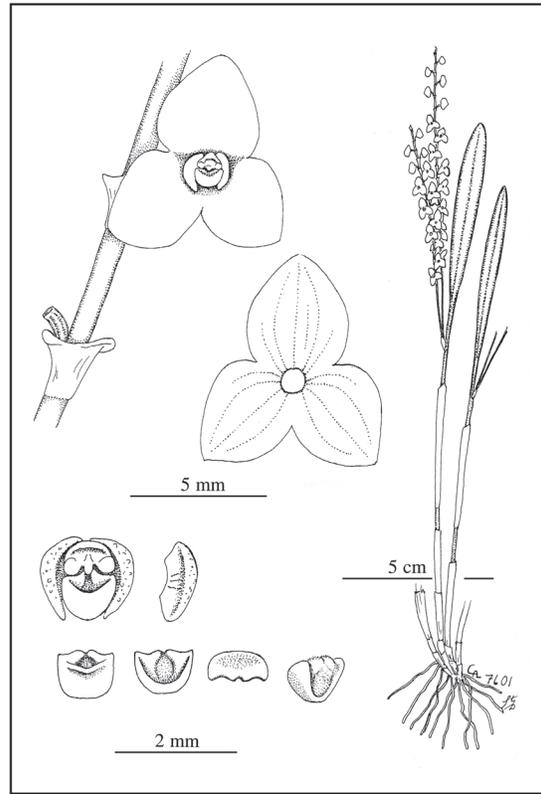


FIGURE 10. *Stelis culmosa* Luer & R. Escobar

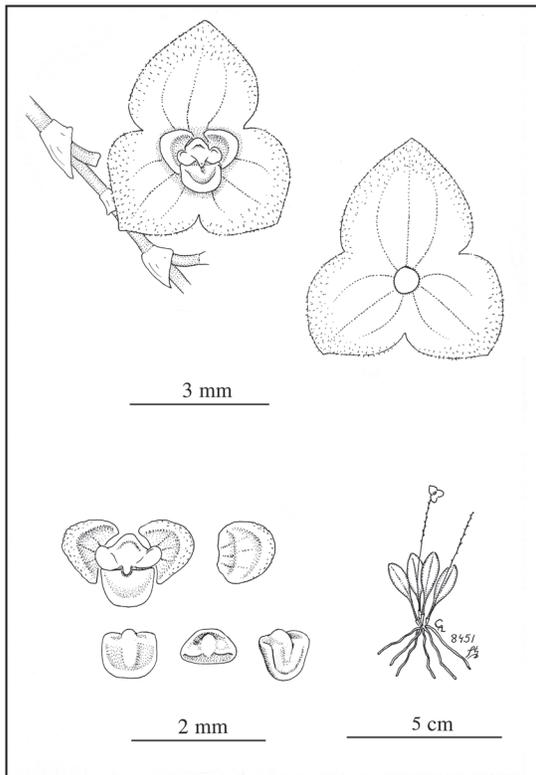


FIGURE 11. *Stelis cupidinea* Luer & R. Escobar

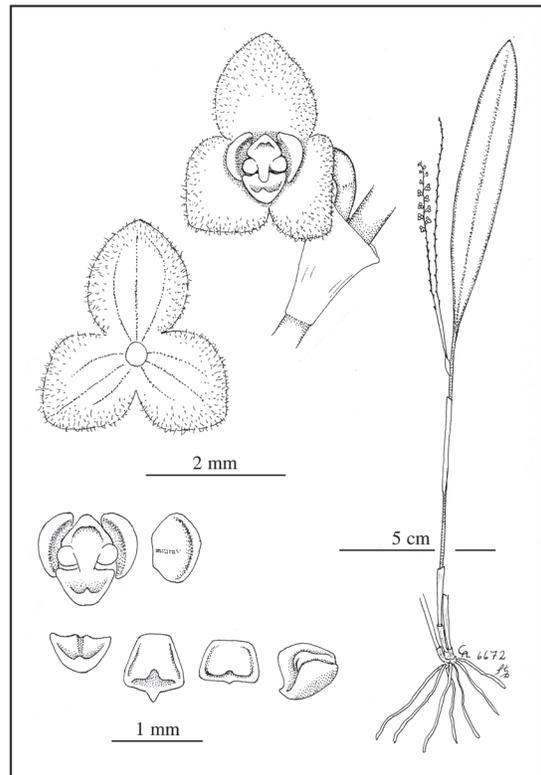


FIGURE 12. *Stelis dejavu* Luer & R. Escobar

elliptical leaves borne by slender ramicauls. The sepals are ovate and glabrous, and the petals are three-veined. On the anterior surface of the lip is a central, suborbicular callus similar to that of *Stelis trochophora* Luer & R. Escobar, but *Stelis culmosa* is distinguished best by large clusters of narrowly elliptical leaves, and four- to five-veined, glabrous sepals.

**Stelis cupidinea** Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Cauca: Páramo de Moras, cultivated in Popayán by Amalia Lehmann de Sarria, 16 November 1982, *C. Luer 8451* (Holotype: SEL). Fig. 11.

This very small, caespitose species is characterized by many-flowered, flexuous raceme that exceeds an elliptical leaf twice its length; broadly ovate, obtuse sepals; thick, three-veined petals; and a lip with a dorsal callus that extends forward onto the flat, non-concave, anterior surface.

*Plant* very small, epiphytic, caespitose; roots slender. Ramicauls erect, 5 mm long, enclosed by 2 tubular sheaths. *Leaf* erect, coriaceous, elliptical, subacute to obtuse, 10–15 mm long including a petiole 2–3 mm long, the blade 4–5.5 mm wide when dry, cuneate below into the petiole. *Inflorescence* single; 20–35 mm long, erect, distichous, flexuous, many flowered; floral bracts oblique, acute, 1 mm long; pedicel 1 mm long; ovary 1 mm long; the peduncle ca. 12 mm long, from near the apex of the ramicaul; flowers purple; *sepals* minutely pubescent, broadly ovate, obtuse, connate below the middle, 3-veined, the dorsal sepal 3 mm long, 3 mm wide, the lateral sepals 2 mm long, 2.5 mm wide; *petals* subcircular, 1 mm long, 1 mm wide, thick, broadly rounded at the apex, shallowly concave below the thickened, apical margin, concave and 3-veined below the transverse carina; *lip* subquadrate, 0.6 long, 0.75 mm wide, 0.4 mm deep, the anterior surface flat below the bar, apex rounded and thickened, the dorsum shallow, with a central, rounded callus that extends forward over the bar onto the anterior surface, the base truncate, hinged to the base of the column; *column* stout, ca. 0.5 mm long, 0.8 mm wide across the stigmatic lobes, the anther and stigmatic lobes apical.

**Etymology:** From the Latin *cupidineus*, pertaining to Cupid, something “dainty,” referring to the tiny habit.

This very small species from the southern Central Cordillera is characterized by an elliptical leaf that is exceeded by twice the length by minute, flexuous, many-flowered racemes. Unfortunately, only two good flowers remained on Amalia’s plant, so it is unknown if it is simultaneously or successively flowered. The sepals are minutely pubescent and three-veined; the petals are broadly rounded at the apex, shallowly concave, but sharply concave and three-veined below a thick transverse carina. The lip is flat below the bar, except for a rounded callus that begins at the base of the shallow dorsum, and extends forward over the bar onto the anterior surface.

**Stelis dejavu** Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Norte de Santander: terrestrial on road embankment near the pass between Abrego and Sardinata, 2500 m, 12 November 1981, *C. Luer, J. Luer & R. Escobar 6672* (Holotype: SEL). Fig. 12.

This caespitose species is distinguished by one or two congested racemes that approach the leaf in length; shortly pubescent, obtuse, three-veined sepals; thin, single-veined petals; and a lip similar to that of *Stelis oblonga* (Ruiz & Pav.) Willd. with a shortly acuminate tip.

*Plant* medium in size, epiphytic, densely caespitose; roots slender. Ramicauls erect, slender, 8–19 cm long, with a tubular sheath above the middle, and another 1–2 tubular sheaths below and at the base. *Leaf* erect, coriaceous, narrowly elliptical, narrowly obtuse, 9–11 cm long including a petiole 1.5–2 cm long, the blade 1.2–1.5 cm wide in the dry state, cuneate below into the petiole. *Inflorescence* 2; 7–9 cm long, the raceme erect, strict, 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 ca. 1.5 cm long, subtended by a slender spathe 1 cm long, from a node near the apex of the ramicaul; flowers yellow; *sepals* shortly pubescent, expanded, ovate, obtuse, 3-veined, connate basally, the dorsal sepal 1.8 mm long, 1.6 mm wide, the lateral sepals 1.5 mm long, 1.6 mm wide; *petals* thin, transversely elliptical, concave below a rounded apex with a narrowly thickened margin, 0.6 mm long, 0.8 wide, 1-veined; *lip* type A, subquadrate, 0.7 long, 0.7 mm wide, 0.5 mm deep, concave below a cleft bar cleft with a deep glenion, the apex truncate with a short, acute, triangular apiculum. the dorsum smooth, 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:** Named for the commonly used French expression “deja vu,” that recalls an illusion that it has been seen before.

This caespitose species with a couple of small-flowered racemes slightly shorter than a narrowly elliptical leaf, produces flowers reminiscent of *Stelis oblonga* (Ruiz & Pav.) Willd. The flowers with shortly pubescent, obtuse sepals, and the lip with a cleft bar and apiculate tip are similar, but the petals are thin and single-veined, instead of thick and three-veined.

**Stelis desautelsii** Luer, *sp. nov.* TYPE: COLOMBIA. Valle de Cauca: between Valle de Mercedes and Ataca, 2000 m, collected by Paul Desautels, fl. in cult. at Colomborquídeas, 23 November 1981, *C. Luer 6765* (Holotype: SEL). Fig. 13.

This large, caespitose species is distinguished by a congested raceme that exceeds the elliptical leaf; floral bracts closely hugging the rachis; broadly ovate, three-veined, pubescent sepals; three-veined petals; and an ovoid lip with a callus descending from the bar.

*Plant* medium in size to large, epiphytic, densely caespitose; roots slender. Ramicauls erect, slender, 8–10 cm long, with a tubular sheath on the middle third, another 1–2 sheaths below and at the base. *Leaf* erect, coriaceous, elliptical, acute, 8–10 cm long including a petiole 1–1.5 cm long, the blade 1.5–1.7 cm wide in the dry state, cuneate below into the petiole. *Inflorescence* 1–2; 15–20 cm long, the racemes erect, strict, congested, distichous, many-flowered, with 3 mm long floral bracts erect, obtuse, and enclosing the pedicels; pedicels 2.5 mm long; ovary 1 mm

long; the peduncle ca. 5 cm long, subtended by a spathe ca. 1.5 cm long, from a node near the apex of the ramicaul; *sepals* yellow, pubescent, expanded, broadly ovate, obtuse, 3-veined, connate to near the middle, the dorsal sepal transversely ovate, 2 mm long, 3 mm wide, the lateral sepals oblique, 2 mm long, 2.3 mm wide; *petals* yellow, thick, transversely ovate, concave within a broadly rounded apex, 3-veined, 1 mm long, 1.3 mm wide; *lip* brown with yellow margins, ovoid, 1 mm long, 1.2 mm wide, 0.6 mm deep, concave within the rounded apex, the bar intact with a small callus descending from the center, the apex broadly obtuse with a small, triangular apiculum, the dorsum slightly convex, 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 Paul Desautels (1920–1991), collector of this species.

This large, caespitose species is characterized by a congested raceme that exceeds an elliptical leaf. Erect, obtuse floral bracts embrace the rachis and enclose the pedicels. The sepals are broadly obtuse, three-veined and pubescent, and the petals thick and three-veined. The lip is concave below the bar, but instead of being smooth, notched, or cleft, a small callus descends toward the apical margin that has a short, obtuse apiculum.

**Stelis discors** Luer & Hirtz, *sp. nov.* TYPE: COLOMBIA. Nariño: above Ricaurte, 1950 m, 2 November 1979, C. Luer, J. Luer & A. Hirtz 4563 (Holotype: SEL). Fig. 14.

Plant large, caespitose with a long, many-flowered inflorescence with five-veined sepals that are seven centimeters long in the lower half, decreasing to three and a half centimeters in the upper half; thick, three-veined petals; and a lip with a shortly acuminate tip.

*Plant* large, epiphytic, densely caespitose; roots slender. Ramicauls erect, slender, 12–18 cm long, with a loose, tubular sheath on the middle third, another 1–2 sheaths below and at the base. *Leaf* erect, coriaceous, ovate, subacute, 12–13 cm long including a petiole 1.5–2 cm long, the blade 2.7–3 cm wide in the dry state, cuneate below into the petiole. *Inflorescence* single; to 28 cm long, the raceme erect, subcongested, distichous, many-flowered; floral bracts oblique, acute, 3–4 mm long; pedicels 3 mm long; ovary 3 mm long; the peduncle ca. 10 cm long, subtended by a slender spathe 1.5 cm long, from a node near the apex of the ramicaul; flowers yellow, suffused and speckled with brown; *sepals* glabrous, expanded, ovate, obtuse, 5-veined, connate in lower third, the dorsal sepal 7 mm long, 5.5 mm wide, decreasing to 3.5 mm long, 3 mm wide toward the tip, the lateral sepals 2.5 mm long and wide, decreasing to 3 mm wide and long above; *petals* thick, transversely semilunate, with a broad, rounded margin, concave below a transverse carina, 3-veined, 0.75 mm long, 1.25 mm wide; *lip* ovoid, 0.6 mm long, 0.6 mm wide, 0.5 mm deep, concave below an indistinct bar, the apex obtuse with a short, acuminate apex, the dorsum convex, the base truncate, attached 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 *discors*, “discordant,” referring to the marked difference in the sizes of the flowers in the lower part of the raceme compared to those above.

This large, caespitose species is characterized by a long, many-flowered raceme with relatively large flowers in lower half, and flower parts with less than half the dimensions toward the tip. Smaller flowers toward the tip of a raceme are commonly seen, but this magnitude is unusual. The sepals are five-veined, and the thick petals are three-veined. The apex of the obtuse lip is short and acuminate.

**Stelis diprizo** Luer, *sp. nov.* TYPE: COLOMBIA. Valle del Cauca: El Cairo, Cerro del Inglés, Serranía de los Paraguas, 2400 m, 28 December 1986, P.A. Silverstone-Sopkin 2665 (Holotype: MO; Isotype: CUVC), C. Luer illustr. 21991. Fig. 15.

This caespitose species is distinguished by ovate, petiolate leaves; an inflorescence of up to four, congested racemes about as long as the leaf; and a lip with a thick, bigibbous bar.

*Plant* large, epiphytic, densely caespitose, roots slender. Ramicauls erect, slender, 10–15 cm long, with a tubular sheath above the middle and another below and at the base. *Leaf* erect, coriaceous, ovate, acute, 9–11 cm long including a petiole ca. 1.5 cm long, the blade 2–2.8 cm wide in dry state, abruptly contracted below into the petiole. *Inflorescence* 1–4; 4–11 cm long, erect, strict, congested, distichous, many-flowered, flowering from near the base; floral bracts erect, oblique, acute, 3 mm long; pedicels ca. 2 mm long; ovary 1.5 mm long; the spathe ca. 8 mm long, from a node below the apex of the ramicaul; flowers dark red-violet; *sepals* glabrous, the dorsal sepal ovate, subacute to obtuse, 3.5 mm long, 3.5 mm wide, 5-veined, the lateral sepals connate into a shallowly concave synsepal, each sepal 3 mm long, 3 mm wide, 3-veined; *petals* transversely ovate, concave below the thickened, broadly rounded apical margin, 0.75 mm long, 1 mm wide, 3-veined, with a transverse carina; *lip* subquadrate, 0.75 mm long, 1 mm wide, 0.5 mm deep, concave below a thick, bigibbous bar with a deep glenion, the apex transversely obtuse, the dorsum with a low rounded callus, the base truncate, hinged to the base of the column; *column* clavate, ca. 0.8 mm wide and long, anther and bilobed stigma apical.

**Etymology:** From the Greek *diprizo*, “double saw,” referring to the racemes of the inflorescence.

**Additional specimen examined:** COLOMBIA. Valle del Cauca: El Cairo, Cerro del Inglés, Serranía de los Paraguas, 2070–2430 m, 1 April 1988, P.A. Silverstone-Sopkin 3933 (MO, CUVC), C. Luer illustr. 21989.

This large, caespitose species of section *Humboldtia* is distinguished by an ovate, petiolate leaf, and a cluster of a few, congested; distichous racemes that resemble a double-bladed saw. The lip is distinctive with a thick, bigibbous bar with a deep glenion.

**Stelis dissidens** Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. **Chocó:** Guarumales, coll. by M. Zapata, fl. in cult. at Colomborquídeas, 23 May 1995, C. Luer 17584 (Holotype: MO). Fig. 16.

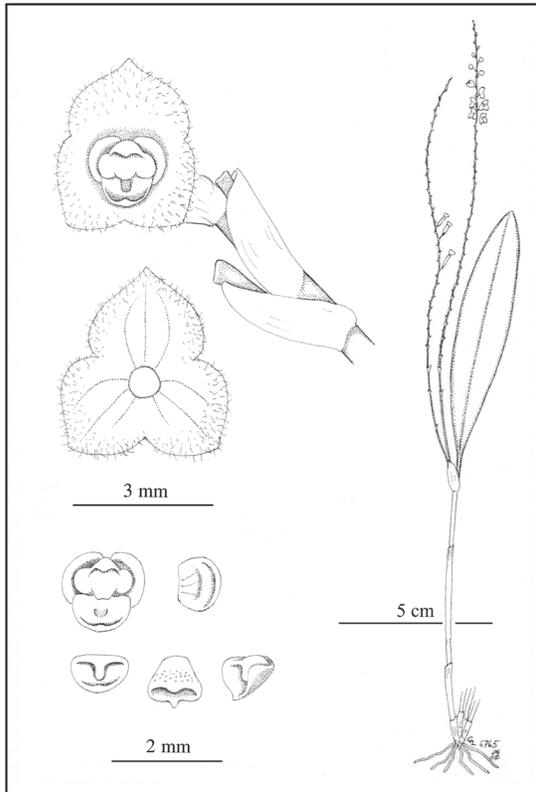


FIGURE 13. *Stelis desautelsii* Luer

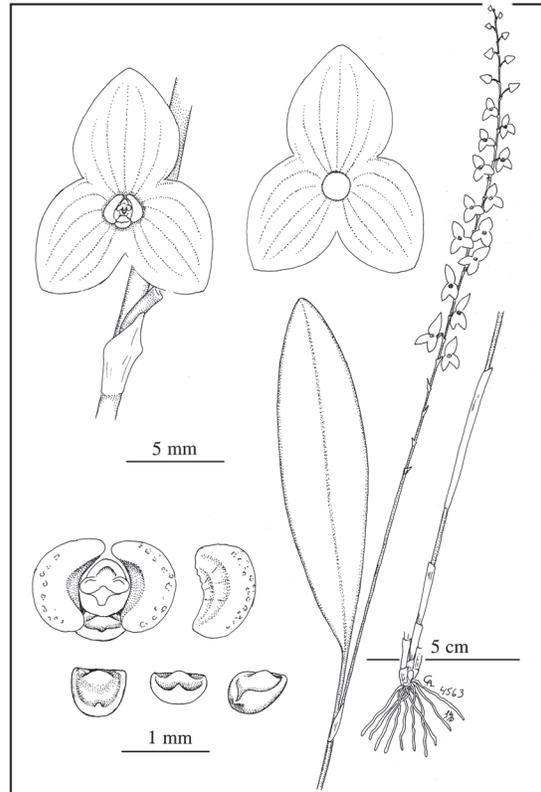


FIGURE 14. *Stelis discors* Luer & Hirtz

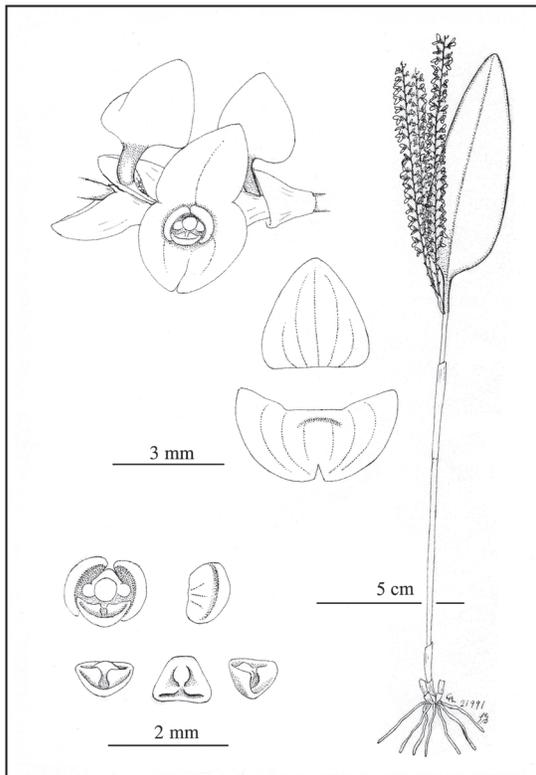


FIGURE 15. *Stelis diprizo* Luer

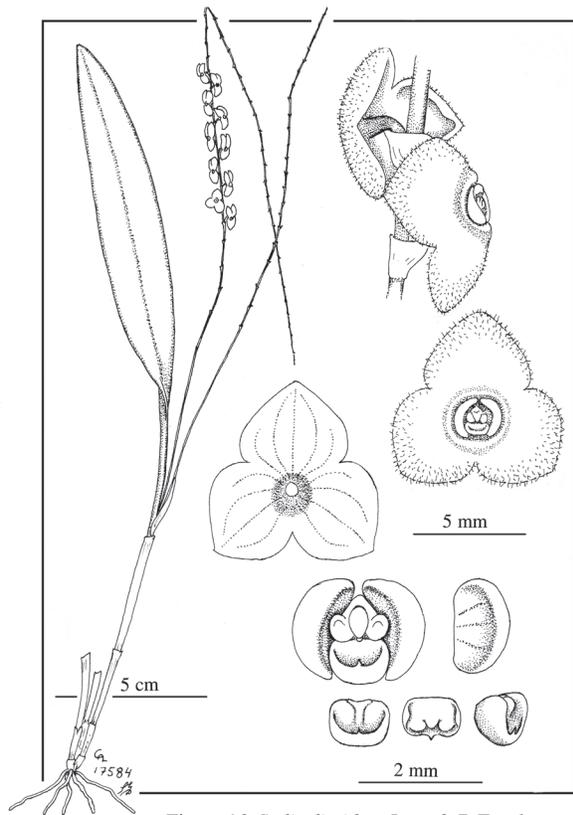


Figure 16. *Stelis dissidens* Luer & R. Escobar

This large species is characterized by acute, elliptical-ovate, long-petiolate leaves; long racemes with convex, non-resupinate flowers; a five-veined dorsal sepal; and a lip with a round, concave, apiculate apex.

*Plant* large, epiphytic, densely caespitose. Ramicauls erect, relatively stout, 6–9 cm long, with a tubular sheath from near the middle, and another 1–2 sheaths below and at the base. *Leaf* erect, coriaceous, acute, elliptical-ovate, 13–18 cm long including a conduplicate petiole 3–6 cm long, the blade 2–2.5 cm wide in the dry state, cuneate and conduplicate below into the petiole. *Inflorescence* 1–3; 17–27 cm long, the racemes erect, strict, subcongested, distichous, many-flowered with most flowers open simultaneously; floral bracts oblique, acute, 2.5 mm long; pedicels 2 mm long; ovary 1.5 mm long; the peduncle 6–10 cm long, subtended by a slender spathe 2 cm long, from a node below the apex of the ramicaul; flowers purple, non-resupinate; *sepals* pubescent, convex, broadly ovate, obtuse, connate to near the middle, the dorsal sepal 4 mm long, 5 mm wide, 5-veined, the lateral sepals 4 mm long, 5 mm wide, 4-veined; *petals* transversely ovate, 1 mm long, 1.5 mm wide, 3-veined, the apex broadly rounded, thickened, concave with an indistinct transverse carina; *lip* subquadrate, 0.75 mm long, 1 mm wide, 0.6 mm deep, concave below the bar that is overlaid with a callus from the dorsum, the apex concave, broadly rounded, with a minute apiculum, the dorsum with a broad, low callus, the base truncate, connate 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 *dissidens*, “differing,” referring to unusual vegetative and floral morphology.

This large species is characterized by acute, elliptical-ovate leaves that are conduplicate below into a long petiole. The racemes are crowded with medium-sized, non-resupinate flowers with convex, pubescent sepals. The dorsal sepal is five-veined, the lateral sepals, four-veined. The apex of the lip is concave and broadly rounded with a minute apiculum.

***Stelis elementaria*** Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Norte de Santander, forest near Agua de La Virgen, W of Ocaña, 1650 m, 4 May 1982, C. Luer, J. Luer & R. Escobar 7699 (Holotype: SEL). Fig. 17.

This small, caespitose species is characterized by a single, many-flowered raceme about twice longer than elliptical leaves; glabrous, obtuse, three-veined sepals; thin, subcircular, three-veined petals; and a simple, slightly convex lip with a rounded apex.

*Plant* small, epiphytic, caespitose; roots slender. Ramicauls erect, slender, 1–1.2 cm long, enclosed by a tubular sheath from below the middle, and another 1–2 sheaths at the base. *Leaf* erect, coriaceous, elliptical, subacute to obtuse, 2–2.5 cm long including a petiole 3–4 mm long, the blade 6–8 mm wide in the dry state, cuneate below to the petiole. *Inflorescence* single; 6–8 cm long, the raceme erect, many-flowered, distichous, congested; floral bracts oblique, obtuse, 1.25 mm long; pedicel 0.75 mm long; ovary 0.75 mm long; the peduncle 3–4 cm long, from a node near the apex of the ramicaul; flowers greenish white; *sepals* similar, glabrous, ovate, obtuse, 3-veined, 1.5

mm long and wide, connate below the middle; *petals* thin, subcircular, concave below a broad, indistinctly thickened margin, 3-veined; *lip* subquadrate, 0.8 mm long, 0.6 mm wide, 0.3 mm deep, shallowly concave below the bar, the apex rounded, the dorsum smooth, slightly convex, the base truncate, hinged to the column-foot; *column* stout, ca. 0.6 mm long and wide, the anther and stigmatic lobes apical.

**Etymology:** From the Latin *elementarius*, “elementary,” referring to the simple habit and flowers of a basic pattern.

None of the characters of this little, caespitose species is distinctive, all the features found commonly in other species: a single inflorescence with a peduncle as long as elliptical, subacute leaves; glabrous, obtuse, three-veined sepals; thin, subcircular, three-veined petals; and a simple, slightly convex lip with a rounded apex.

***Stelis fecunda*** Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Antioquia: Frontino, below El Plateado, 1820 m, 3 May 1983, C. Luer, J. Luer & R. Escobar 9053 (Holotype: SEL). Fig. 18.

This small, caespitose species is similar to some variations of *Stelis pusilla* Kunth, but differs by a successively flowered raceme, larger flowers with subcircular sepals that are minutely pubescent toward the base, and a lip with a rounded, non-apiculate apex.

*Plant* small, epiphytic, densely caespitose, roots slender. Ramicauls erect, slender, 5–10 mm long, with a tubular sheath from near the base. *Leaf* erect, coriaceous, narrowly elliptical, subacute, 15–25 mm long, 2–4 mm wide in dry state, gradually narrowed below with an indistinct petiole to the base. *Inflorescence* single; 4–6 cm long, the raceme erect, distichous, successively many-flowered, often bearing a capsule, with frequent remnants of old racemes; floral bracts infundibular, acute, 1.5 mm long; pedicels 1 mm long; ovary 0.75 mm long; peduncle 1–2 cm long, from a node at the tip of the ramicaul; flowers purple; *sepals* diffusely cellular, minutely pubescent toward the base, expanded, broadly ovate to subcircular, broadly obtuse, 3-veined, connate below the middle, the dorsal sepal 2 mm long, 2.4 mm wide; the lateral sepals 1.75 mm long, 2 mm wide; *petals* thin, transversely obovate, concave, slightly thickened on the margin of a rounded apex, 0.5 mm long, 0.6 mm wide, 1-veined; *lip* subquadrate, type A, 0.4 mm long, 0.6 mm wide, 0.5 mm deep, shallowly concave below a thick bar with a narrow glenion, the apex rounded with a narrow margin, the dorsum slightly convex, the base truncate, hinged to the base of the column; *column* clavate, 0.6 mm wide and long, the anther and the bilobed stigma apical.

**Etymology:** From the Latin *fecundus*, “fruitful,” referring to the frequent production of capsules.

This small, caespitose species is another in the great number of variations attributed to *Stelis pusilla* Kunth. It is distinguished by erect, successively many-flowered racemes of small flowers, that often produce capsules. The flowers are larger with sepals two to two and a half millimeters long instead of less than two millimeters, and minutely pubescent toward the base. Single-veined petals are similar, but the apex of the lip is broadly rounded without an apiculum.

**Stelis fusilifera** Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Putumayo: E of San Francisco toward Mocoa, 2200 m, 2 August 1978, C. Luer, J. Luer & R. Escobar 3139 (Holotype: SEL). Fig. 19.

This small, caespitose species is characterized by slender ramicauls shorter than narrowly acute leaves that are exceeded by a lax, successively flowered raceme of small flowers with broadly obtuse, three-veined sepals; thin, three-veined petals; and an obtuse lip with a glenion and a rounded callus.

*Plant* small to medium-sized, epiphytic, caespitose. Ramicauls erect, slender, 2–3 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, acute, 4–7 cm long including a petiole 1.5–2 cm long, the blade 0.5–0.7 cm wide in the dry state, cuneate below into the petiole. *Inflorescence* 1–2; 7–15 cm tall, the racemes erect, subclax, distichous, successively-flowered with 6–8 flowers open simultaneously; floral bracts oblique, acute, 2–2.5 mm long; pedicel 1 mm long; ovary 1 mm long; the peduncle ca. 3 cm long, subtended by a slender spathe ca. 5 mm long, from a node near the apex of the ramicaul; flowers purple; *sepals* expanded, microscopically pubescent, broadly ovate, obtuse, 3-veined, connate to near the middle, the dorsal sepal 1.75 mm long, 2.5 mm wide, the lateral sepals 1.75 mm long, 1.75 mm wide; *petals* purple, transversely elliptical, 0.75 mm long, 1.25 mm wide, 3-veined, the apex broadly rounded, concave below a narrowly thickened margin; *lip* ovoid, 0.5 mm long, 0.75 mm wide, 0.5 mm deep, concave below the bar with a glenion, the apex obtuse, the dorsum with a central, suborbicular callus, 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 *fusilifer*, “little spindle-bearer,” referring to the slender, spindle-shaped inflorescence.

**Additional specimen examined:** COLOMBIA. Tolima: southern slope of Mt. Tolima, 2600 m, 21 April 1982, C. Luer, J. Luer & R. Escobar 7494 (SEL).

This graceful, little species is characterized by acute, narrow leaves and a slender, fusiform raceme of simultaneous flowers. The dorsal sepal is transversely ovate, deeply connate, very minutely pubescent and three-veined, and the petals are thin and three-veined. The lip is type A.

**Stelis gerontica** Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Antioquia: Urrao, El Llaveró, 1500 m, coll. by M. Zapata, fl. in cult. at Colomborquídeas, 12 December 1992, R. Escobar 5022 (Holotype: MO), C. Luer illustr. 21908. Fig. 20.

This small, caespitose species is distinguished by obtuse, elliptical leaves with much shorter ramicauls, and a twice longer raceme with colorful flowers that are proportionately large for the plant; three-veined, pubescent sepals; three-veined petals; and a lip with a narrow, longitudinal glenion and a round, apiculate apex.

*Plant* small, epiphytic, caespitose; roots slender. Ramicauls erect, slender, 1–1.3 cm long, enclosed with a tubular sheath below the middle, and another sheath at the base. *Leaf* erect, coriaceous, elliptical, obtuse to rounded at the apex, 2–3 cm long including a petiole 0.5–0.7 cm long, the blade 1 cm wide preserved in liquid, cuneate below into the petiole. *Inflorescence* single; 4–6 cm long, the raceme strict, distichous, loosely flowered below to congested above, several flowers open simultaneously; floral bracts oblique, acute, 2 mm long; pedicels 1 mm long; ovary 1 mm long; the peduncle 4–5 cm long, from a node above the apex of the ramicaul; *sepals* similar, expanded, light rose, shortly pubescent, ovate to rounded at the apex, more or less convex, 3-veined, connate in basal quarter, 4 mm long, 4 mm wide; *petals* orange, transversely oblong, concave, the apex broadly rounded with the margin thickened, 0.9 mm long, 1.4 mm wide, 3-veined, without a transverse carina; *lip* type C, dark yellow-orange, subquadrate, 0.7 mm long, 0.8 mm wide, 0.4 mm deep, shallowly concave below a convex bar with a narrow, longitudinal glenion, the apex with a narrow margin and a minute apiculum, 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 Greek *gerontikos*, “like a little old man,” referring to a fancied appearance of the plant.

This small, caespitose species is related to the variable and seemingly ubiquitous *Stelis argentata* Lindl., from which it, as well as from all other variations, differs by the small habit with ramicauls about one centimeter long, and pubescent, obtuse sepals about four millimeters long and wide. The petals and the lip do not differ significantly.

**Stelis gigapetala** Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Antioquia: near El Retiro, 2280 m, 26 April 1983, C. Luer, J. Luer & R. Escobar 8828 (Holotype: SEL). Fig. 21.

This large, caespitose species is characterized by slender ramicauls; an acute, elliptical leaf; one or two racemes longer than the leaf; five-veined sepals about three millimeters long and wide; and thick, five-veined petals two millimeters wide.

*Plant* large, epiphytic, caespitose. Ramicauls erect, slender, 12–20 cm long, with a close, tubular sheath from below the middle, and another 2–3 sheaths below and at the base. *Leaf* erect, coriaceous, elliptical, acute, 10–13 cm long including a petiole 1–1.5 cm long, the blade 2.5–3 cm wide in the dry state, cuneate below into the petiole. *Inflorescence* 1–2; 15–18 cm long, the racemes erect, subclax, distichous, mostly simultaneously flowered; floral bracts oblique, obtuse, 1.5 mm long; pedicel 1.5 mm long; ovary 1.5 mm long; the peduncle ca. 5 cm long, subtended by a spathe 5–7 mm long, from a node near the apex of the ramicaul; *sepals* light green, more or less suffused with purple externally, expanded, glabrous, broadly ovate, obtuse, 5-veined, connate below the middle, the dorsal sepal 3.5 mm long, 4 mm wide, the lateral sepals 3 mm long, 3.5 mm wide; *petals* green, transversely semilunate, 1 mm long,

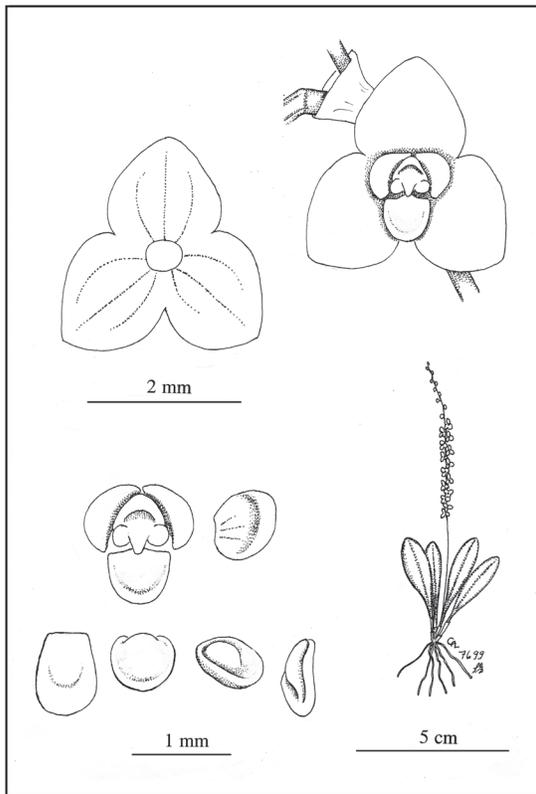


FIGURE 17. *Stelis elementaria* Luer & R. Escobar

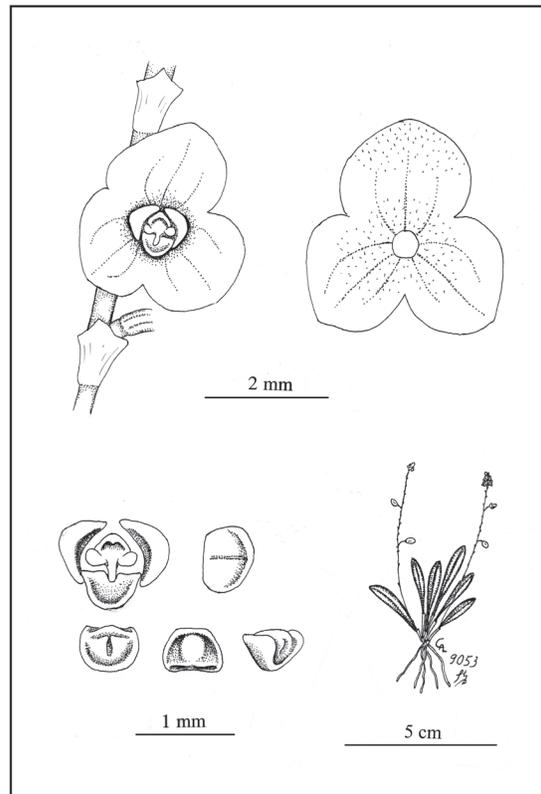


FIGURE 18. *Stelis fecunda* Luer & R. Escobar

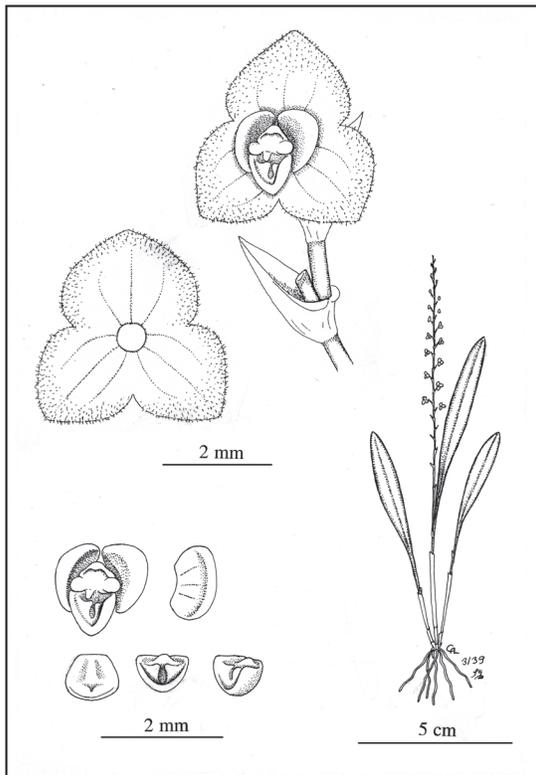


FIGURE 19. *Stelis fusilifera* Luer & R. Escobar

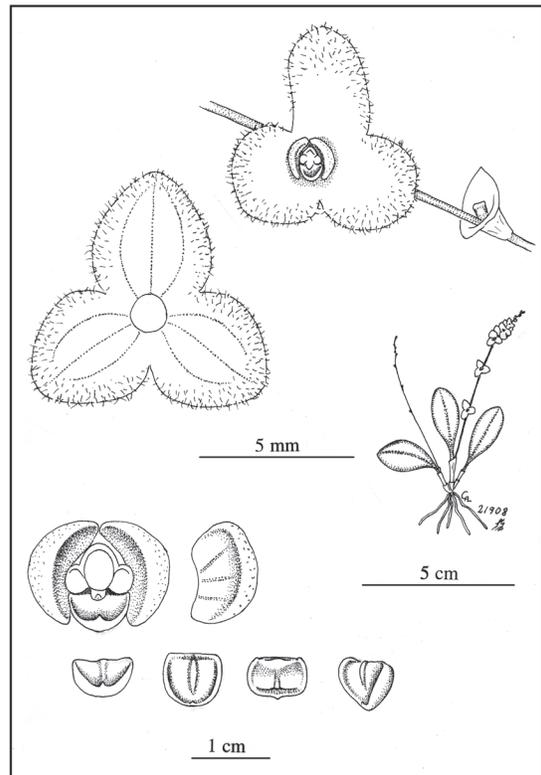


FIGURE 20. *Stelis gerontica* Luer & R. Escobar

2 mm wide, the apex broadly rounded with a thick margin, the corners acuminate, concave below a transverse carina, 5-veined; *lip* green, subquadrate, 0.8 mm long, 0.8 mm wide, 0.6 mm deep, with a short cavity between the bar and an obtuse apex with thick, flat margins, the dorsum with a central, suborbicular callus, 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 Greek *gigapetalon*, "gigantic petals," referring to the petals more than twice larger than the lip.

This large, caespitose species is characterized by one or two racemes longer than acute, elliptical leaves, and five-veined sepals. The column and lip are surrounded by proportionately large, thick, five-veined petals. The lip is shortly concave between a shallowly notched bar and a thick, flat, apical margin.

The flowers of *Stelis gigapetala* are similar to those of *Stelis galapagosensis* Luer & R.Escobar, but differ with five-veined petals, and a lip with the dorsum not acutely deflexed.

**Stelis hyacinthalis** Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Tolima: southern slope of Mt. Tolima, N of Ibagué, 2930 m, 21 April 1982, C. Luer, J. Luer & R. Escobar 7509 (Holotype: SEL). Fig. 22.

This species is related to *Stelis chocoënsis* O.Duque, but differs in a stout, thicker ramicaul, broader leaves, glabrous sepals, smooth-margined petals, and a lip concave below an intact bar.

*Plant* medium or large, epiphytic, densely caespitose, roots slender. Ramicauls erect, stout, 4–9 cm long, with a close, tubular sheath near the middle and another 2 sheaths below and at the base. *Leaf* erect, coriaceous, elliptical, subacute, 6–8 cm long including a petiole less than 1 cm long, the blade 1.5–2.5 cm wide in the dry state, cuneate below into the petiole. *Inflorescence* 4–6 simultaneous; 3.5–4 cm long, the racemes erect, strict, congested, distichous, many-flowered with most flowers open simultaneously; floral bracts tubular, subacute, 2 mm long; pedicels 2 mm long; 2 mm long; ovary 2 mm long, the peduncle nil, flowering from the base with a broad spathe ca. 7 mm long, from a node below the apex of the ramicaul; *sepals* dark purple, glabrous, broadly ovate, obtuse, 2 mm long, 2 mm wide, 3-veined, connate below the middle; *petals* yellow, transversely ovate, concave, the apex obtuse with the margin thickened, a transverse carina not seen, 0.8 mm long, 1.2 mm wide, 3-veined; *lip* yellow, subquadrate, 0.5 mm long, 0.9 mm wide, 0.4 mm deep, concave below a curved, entire bar without a glenion, the apex obtuse with an obtuse, triangular tip, the dorsum slightly convex; the base truncate, hinged to the base of the column; *column* clavate, ca. 0.8 mm wide and long, the anther and bilobed stigma apical.

**Etymology:** From the Latin *hyacinthalis*, "like a hyacinth," referring to the appearance of the inflorescence.

This species is similar to *Stelis chocoënsis* O.Duque from the Western Cordillera, but *Stelis hyacinthalis* from the Central Cordillera differs by a stronger habit with thicker,

proportionately shorter ramicauls, wider leaves, and flowers with glabrous sepals and smooth-margined petals. The lip differs in being half as long with a curved, intact bar without a glenion.

**Stelis hypsela** Luer, *sp. nov.* TYPE: COLOMBIA. Chocó: San José del Palmar, Cerro Torrá, mesa below the summit, 2500 m, 13 August 1988, P.A. Silverstone-Sopkin 4357 (Holotype: MO; Isotype: CUVC), C. Luer illustr. 21993. Fig. 23.

This species is remarkable for small flowers in a tall, secund raceme that far surpasses an ovate, acute, long-petiolate leaf; concave, three-veined petals; and a minute lip with an acute, triangular apex.

*Plant* medium, but tall, epiphytic, densely caespitose; roots slender. Ramicauls slender, 6–8 cm long, enclosed by long, close, tubular sheath from below the middle, and another 1–2 sheaths at the base. *Leaf* erect, coriaceous, ovate, acute, petiolate, 6–7 cm long, 0.8–1.3 cm wide in dry state, contracted below into a slender petiole ca. 2.5 cm long. *Inflorescence* single; 15–25 cm long, the raceme erect, congested, strict, secund, many-flowered with most flowers open simultaneously; floral bracts, short, obtuse, 1–1.5 mm long, 1.5 mm wide; pedicels 1 mm long; ovary 0.75 mm long; peduncle 5–8 cm long, subtended by a spathe ca. 1 mm long, from a node below the apex of the ramicaul; *sepals* pale green, suffused with purple toward the base, glabrous, the dorsal sepal antrorse, elliptical, obtuse, concave, 3 mm long, 1.5 mm wide expanded, 3-veined, connate basally, the lateral sepals connate below the middle, but connivent into a concave synsepal, each sepal 3 mm long, 1.6 mm wide. *petals* transversely oblong, concave, 0.5 mm long, 0.75 mm wide, 3-veined, the apex broadly rounded with a thickened margin; *lip* trilobed, ca. 0.5 mm long, 0.6 mm wide, 0.4 mm deep, the lateral lobes rounded, the apical lobe acute, triangular, the dorsum thickened with a low, central callus, 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 Greek *hypselos*, "high," referring to the tall inflorescence.

This species of section *Humboldtia* is remarkable for the tall, secund raceme that far surpasses an ovate, acute, long-petiolate leaf. The flowers are small with connivent lateral sepals, and the petals are concave and three-veined. The minute lip rehydrates poorly, but it is apparently type A with modifications including an acute, triangular apex.

**Stelis jorgei** Luer, *sp. nov.* TYPE: COLOMBIA. Valle del Cauca: Cali, Finca Zingara, between Cali and Buenaventura, 1900 m, 27 November 1994, Jorge Giraldo-Gensini & Luis Oliver Agredo 558 (Holotype: MO; Isotype: TULV), C. Luer illustr. 21985. Fig. 24.

This slender, caespitose species is related to *Stelis furfuracea* F.Lehm. & Kraenzl., but the flowers are smaller and with similar, narrowly ovate, acute sepals that are also infested with an irregular, unidentified substance; the petals are single-veined; and the dimensions of the minute lip are half as the size.

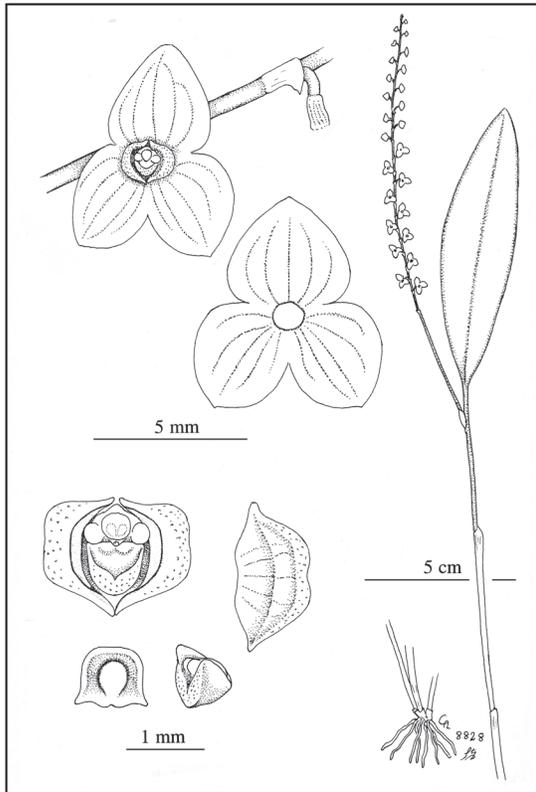


FIGURE 21. *Stelis gigapetala* Luer & R.Escobar

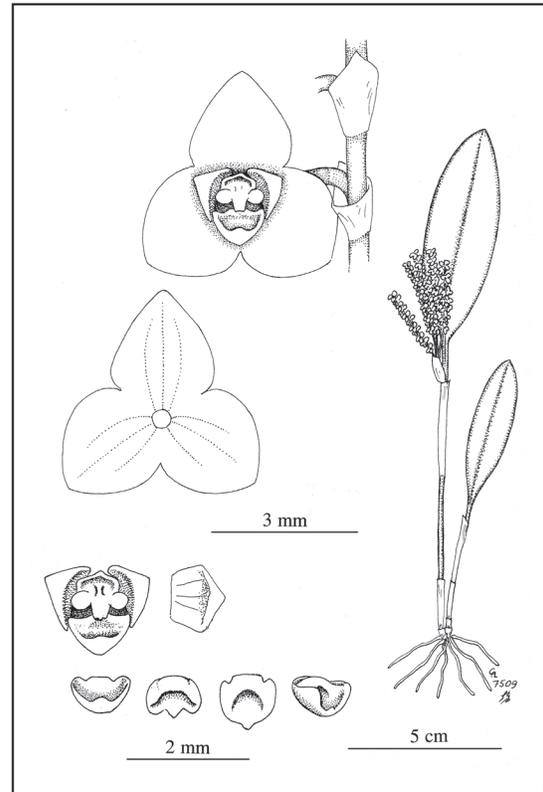


FIGURE 22. *Stelis hyacinthalis* Luer & R.Escobar

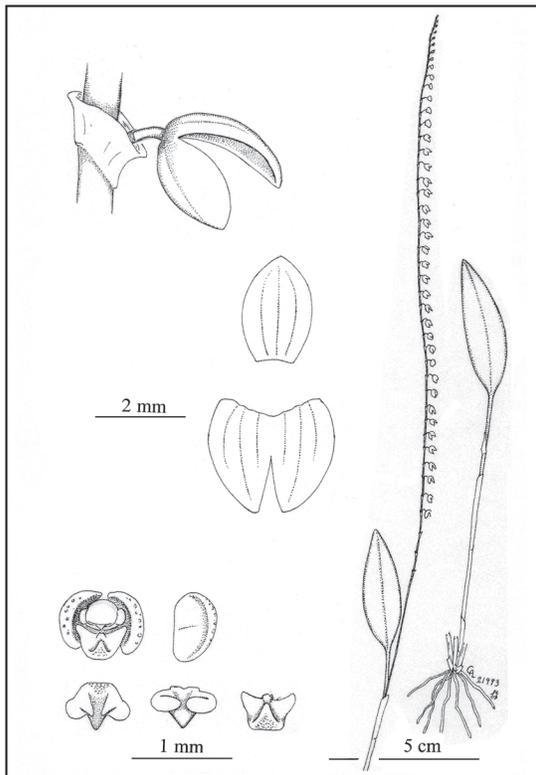


FIGURE 23. *Stelis hypsela* Luer

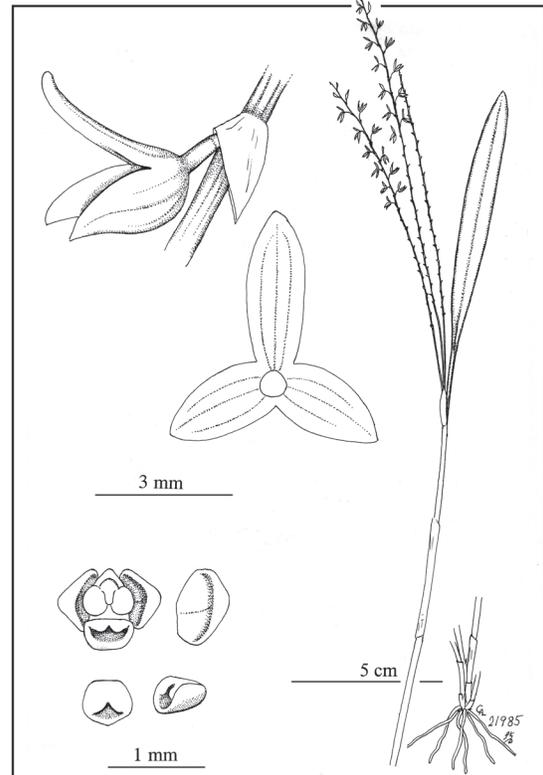


FIGURE 24. *Stelis jorgei* Luer

*Plant* medium in size, epiphytic, densely caespitose; roots slender. Ramicauls erect, slender, 12–14 cm long, with a tubular sheath from near the middle and 2 tubular sheaths below and at the base. *Leaf* erect, coriaceous, narrowly elliptical-oblong, acute, 8–10 cm long including a petiole ca. 1.5 cm long, the blade 0.8–1.1 cm wide in dry state, cuneate below into the petiole. *Inflorescence* 2–4; 10–18 cm long, the raceme erect, subclax, distichous, many-flowered; floral bracts oblique, acute, 2 mm long; pedicels 2 mm long; ovary 1 mm long; spathe slender ca. 1 cm long, from a node below the apex of the ramicaul; flowers ascending, yellow; *sepals* glabrous, with minute, irregular crystal-like substances, narrowly ovate, acute, 3-veined, connate basally, the dorsal sepal 3.5 mm long, 1.5 mm wide, the lateral sepals oblique, 3 mm long, 1.5 mm wide, antrorse; *petals* transversely ovate, thin, concave below the thickened, obtuse margin, 0.5 mm long, 0.75 mm wide, 1-veined; *lip* subquadrate, 0.4 mm long, 0.4 mm wide, 0.3 mm deep, concave below thick, rounded, cleft bar, the apex obtuse, the dorsum slightly concave, the base truncate, hinged to the base of the column; *column* stout, ca. 0.5 mm long and wide, with the anther and the bilobed stigma apical.

**Eponymy:** Named for Jorge Giraldo-Gensini, co-collector of this species.

This slender species is related to *Stelis furfuracea* F.Lehm. & Kraenzl., both being characterized by narrowly ovate, nearly free, more or less antrorse sepals with irregular deposits of an unidentified material. The flowers of *Stelis jorgei* are smaller, and the parts of the central apparatus are less than half the size of those of *S. furfuracea*.

**Stelis luisii** Luer, *sp. nov.* TYPE: COLOMBIA. Valle del Cauca: Cali, between Cali and Buenaventura, via a Dapa, 1900 m, 31 November 1994, *Jorge Giraldo-Gensini & Luis Oliver Agredo 425* (Holotype: MO; Isotype: TULV), C. Luer illustr. 21986. Fig. 25.

This caespitose species is distinguished by elliptical, petiolate leaves born by longer ramicauls and exceeded by one or two racemes of green flowers with pubescent, broadly ovate, three-veined sepals, three-veined petals, and an obtuse lip concave below a shallowly cleft bar.

*Plant* medium in size, epiphytic, densely caespitose; roots slender. Ramicauls erect, slender, 6–8 cm long, with a tubular sheath from near the middle and 2 tubular 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 dry state, abruptly contracted below into the petiole. *Inflorescence* 1–2; 6–10 cm long, the raceme erect, strict, subclax, distichous, many-flowered; floral bracts oblique, acute, infundibular, 2 mm long, 3 mm long toward the base; pedicels 1–1.5 mm long; ovary 1 mm long; spathe slender ca. 1 cm long, from a node below the apex of the ramicaul; flowers green; *sepals* expanded, pubescent within, broadly ovate, 3-veined, connate below the middle, the dorsal sepal subacute, 2.5 mm long, 3 mm wide, the lateral sepals obtuse, oblique, 2.5 mm long and wide; *petals* transversely ovate, concave below the thickened, obtuse margin, 0.75 mm long, 1.3 mm wide,

3-veined; *lip* subquadrate, 0.6 mm long, 0.6 mm wide, 0.5 mm deep, concave below thick, rounded, shallowly cleft bar, the apex obtuse, the dorsum slightly concave, the base truncate, hinged to the base of the column; *column* stout, ca. 0.6 mm long and wide, with the anther and the bilobed stigma apical.

**Eponymy:** Named for Luis Oliver Agredo, co-collector of this species.

Although no single character is distinctive, this handsome species is characterized by green, broadly ovate, pubescent sepals in one or two racemes that exceed elliptical, abruptly petiolate leaves. The petals are three-veined and the lip is type A, simply concave below a shallowly cleft bar.

**Stelis meerenbergensis** Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Huila: near Hacienda Meerenberg, 2300 m, fl. in cult. by Hacienda Meerenberg, 18 November 1982, C. Luer, J. Luer & G. Buch 8485 (Holotype: SEL). Fig. 26.

This tall, slender, caespitose species is characterized by a narrowly elliptical leaf; two simultaneous racemes less than half as long as the leaf; yellow, broadly ovate, 3-veined sepals; broad, three-veined petals; and a subquadrate lip with an obtuse tip.

*Plant* large, epiphytic, densely caespitose, roots slender. Ramicauls erect, slender, elongated, 14–16 cm long, with a close, tubular sheath from below the middle and another 2 sheaths below and at the base. *Leaf* erect, coriaceous, narrowly elliptical, subacute, 10–12 cm long including a petiole 2 cm long, the blade 1.5 cm wide in dry state, cuneate below into the petiole. *Inflorescence* 2; 5–5.5 cm long, the racemes erect, strict, congested, distichous, many-flowered; floral bracts oblique, acute, 2.5 mm long; pedicels 1.5 mm long; ovary 1.5 mm long; the peduncle ca. 2 cm long, with a spathe 1.5 cm long, from a node below the apex of the ramicaul; flowers yellow; *sepals* glabrous, diffusely microscopically cellular, expanded, broadly ovate, obtuse, 2 mm long, 2.25 mm wide, 3-veined, connate below the middle; *petals* broadly oblong-subquadrate, broadly obtuse, concave, with a transverse carina, the apical margin thickened, 1.25 mm long and wide, 3-veined; *lip* subquadrate, 1 mm long, 1 mm wide, 0.5 mm deep, the apex obtuse with the tip subacute, concave below a thick, shallowly cleft bar, the dorsum slightly convex, the base truncate, hinged to the base of the column; *column* clavate, ca. 1.2 mm wide and long, the anther and bilobed stigma apical.

**Eponymy:** Named for Hacienda Meerenberg near the area of collection.

*Stelis meerenbergensis* is characterized by two simultaneous racemes much shorter than a narrowly elliptical leaf borne by a long, slender ramicaul. The flowers are yellow and small with obtuse, three-veined sepals; broad, 3-veined petals; and an obtuse, subquadrate lip.

**Stelis niessen-andreae** Luer, *sp. nov.* TYPE: COLOMBIA. Valle del Cauca: without collection data, fl. in cult. at Orquídeas del Valle, 15 March 1997, C. Luer 18432 (Holotype: MO). Fig. 27.

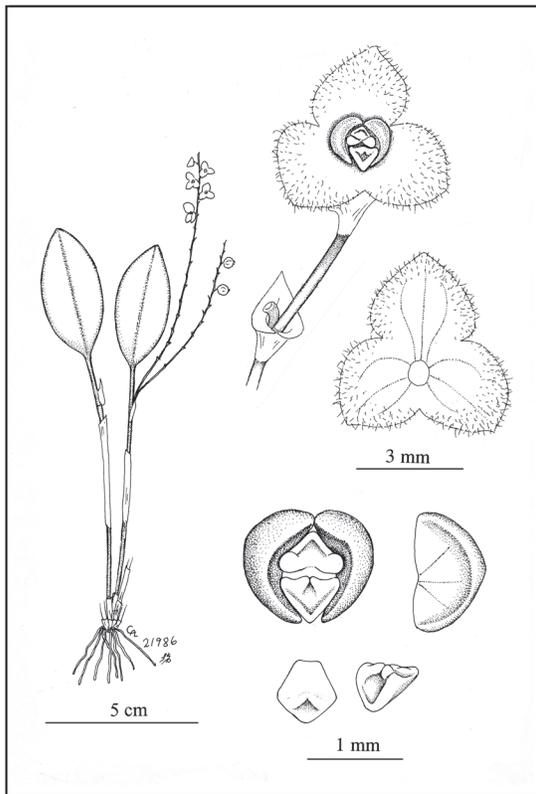


FIGURE 25. *Stelis luisii* Luer

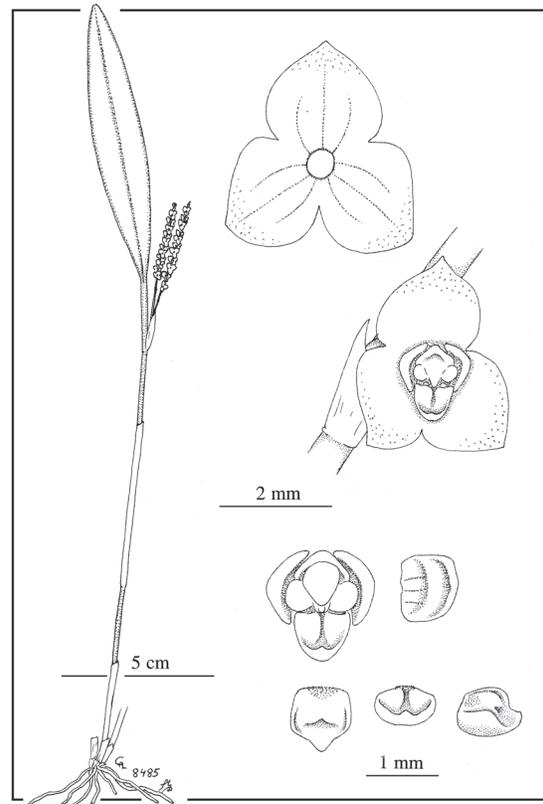


FIGURE 26. *Stelis meerenbergensis* Luer & R. Escobar

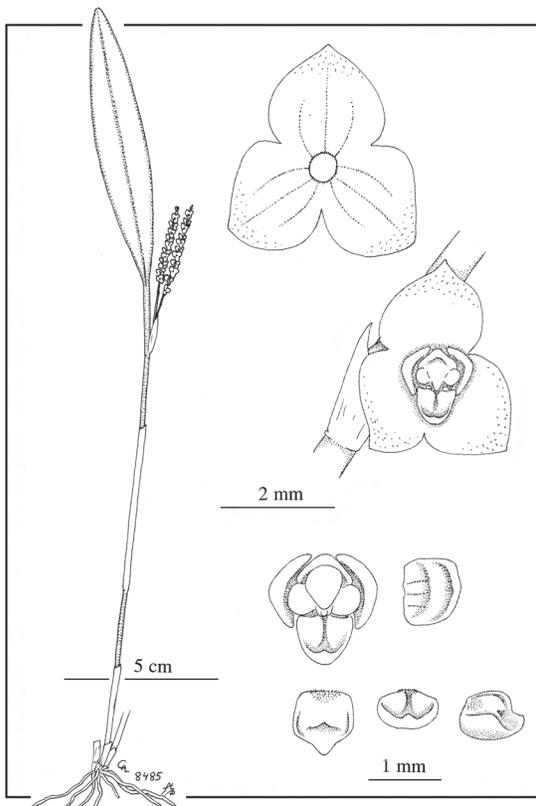


FIGURE 27. *Stelis niessen-andreae* Luer

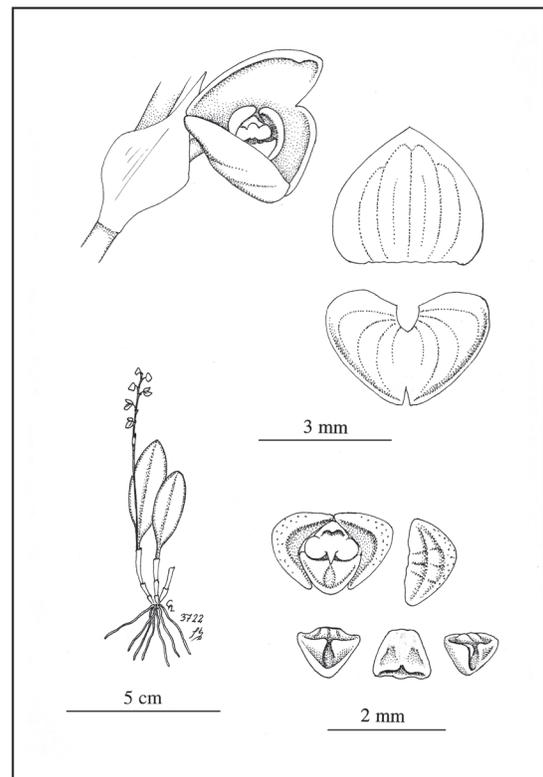


FIGURE 28. *Stelis octavioi* Luer & R. Escobar

This medium-sized species is distinguished by a short, stout ramicaul, much shorter than a large, elliptical leaf; an elongating, successively many-flowered raceme that far exceeds the leaf; elliptical, three-veined sepals; one-veined petals; and a concave, elliptical lip.

*Plant* medium in size, epiphytic, caespitose; roots fleshy. Ramicauls erect, stout, 1.5–2 cm long, enclosed by a tubular sheath from near the base, and another sheath at the base. *Leaf* erect, coriaceous, elliptical, subacute, 12–15 cm long including a petiole 3–4 cm long, the blade 3 cm wide, narrowed below to the petiole. *Inflorescence* single, to 30 cm long, the raceme flexible, distichous, successively many-flowered with 10–12 flowers open simultaneously; floral bracts oblique, acute, 1.5 mm long; pedicel 1.5 mm long; ovary 1 mm long; the peduncle 6–8 cm long, subtended by a spathe 5–6 mm long, from a node below the apex of the ramicaul; flowers dark rose; *sepals* similar, glabrous, elliptical-ovate, obtuse, 4 mm long, 4 mm wide, 3-veined, connate basally; *petals* transversely ovate, concave, the apex obtuse, the margin slightly thickened, 1 mm long, 1.6 mm wide, 1-veined; *lip* elliptical, 2 mm long, 1.3 mm wide, 0.6 mm deep, concave below a narrow, deeply cleft, transverse bar at the base, the apex obtuse with indistinctly thickened margins, the base narrow, truncate, hinged to the column-foot; *column* stout, ca. 0.5 mm long and wide, the anther and stigmatic lobes apical.

**Eponymy:** Named for Andrea Niessen de Uribe of Orquídeas del Valle, Cali, Colombia.

This small, but “large,” caespitose species is characterized by a short, stout ramicaul and a much larger, elliptical, petiolate leaf. A much longer, successively many-flowered raceme retains about a dozen flowers open toward the apex. The sepals are glabrous, obtuse and three-veined, and the petals are single-veined. The larger, ovate lip is concave with a barely thickened margin, the bar being basal and deeply cleft.

**Stelis octavioi** Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Putumayo: between Sibundoy and Mocoa. 2200 m, 20 January 1979, C. Luer, J. Luer, R. Escobar & O. Ospina 3722 (Holotype: SEL). Fig. 28.

This small, caespitose species is distinguished by a several-flowered raceme that exceeds the leaf; proportionately large, acuminate floral bracts; small flowers with multiveined dorsal sepal and synsepal; and a subacute, shallowly concave lip with a glenion.

*Plant* small, epiphytic, caespitose; roots slender. Ramicaul erect, relatively stout, 1–2 cm long, with a loose, tubular sheath from below the middle, and another 1–2 sheaths about the base. *Leaf* erect, coriaceous, elliptical, subacute to rounded at the tip, 2–3.5 cm long including a petiole 0.5–0.7 cm long, the blade 1–1.3 cm wide in the dry state, cuneate below into the petiole. *Inflorescence* single; 6 cm tall, the raceme erect, distichous, sublax, simultaneously flowered with ca. 6 flowers; floral bracts oblique, acute, acuminate, 4 mm long; pedicels ca. 1 mm long; ovary 1 mm long; peduncle 4 cm long, subtended by a spathe within the sheath, from a node at the apex of the ramicaul; flowers pale

yellow; *sepals* glabrous, the dorsal sepal transversely ovate, obtuse 3 mm long, 3.5 mm wide, 5-veined, or 7-veined if a pair of incomplete veins are counted, the lateral sepals concave, connate to the near the tips into a transversely ovoid synsepal, 3 mm long, 3.5 mm wide, unexpanded, 8-veined; *petals* transversely semilunate, 0.75 mm long, 1.5 mm wide, 3-veined, with the rounded apical margin thickened, with a transverse callus; *lip* thickly triangular, 0.6 mm long, 1 mm wide, 0.75 mm deep, shallowly concave below a cleft bar with a glenion, the apex subacute to obtuse, the dorsum slightly convex with 3 small, parallel calli, the base narrowly truncate, hinged to the base of the column; *column* ca. 0.6 mm broad and long, the anther and stigmatic lobes apical.

**Eponymy:** Named for Brother Octavio Ospina of Sibundoy, co-collector of this species.

This small, caespitose species of section *Humboldtia* is distinguished by a sublax, several-flowered raceme of small flowers with proportionately large, acuminate floral bracts. The dorsal sepal is transverse with five of seven veins and a multiveined synsepal, and the lip is shallowly concave with a glenion.

**Stelis odontopetala** Luer & Hirtz, *sp. nov.* TYPE: COLOMBIA. Nariño: above Ricaurte, 1950 m, 2 November 1979, C. Luer, J. Luer & A. Hirtz 4549 (Holotype: SEL). Fig. 29.

This small, slender, caespitose species is distinguished by a crowded raceme of small flowers with wide petals that descend past the minute lip with acute, acuminate tips.

*Plant* small, epiphytic, caespitose, roots slender. Ramicauls erect, slender, 1.5–2.5 cm long, with a thin, tubular sheath below the middle, and another sheath at the base. *Leaf* erect, coriaceous, narrowly elliptical, acute, 3–4 cm long including a petiole 1–2.5 cm long, the blade 3–4 mm wide in dry state, cuneate below into the petiole. *Inflorescence* single; to 6 cm long, the raceme erect, strict, distichous, many-flowered; floral bracts oblique, acute, 1 mm long; pedicels less than 1 mm long; ovary less than 1 mm long; peduncle ca. 3 cm long, from a node at the apex of the ramicaul; *sepals* translucent yellow, glabrous, ovate, obtuse, more or less concave, 3-veined, the dorsal sepal 1.5 mm long, 1.4 mm wide, the lateral sepals 1 mm long, 1.4 mm wide; *petals* red, transversely oblong-ovate, 0.5 mm long, 1.25 mm wide, 3-veined, concave below an elongated margin, the upper extremity obtuse, the lower extremity acuminate, acute at the tip that descends past the lip; *lip* red, subovoid, 0.3 mm long, 0.4 mm wide, 0.2 mm deep, concave below a minute, retuse bar, the apex rounded with thick margin, the dorsum ill-defined in this specimen, the base attached 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 Greek *odontopetala*, “with fang-like petals,” referring to the pair of fang like petals.

This small, weak, caespitose species is characterized by narrowly elliptical, long petiolate leaves that are exceeded by a congested raceme of tiny flowers. The sepals are more

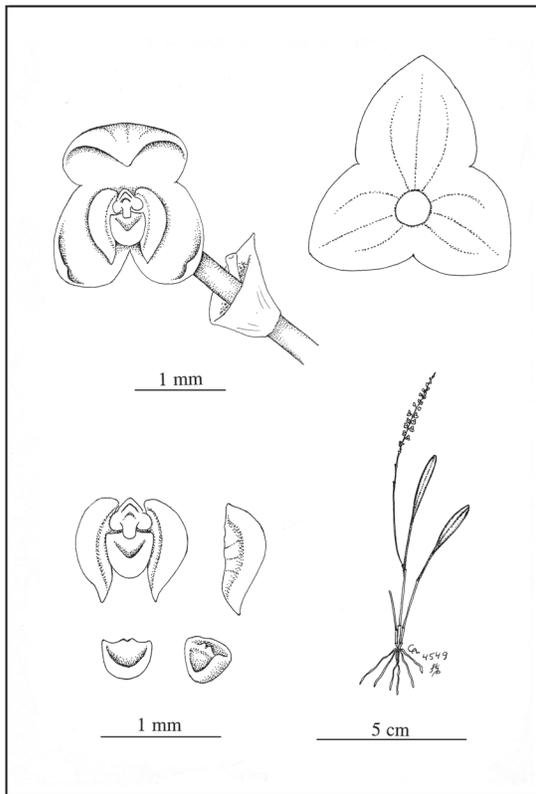


FIGURE 29. *Stelis odontopetala* Luer & Hirtz

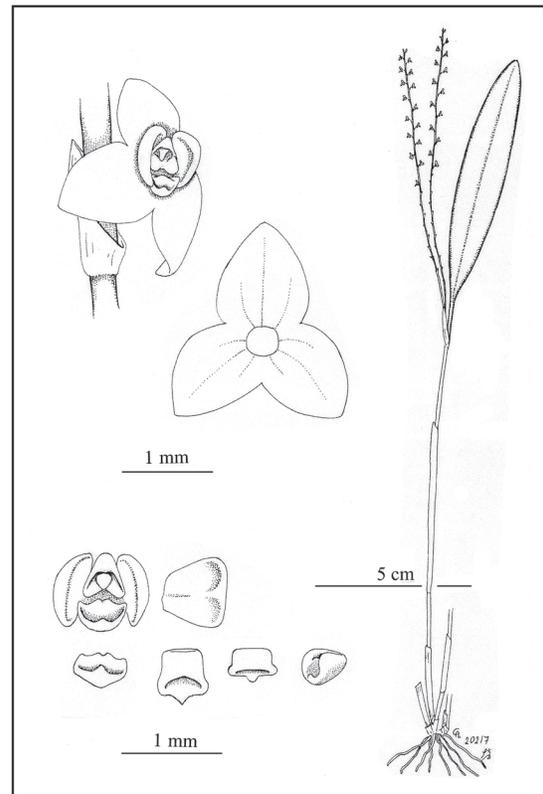


FIGURE 30. *Stelis orphana* Luer

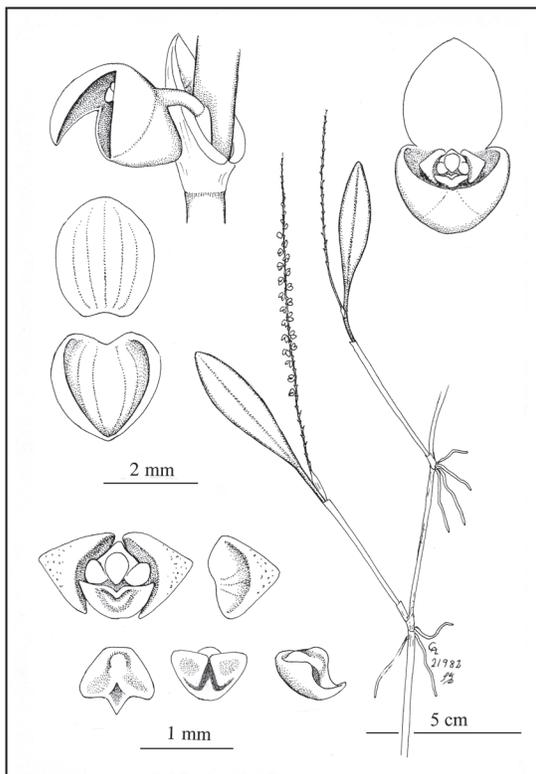


FIGURE 31. *Stelis pasminoi* Luer

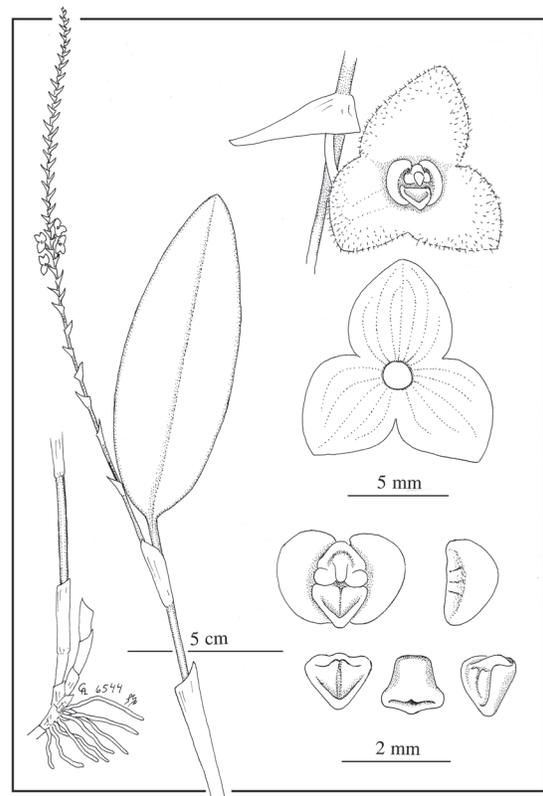


FIGURE 32. *Stelis posadarum* Luer & R. Escobar

or less concave and three-veined. The petals are transversely elongated with acuminate tips descending on either side of the lip like a pair of fangs. The lip is extremely small, and round below a minutely notched bar.

**Stelis orphana** Luer, *sp. nov.* TYPE: COLOMBIA. Without collection data, obtained from Colomborquídeas, fl. in cult. by the San Francisco Conservatory, 31 May 2002, *C. Luer 20217* (Holotype: MO). Fig. 30.

This tall, caespitose species is characterized by a few, loosely, minutely flowered inflorescences longer than narrow, acute, elliptical leaves; three-veined sepals; single-veined petals; and a minute, subquadrate, apiculate lip.

*Plant* large, epiphytic, densely caespitose. Ramicauls erect, slender, 12–15 cm long, with a tubular sheath from near the middle, and another 1–2 tubular sheaths below and at the base. *Leaf* erect, coriaceous, elliptical, acute, 8–10 cm long including a petiole 1–1.5 cm long, the blade 1.2–1.5 cm wide in the dry state, cuneate below to the petiole. *Inflorescence* 1–3, simultaneous; 9–10 cm long, the racemes erect, lax, distichous, many-flowered, flowering from near the base; floral bracts erect, oblique, acute, 1.5 mm long; pedicels 1 mm long; ovary 1 mm long; the peduncle nil, subtended by a narrow spathe 15 mm long, from a node below the apex of the ramicaul; flowers yellow; *sepals* glabrous, fleshy, expanded, ovate, subacute to obtuse, 1.25 mm long, 1 mm wide, faintly 3-veined, connate below the middle; *petals* thin, cuneate, 0.75 mm long, 0.75 mm wide, 1-veined, shallowly concave below a slightly thickened, truncate apex; *lip* subquadrate, 0.5 mm long, 0.5 mm wide, 0.3 mm deep, concave below an intact bar, the apex truncate with a short, triangular apiculum, the dorsum featureless, the truncate base hinged 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 *orphanus*, “an orphan,” referring to its unknown origin.

This species without collection data is tall with slender ramicauls, elliptical leaves, and more than one minutely many-flowered racemes is not unusual in the genus *Stelis*. The sepals and petals, similar to those of *Stelis braccata* Rchb.f. & Warsz., and a subquadrate lip is one of the more common designs. No other species is known with this combination of morphological characters.

**Stelis pasminoi** Luer, *sp. nov.* TYPE: COLOMBIA. Putumayo: Santiago, San Antonio de Bellavista, Páramo de Bordoncillo, 3240 m, 19 March 1999, *S.M. Pasmíño & M.R. Posso 031* (Holotype: MO; Isotype: PSO), *C. Luer* illustr. 21982. Fig. 31.

This long-repent species is related to *Stelis tritriangulata* Luer & R.Escobar, but distinguished by a very congested raceme of twice smaller flowers with five-veined, instead of three-veined sepals.

*Plant* medium in size, epiphytic, long-repent, scandent, the rhizome slender, ca. 5 cm long between ramicauls; roots slender. Ramicauls ascending, erect, 4–5 cm long, with a tubular sheath from near the middle and another sheath at

the base. *Leaf* erect, coriaceous, elliptical, acute, 5–7 cm long including a petiole 1.5–2 cm long, the blade 1–1.5 cm wide in the dry state. *Inflorescence* single; 6–12 cm long, the raceme erect, strict, congested, secund, simultaneously many-flowered; floral bracts oblique, acute, 3–4 mm long; pedicels 1.5 mm long; ovary 1.5 mm long; peduncle 1.5–2 cm long, from a node at the apex of the ramicaul; flowers “lila;” *sepals* glabrous, the dorsal sepal decurved, elliptical, obtuse, 2.5 mm long, 2 mm wide, 5-veined, the lateral sepals connate into an ovoid, deeply concave synsepal, ca. 2.5 mm long, 2.5 mm wide unexpanded; *petals* triangular, deeply concave below the thick apical margin, 0.8 mm long, 0.8 mm wide, 3-veined; *lip* transversely triangular, 0.6 mm long, 0.8 mm wide, 0.5 mm deep, concave below a bar cleft with a glenion, the apex acuminate into an acute, triangular tip, the dorsum convex with a low callus toward the base, the base truncate, hinged to the base of the column; *column* clavate, ca. 0.8 mm wide and long, the anther and the bilobed stigma apical.

**Eponymy:** Named for S. M. Pasmíño, co-collector of this species.

This long-repent species of sect. *Humboldtia* is characterized by a long, congested raceme of small flowers that are similar to those of *Stelis tritriangulata* Luer & R.Escobar, except for being only half as large, and with the sepals being five-veined instead of three-veined. The triangular petals are similarly deeply concave below a thick, acute margin; and also the lip with an acute, triangular tip.

**Stelis posadarum** Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Without collection data, fl. in cult. by Colomborquídeas, 1 November 1981, *C. Luer 6544* (Holotype: SEL). Fig. 32.

This large, caespitose species is distinguished by a long, multiflowered raceme with relatively large flowers with multiveined sepals; stout ramicauls with a pair of loose sheaths; thick, semiorbicular petals; and a narrowly obtuse lip.

*Plant* large, epiphytic, densely caespitose, roots coarse. Ramicauls erect, stout, 15–17 cm long, with a loose, tubular sheath on the upper half, another loose, tubular sheath on the lower half, and a tubular sheath at the base. *Leaf* erect, coriaceous, elliptical, obtuse, the blade 11 cm long, 3–4 cm wide, cuneate into a petiole 2.5 cm long. *Inflorescence* solitary; 25 cm long, the raceme erect, distichous, lax below, congested above, many-flowered, floral bracts oblique, acute, 7 mm long below, 5 mm long above; pedicels 5 mm long; ovary 2 mm long; the peduncle ca. 5 cm long, from a node below the abscission layer, with a spathe 2.5 cm long; flowers light green, non-resupinate; *sepals* pubescent within, broadly ovate, obtuse, connate below the middle, the dorsal sepal 5–6 mm long, 5.5 mm wide, 7-veined, the lateral sepals 5 mm long, 4.5 mm wide, 6-veined; *petals* semilunate, thick, concave below a broad, rounded apical margin, without a transverse carina, 1 mm long, 2 mm wide, 3-veined; *lip* subquadrate, 1 mm long, 1.3 mm wide, 1 mm deep, shallowly concave below a slightly elevated bar with a narrow glenion, the apex thick, narrowly obtuse, the dorsum

slightly convex, the base truncate, hinged to the base of the column; *column* stout, ca. 1.3 mm long and wide, the anther and the bilobed stigma apical.

**Eponymy:** Named for Lijia, Jaime and Juan Filipe Posada in whose greenhouse at Colomborquídeas this species was being cultivated.

This large, robust, handsome species is distinguished by stout ramicauls clad in loose, tubular sheaths, and an elliptical leaf abruptly contracted into a petiole. Numerous, relatively large, non-resupinate flowers are produced with oblique floral bracts in a long raceme that becomes crowded near the middle before dissipating at the tip. The sepals broadly ovate, pubescent and multiveined; the semilunate petals are concave below a broad, thick, rounded apical margin; the lip is type A with a narrowly obtuse apex and a narrow glenion.

***Stelis praecipua*** Luer, *sp. nov.* TYPE: COLOMBIA. Nariño: near Laguna La Cocha, along main road from Pasto to Mocoa, 25 June 1960, *L.A. Garay 37* (Holotype: AMES), C. Luer illustr. 21964. Fig. 33.

This caespitose species of Sect. *Humboldtia* is distinguished by glabrous sepals with recurved sides; a long, many-flowered raceme; obtuse petals with a broad, thickened margin; and a subquadrate lip concave below a thick, deeply cleft bar and a thick, protruding apex.

*Plant* large, epiphytic to terrestrial in “semiopen, mossy ground,” densely caespitose, roots slender. Ramicauls erect, slender, 9–15 cm long, with a tubular sheath above the middle, and another 2–3 tubular sheaths below and at the base. *Leaf* erect, coriaceous, elliptical, subacute to acute, 7–11 cm long including a petiole ca. 1.5 cm long, the blade 1.5–2 cm wide in dry state, narrowly cuneate below into the petiole. *Inflorescence* 1–2; 20–28 cm long, the raceme erect, congested, strict, many-flowered, distichous; floral bracts oblique, acute, 3 mm long; pedicels 2 mm long; ovary 2 mm long; peduncle ca. 5 cm long, from a node below the apex of the ramicaul; color of flowers not noted, *sepals* glabrous, ovate, subacute, with sides revolute, the dorsal sepal 8 mm long, 3 mm wide, connate to synsepal for 1 mm, 3-veined, the lateral sepals connate to near the apex into a concave synsepal with the sides revolute, each 7 mm long, 4 mm wide, 3-veined; *petals* transversely ovate, concave below a broad, obtuse, margin overlying a transverse callus, 1 mm long, 1.5 mm wide, 3-veined; *lip* subquadrate, 1.8 mm long, 1 mm wide, 1.6 mm deep, concave below a thick, deeply notched bar, the apex thick, concave, protruding, the dorsum with a low, rounded callus, the base 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 Latin *praecipuus*, “singular, peculiar,” referring to the details of the lip.

This caespitose species of section *Humboldtia* was identified as the Ecuadorian *Stelis velutina* Lindl., a superficially similar species, but it differs from the latter by glabrous sepals with revolute sides. Most distinctive is the lip that is distinguished by a thick, deeply notched bar, and an equally thick, narrowly obtuse, protruding apex.

***Stelis quintella*** Luer & Hirtz, *sp. nov.* TYPE: COLOMBIA. Nariño: above Ricaurte, 1600 m, 3 November 1979, *C. Luer, J. Luer & A. Hirtz 4589* (Holotype: SEL). Fig. 34.

This small, caespitose species distinguished by a flexuous raceme that more or less equals an elliptical, petiolate leaf; proportionately large, purple, five-veined sepals; thick, three-veined petals; and transverse lip borne behind a fold at the base of the lateral sepals.

*Plant* small, epiphytic, caespitose, roots slender. Ramicauls erect, slender, 1–1.5 cm long, with a tubular sheath below the middle, and another sheath at the base. *Leaf* erect, coriaceous, elliptical, obtuse, 2.5–4 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; 3–4 cm long, the raceme suberect, flexuous, distichous, many-flowered; floral bracts oblique, acute, 3 mm long; pedicels 3 mm long; ovary 1.5 mm long; peduncle 1.5–2 cm long, from a node below the apex of the ramicaul; flowers purple, *sepals* glabrous, transversely ovate, obtuse, 5-veined, deeply connate, the dorsal sepal 4 mm long, 5 mm wide, the lateral sepals 3.5 mm long, 4 mm wide; *petals* semilunate, thick, 0.7 mm long, 1.25 mm wide, concave below a broad, crescent-shaped margin overlying a transverse callus, 3-veined; *lip* transversely subdiscoid, 1 mm long, 1.25 mm wide, 1.5 mm deep, concave below a thick bar, the apex broadly rounded, the dorsum ill-defined in this specimen, the base 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 Latin *quintellus*, “a little one with five,” referring to five-veined sepals occurring in a plant of a small size.

This small, caespitose species is one of the smallest known with five-veined sepals. A flexuous raceme of purple flowers more or less equals elliptical leaves. The sepals are transversely ovate, glabrous, deeply connate and five-veined; the petals are crescent-shaped with a broad margin; the lip is a simple type A.

***Stelis remulifera*** Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Tolima: Alto de Pozo, near the pass, W of Ibagué, 3300 m, 20 April 1982, *C. Luer, J. Luer & R. Escobar 7481* (Holotype: SEL). Fig. 35.

This small, long-repent species is distinguished broadly elliptical leaves borne by stout ramicauls far surpassed by the peduncles of a solitary inflorescence; ovate, long-pubescent, ovate sepals; single-veined petals; and a proportionately large, oblong, obtuse lip with a central callus below the middle.

*Plant* small, epiphytic, long-repent, the rhizome stout, 2 mm thick, 1–2 cm between Ramicauls; roots slender. Ramicauls ascending, erect, stout, 1.5–2 cm long, with a tubular sheath from below the middle and another 1–2 sheaths below and about the base. *Leaf* erect, coriaceous, broadly elliptical, obtuse to rounded, 2–2.5 cm long including a petiole 0.5 cm long, the blade 0.9–1.2 cm wide in dry state, abruptly contracted below into the petiole. *Inflorescence* single; 8–10 cm long, the racemes erect, strict, congested, secund, with most flowers open, the peduncle 3–6 cm long,

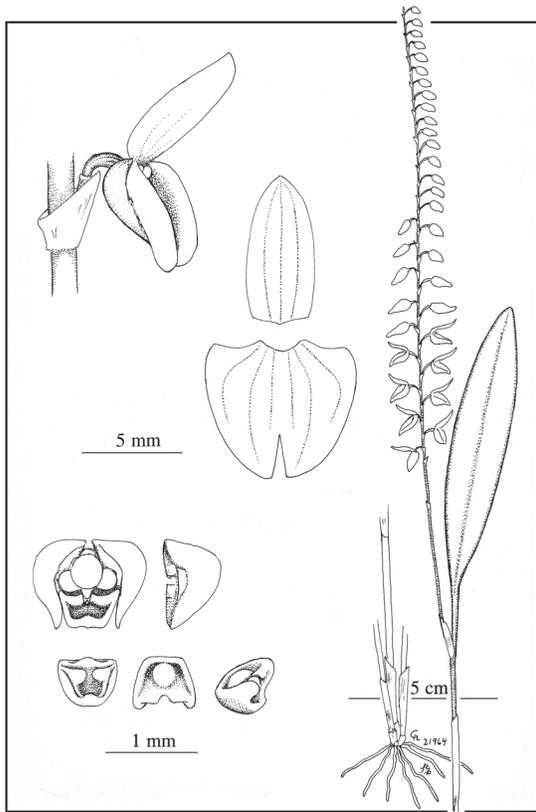


FIGURE 33. *Stelis praecipua* Luer

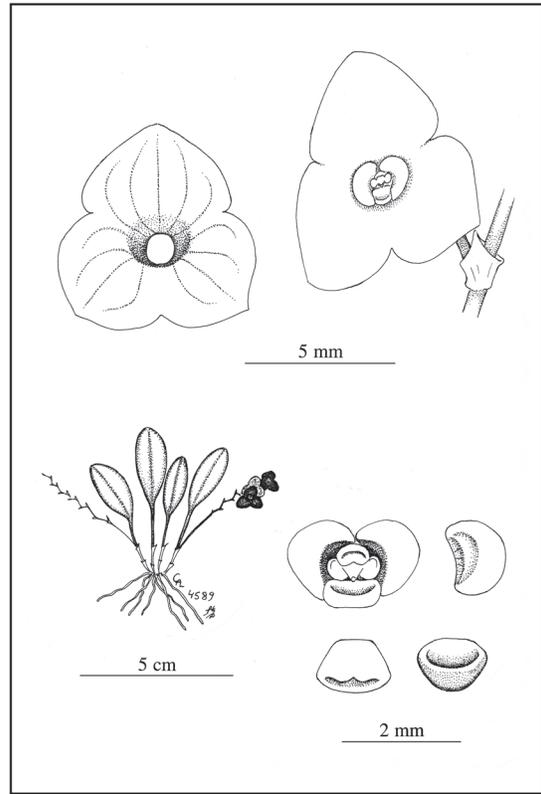


FIGURE 34. *Stelis quintella* Luer & Hirtz

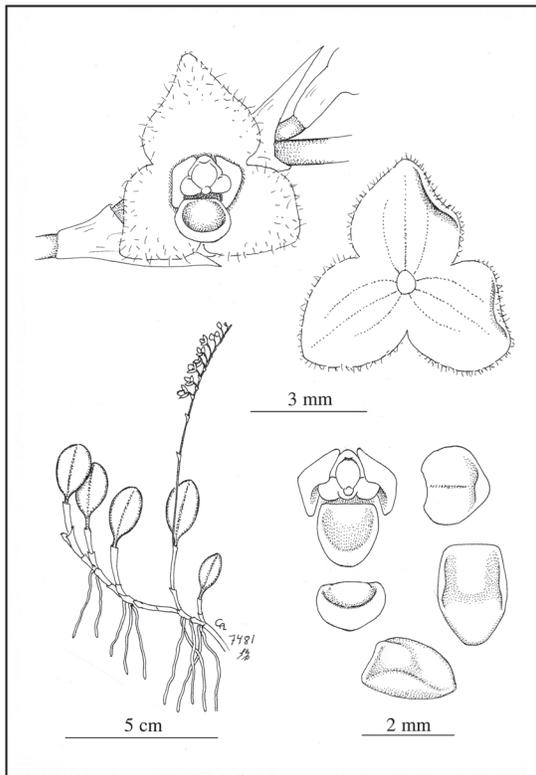


FIGURE 35. *Stelis remulifera* Luer & R. Escobar

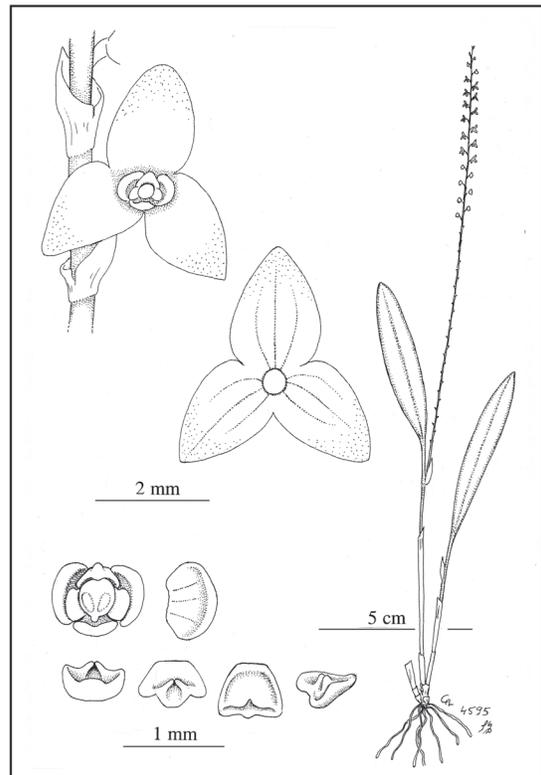


FIGURE 36. *Stelis ricautensis* Luer & Hirtz

the raceme 3–3.5 cm long; floral bracts oblique, acute, 4 mm long; pedicels 3 mm long; ovary 1.5 mm long; from a node near the apex of the ramicaul; *sepals* similar, greenish purple with darker purple veins, long-pubescent, ovate, obtuse, 3 mm long, 3 mm wide, 3-veined, connate below the middle; *petals* yellow, transversely ovate, 1.3 mm long and wide, 1-veined, concave, the apex obtuse, thickened only at the tip; *lip* yellow, oblong, rounded at the tip, 2 mm long, 1.6 mm wide, 1 mm deep, shallowly concave with thin margins, filled below the middle with a smooth, rounded callus, 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 *remulifer*, “oar, or paddle bearing,” referring to the ramicauls and leaves.

This small, creeping species is distinguished by the paddle-shaped leaves with short ramicauls. The inflorescence far exceeds the leaf with the peduncle about twice longer than the leaf. The pubescence of the sepals is fine and long. The petals are thin and single-veined. The proportionately large, oblong lip is two millimeters long. Below the middle the bar is replaced by a smooth callus, above the middle the lip is simply concave with thin margins.

***Stelis ricaurtensis*** Luer & Hirtz, *sp. nov.* TYPE: COLOMBIA. Nariño: above Ricaurte, 1600 m, 3 November 1979, C. Luer, J. Luer & A. Hirtz 4595 (Holotype: SEL). Fig. 36.

*Plant* medium in size, caespitose, with slender ramicauls and elliptical leaves; a longer raceme of small flowers with subacute, glabrous, three-veined sepals; thin, three-veined petals; and a transverse, subtrilobate lip with a cleft glenion.

*Plant* medium in size, epiphytic, caespitose. Ramicauls erect, slender, 3–7 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, acute, 5–7 cm long including a petiole 1.5 cm long, the blade 1–1.2 cm wide in the dry state, cuneate below into the petiole. *Inflorescence* single; 12–14 cm long, the raceme erect, strict, congested, flowering from near the base with many flowers open simultaneously; floral bracts oblique, acute, 2–2.5 mm long; pedicel 2 mm long; ovary 1 mm long; the peduncle ca. 5 mm long, subtended by a slender spathe 1 cm long, from a node near the apex of the ramicaul; flowers yellow; *sepals* glabrous-cellular, similar, ovate, subacute, three-veined, connate to near the base, 2.5 mm long, 2 mm wide. *petals* thin, transversely elliptical, concave, 0.5 mm long, 0.8 mm wide, 3-veined; *lip* transversely sublobulate, 0.5 mm long, 0.8 mm wide expanded, 0.4 mm deep, concave below an elevated bar with a cleft glenion, the apex truncate subtrilobulate, the lateral angles rounded, flanking a similar, central rounded protrusion, the base truncate, connate to the base of the column; *column* stout, ca. 0.8 mm long and wide, the anther and the stigmatic lobes apical.

**Etymology:** Named for community of Ricaurte, near the site of collection.

Vegetatively, this medium-sized, caespitose species with narrowly acute, elliptical leaves borne by ramicauls

about equally long; ovate, acute, three-veined sepals; thin, three-veined petals; and a type A lip with a glenion is not remarkable. It is distinguished from the horde of others by the combination of the above morphological characters. The details of the lip cannot be certain, because the lip is described from a rehydrated flower.

***Stelis risaraldae*** Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Risaralda: Pueblo Rico, Alto de Linea, 2100 m, 11 May 1993, C. Luer, J. Luer & R. Escobar 16775 (Holotype: MO). Fig. 37.

This small, caespitose species is characterized by slender ramicauls about equal to acute, ovate leaves; one or two distichous racemes shorter than the leaf; broadly ovate, obtuse, ciliate, three-veined sepals; broad, thick, three-veined petals; and a small, rounded lip.

*Plant* small, epiphytic, caespitose. Ramicauls erect, slender, 4–5 cm long, with a tubular sheath from below the middle, and another 1–2 sheaths below and at the base. *Leaf* erect, coriaceous, ovate, acute, 4–5 cm long including a petiole 1–1.5 cm long, the blade 1–1.6 cm wide in the dry state, cuneate below into the petiole. *Inflorescence* 1–2; 4–4.5 cm long, the racemes erect, subaxillary, distichous, successively-flowered with 5–6 flowers open simultaneously; floral bracts tubular, obtuse, 1.5 mm long; pedicel 1.5 mm long; ovary 1 mm long; the peduncle ca. 1.5 cm long, subtended by a slender spathe 3–4 mm long, from a node near the apex of the ramicaul; *sepals* creamy white, expanded, shortly ciliate, broadly ovate, obtuse, 3-veined, connate to near the middle, the dorsal sepal 2.5 mm long, 2.8 mm wide, the lateral sepals 2 mm long, 2.5 mm wide; *petals* yellow, transversely semilunate, 0.6 mm long, 1 mm wide, the apex broadly rounded, concave below a thickened margin, with a thick transverse carina, 3-veined; *lip* purple, ovoid, 0.5 mm long, 0.6 mm wide, 0.5 mm deep, concave below a thick, rounded, minimally sulcate bar, the apex rounded, thick, the dorsum slightly 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.

**Eponymy:** Named for the department of Risaralda where the species was encountered.

This little species is characterized by flowers with broadly ovate, ciliate sepals in one or two racemes shorter than an acute, ovate leaf. The sepals were noted to be creamy white in the fresh collection with the petals yellow, and the lip purple. The petals are thick and three-veined, and the small lip is a simple type A.

***Stelis saurota*** Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Antioquia: Alto de Cuevas, above Nutibara, 2050 m, 4 May 1983, C. Luer, J. Luer & R. Escobar 9006 (Holotype: SEL). Fig. 38.

This large, caespitose species is characterized by two or three inflorescences with racemes longer than the leaf; glabrous sepals, the dorsal sepal antrorse, five-veined; the lateral sepals acute in apposition; three-veined petals; and an obtuse lip with a dorsal callus.

*Plant* large, epiphytic, densely caespitose; roots slender. Ramicauls erect, slender, 4–10 cm long, with a close,

tubular sheath from below the middle, and another 1–2 sheaths below and about the base; *leaf* erect, coriaceous, elliptical, acute at the tip, 6–9 cm long including a petiole 1.5–2 cm long, the blade 1.2–1.8 cm wide in the dry state, cuneate below into the petiole. *Inflorescence* 2–3; to 12 cm tall, the raceme erect, strict, secund, congested, simultaneously flowered, flowering from near the base; floral bracts tubular, acute, 3 mm long; pedicels 2 mm long; ovary 1 mm long; the peduncle less than 1 cm long, subtended by a slender spathe 1.5–2 cm long, from a node below the apex of the ramicaul; flowers light green; *sepals* glabrous, the dorsal sepal ovate, acute, with sides recurved, 4.5 mm long, 2 mm wide, 5-veined, connate basally to the synsepal, the lateral sepals ovate, acute, oblique, adherent or in apposition, with recurved margins, 4 mm long, each 2 mm wide, 3-veined; *petals* transversely ovate, 0.5 mm long, 1 mm wide, 3-veined, concave within the obtuse apex with thickened margin, with an indistinct transverse callus; *lip* green edged in black, subquadrate, 0.5 mm long, 0.6 mm wide, 0.4 mm deep, concave below the bar that is elevated centrally, minutely sulcate, the apex obtuse, 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 Greek *saurotus*, “like a lizard,” referring to the flower resembling the head of a lizard.

This large, caespitose species is characterized by slender ramicauls; acute, elliptical leaves; and two or three longer racemes of numerous, green flowers. The dorsal sepal is antrorse and connate basally to the lateral sepals; the lateral sepals are in apposition to their acute tips. The petals are three-veined. The lip is type A with an elevated, minutely sulcate bar, and with a rounded, dorsal callus.

*Stelis saurota* is similar to sympatric *Stelis lacertina* Luer & R. Escobar, the other “lizard head” described herein, but differs mostly by the dorsal sepal being connate basally and not forming a retrorse, chin-like base of the lateral sepals, and a lip with an intact, elevated bar without being widely and deeply cleft.

**Stelis scalaris** Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Santander: Bucaramanga, forest between Bucaramanga and Berlin, 2600 m, 3 November 1981, C. Luer & R. Escobar 6576 (Holotype: SEL), C. Luer illustr. 6576. Fig. 39–40.

The flowers of this species resemble those of the variable *Stelis argentata* Lindl. complex, but it differs from them by a long-repent habit and long-petiolate leaves.

*Plant* medium in size, epiphytic, long-repent, the rhizome stout, 4–5 mm thick, and 1.5–2 cm long between ramicauls. Ramicauls erect, slender, 4–7 cm long, with a tubular sheath from below the middle, another 2 sheaths below and at the base. *Leaf* erect, coriaceous, elliptical, acute to subacute, 7–9 cm long including a petiole 2.5–3 cm long, the blade 1–1.5 cm wide in the dry state, cuneate below to the petiole. *Inflorescence* single; 8–13 cm long, the raceme erect, lax, distichous; floral bracts oblique, acute, 3–4 mm long; pedicels 2–3 mm long; ovary 1–2 mm long; the peduncle

2–3 cm long, subtended by a spathe 1 cm long, from a node below the apex of the ramicaul; flowers purple with white pubescence; *sepals* minutely short-pubescent, expanded, broadly ovate, obtuse, 3-veined, connate to near the middle, the dorsal sepal 4 mm long, 4 mm wide, the lateral sepals oblique, 3.25 mm long, 3.25 mm wide; *petals* transversely semilunate, 0.9 mm long, 1.25 mm wide, 3-veined, concave within a broad, thickened, apical margin, with an ill-defined transverse carina; *lip* subquadrate, 0.6 long, 0.8 mm wide, 0.5 mm deep, concave within the rounded apex with a minute, acute apiculum, the bar broadly rounded from the base to near the apex, shallowly sulcate with an ill-defined glenion, the dorsum microscopically pubescent, 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 Latin *scalaris*, “like a ladder,” referring to the appearance of the ramicauls spaced along a repent rhizome.

**Additional specimen examined:** COLOMBIA. Without collection data, fl. in cult. at Colomborquideas, 9 January 1993, R. Escobar 5235 (SEL), C. Luer illustr. 21925.

This species is characterized by a stout, creeping rhizome that gives rise to slender ramicauls that bear a loose raceme longer than long-petiolate leaves, and flowers similar to those of *Stelis argentata* Lindl. The ovate, three-veined sepals are minutely pubescent, the petals are three-veined, and the broadly obtuse, type C lip is minutely apiculate.

**Stelis secundosa** Luer, *sp. nov.* TYPE: COLOMBIA. Without collection data, fl. in cult. by Colomborquideas, 1 November 1981, C. Luer 6543 (Holotype: SEL). Fig. 41.

This large, caespitose species is characterized by stout ramicauls; one or two simultaneously many-flowered, secund inflorescences that exceed acute, elliptical leaves; broadly ovate, pubescent, three-veined sepals; three-veined petals; and a lip with a broadly forked bar near the center.

*Plant* large, epiphytic, caespitose; roots slender. Ramicauls erect, stout, 8–10 cm long, with a tubular sheath on the middle third, and another 2 sheaths below and about the base. *Leaf* erect, coriaceous, elliptical, acute, petiolate, 12–13 cm long including the petiole 1.5 cm long, the blade 2 cm wide in the dry state, cuneate below into the petiole. *Inflorescence* 1–2; 15–17 cm long, the racemes erect, distichous, congested, secund, many-flowered; floral bracts oblique, acute, 2 mm long; pedicels ca. 1.75 mm long; ovary ca. 1.5 mm long; the peduncle ca. 5 cm long, with a spathe 1 mm long below the apex of the ramicaul; flowers light yellow; *sepals* pubescent, incompletely expanded, broadly ovate, subacute to obtuse, 3-veined, connate below the middle, the dorsal sepal 2.75 mm long, 2.5 mm wide, the lateral sepals 2.25 mm long, 2 mm wide; *petals* transversely ovate, concave below the thickened margin of the obtuse apex, 1 mm long, 1.25 mm wide, 3-veined; *lip* subquadrate, 1 mm long, 1 mm wide, 0.75 mm deep, concave below a thick, shallowly cleft bar near the center, the apex subtruncate with a short, triangular apiculum, the dorsum with a low, triangular callus; *column* clavate, ca. 1 mm long and wide, the anther and the stigmatic lobes apical.

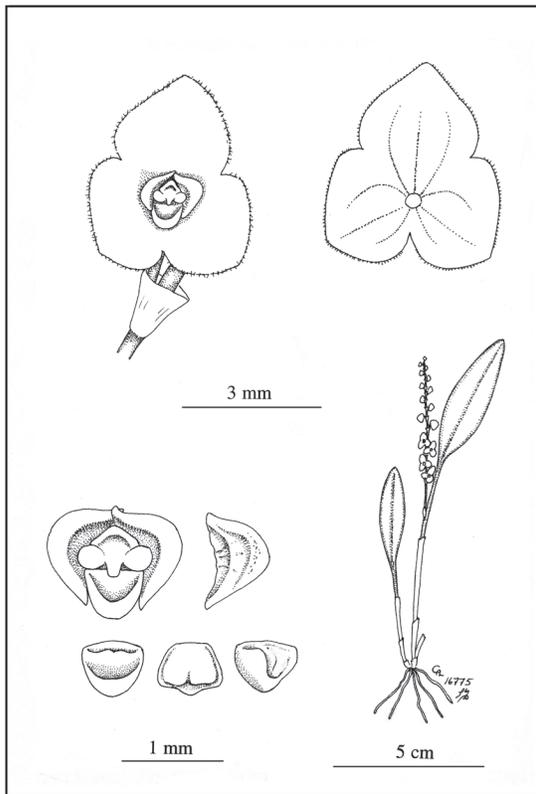


FIGURE 37. *Stelis riseraldae* Luer & R. Escobar

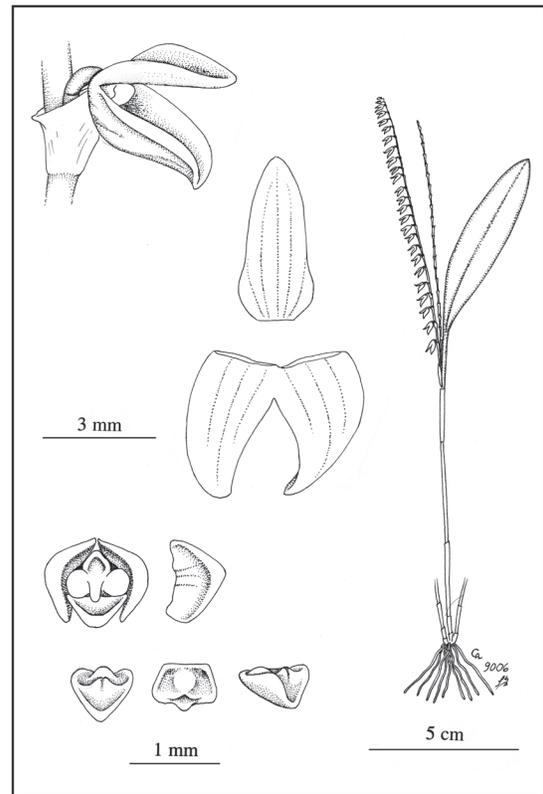


FIGURE 38. *Stelis saurota* Luer & R. Escobar

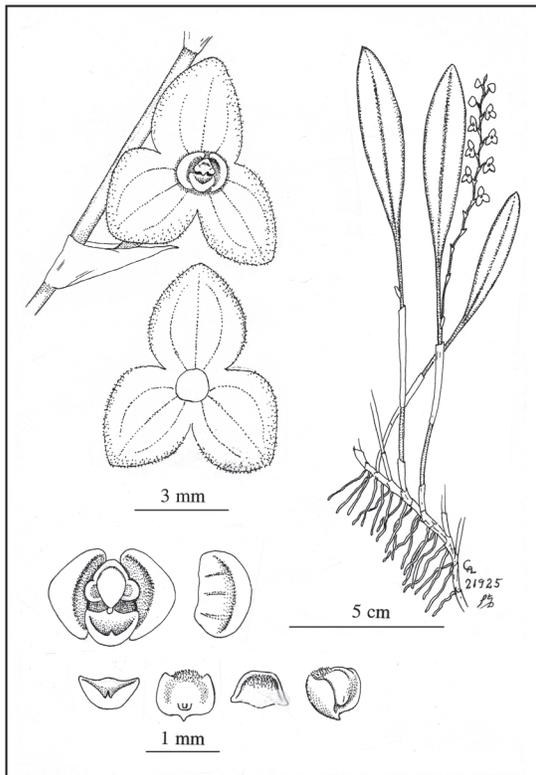


FIGURE 39. *Stelis scalaris* Luer & R. Escobar

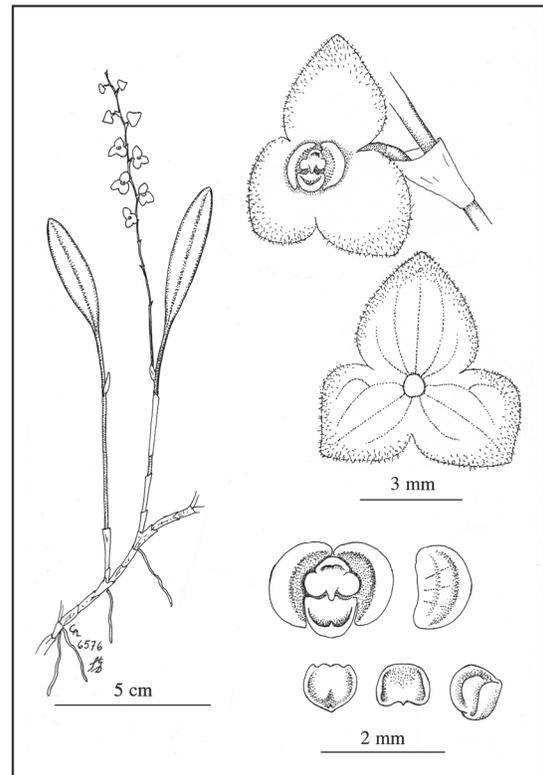


FIGURE 40. *Stelis scalaris* Luer & R. Escobar

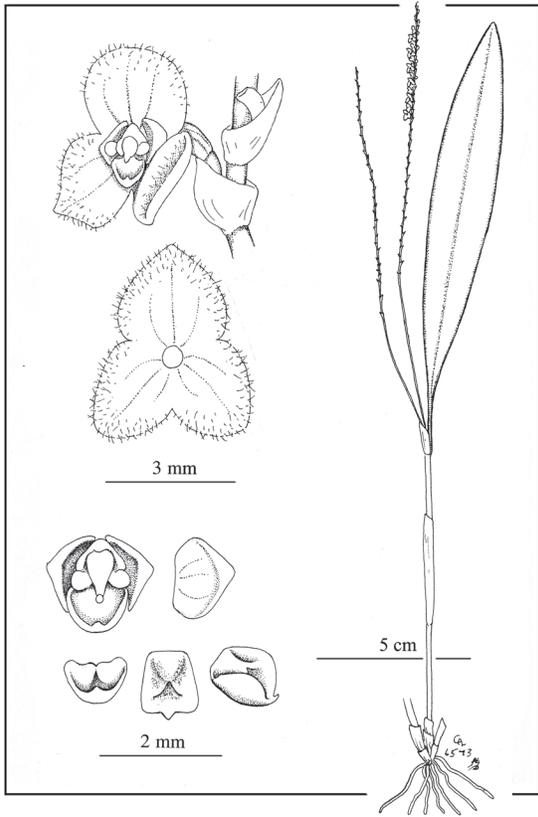


FIGURE 41. *Stelis secundosa* Luer

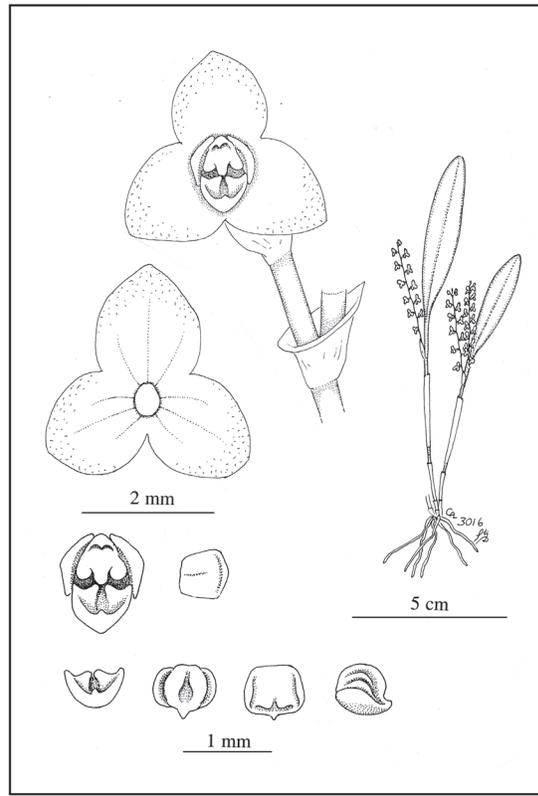


FIGURE 42. *Stelis sobrina* Luer & R. Escobar

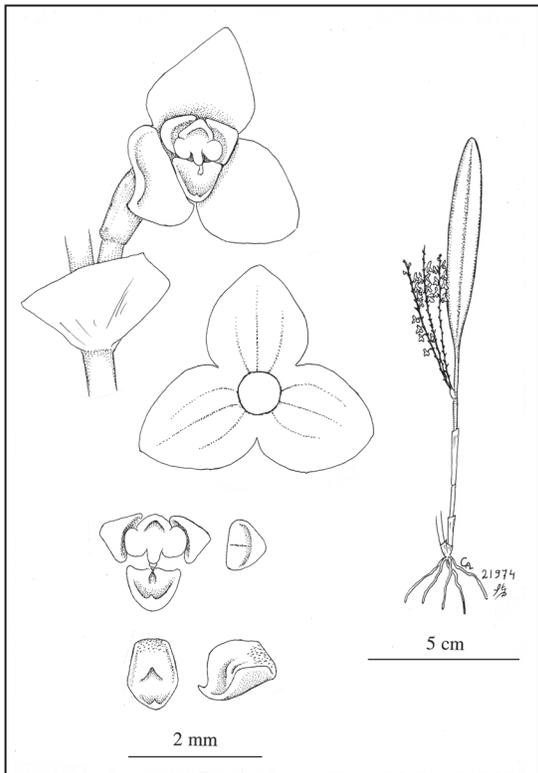


FIGURE 43. *Stelis sobrina* Luer & R. Escobar

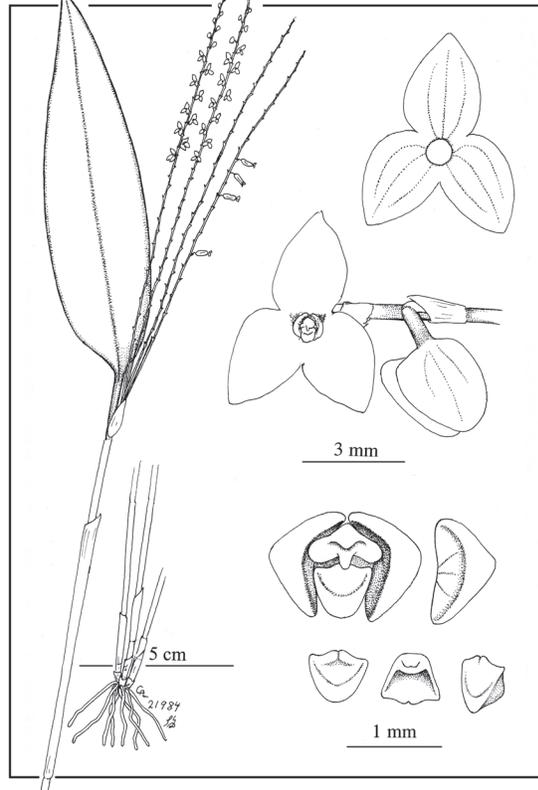


FIGURE 44. *Stelis splendens* Luer

**Etymology:** From the Latin *secundus*, “markedly developed second,” referring to congested, overlapping flowers facing the same direction.

This large, caespitose species is distinguished by one or two very crowded, many-flowered, secund racemes that equal or barely surpass a narrowly elliptical leaf. The sepals are pubescent and three-veined; the petals are also three-veined; and the lip is subquadrate and minutely apiculate with the bar low near the center and forked.

**Stelis sobrina** Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Cauca: Páramo de Barbillas, SE of Popayán, 3070 m, 27 July 1978, *C. Luer, J. Luer & R. Escobar 3016* (Holotype: SEL), *C. Luer* illustr. 3018. Fig. 42–43.

This species is distinguished by a few racemes shorter than the leaf, single-veined petals, and a lip with a shortly acuminate tip and a deep glenion.

*Plant* medium in size, epiphytic, densely caespitose, roots slender. Ramicauls erect, slender, 3.5–5 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, acute, 5–8 cm long including a petiole 1–1.5 cm long, the blade 1–1.2 cm wide in dry state, cuneate below into the petiole. *Inflorescence* 1–3 simultaneous; 2.5–4 cm long, the racemes erect, strict, congested, distichous, many-flowered with most flowers open simultaneously, floral bracts infundibular, acute, 1.5 mm long; pedicels 1 mm long; ovary 1 mm long; the peduncle ca. 1 cm long, flowering from near the base with a spathe ca. 0.5 cm long, from a node below the apex of the ramicaul; *sepals* dark red-purple externally, yellow within, microscopically pubescent, ovate, obtuse, the dorsal sepal 2 mm long, 1.5 mm wide, the lateral; sepals 1.5 mm long, 1.5 mm wide, 3-veined, connate below the middle; *petals* transversely obovate, concave, broadly obtuse at the apex, with the margin thickened, 0.75 mm long, 0.75 mm wide, 1-veined; *lip* subquadrate, 0.75 mm long, 1 mm wide, 0.5 mm deep, concave below a cleft bar, the apex obtuse with a short, acuminate apiculum, the dorsum slightly convex; the base truncate, hinged to the base of the column; *column* clavate, ca. 1 mm wide and long, anther and bilobed stigma apical.

**Etymology:** From the Latin *sobrina*, “a female cousin,” referring to a similarity to *Stelis polybotrya* Lindl.

**Additional specimen examined:** COLOMBIA. Cauca: Volcano of Sotará, 2800–3300 m, date unknown, *F.C. Lehmann 6140* (AMES), *C. Luer* illustr. 21924.

With a few racemes shorter than leaf this species is similar to *Stelis polybotrya* Lindl, but differs by shorter ramicauls and leaves, proportionately longer inflorescences, and an obtuse lip that is shortly acuminate at an incurved tip.

**Stelis splendens** Luer, *sp. nov.* TYPE: COLOMBIA. Valle del Cauca: El Cairo, Cerro del Inglés, Serranía de los Paraguas, 2220 m, 30 March 1988, *P.A. Silverstone-Sopkin 3784* (Holotype: MO; Isotype: CUVC), *C. Luer* illustr. 21984. Fig. 44.

This tall, immense species is distinguished by large, ovate, acute and petiolate leaves; racemes of white flowers with ovate, acute sepals; obtuse, three-veined petals; and a

lip with the dorsum acutely deflexed.

*Plant* large, epiphytic, densely caespitose, roots slender. Ramicauls erect, slender, 20–45 cm long, with a loose, tubular sheath above the middle and another below and at the base. *Leaf* erect, coriaceous, ovate, acute, 13–15 cm long including a petiole 1.5–2 cm long, the blade 3.5–4 cm wide in dry state, contracted below into the petiole. *Inflorescence* 3–4; 13–15 cm long, the racemes erect, strict, subcongested, distichous, many-flowered; floral bracts small, oblique, acute, 2 mm long, 3 mm long near the base; pedicels 1 mm long; ovary 1 mm long; the peduncle 3–4 cm long, with a spathe 1–1.5 cm long, from a node below the apex of the ramicaul; flowers white; *sepals* glabrous, ovate, acute, 3-veined, connate near the base, the dorsal sepal 3.5 mm long, 2.5 mm wide, the lateral sepals 3 mm long, 2.5 mm wide; *petals* transversely ovate, obtuse, concave, below the thickened apical margin, 0.6 mm long, 1 mm wide, 3-veined; *lip* subtriangular, 0.5 mm long, 0.6 mm wide, 0.3 mm deep, shallowly concave below a narrow, notched bar, the apex obtuse with a broad margin, the dorsum acutely deflexed, concave above a rounded basal callus, the base truncate, hinged to the base of the column; *column* clavate, ca. 0.8 mm wide and long, anther and bilobed stigma apical.

**Etymology:** From the Latin *splendens*, “splendid,” referring to the floral and vegetative characters.

This tall, immense species is distinguished by white flowers borne in several racemes that more or less equal in length a large, ovate, acute and petiolate leaf. The ovate, acute sepals and the obtuse petals are three-veined. The dorsum of the lip, similar to that of *Stelis bigibba* Schltr., is acutely deflexed leaving the bar as a narrow edge between the sides of the lip.

**Stelis stigmatosa** Luer & R. Escobar, *sp. nov.* COLOMBIA. Without collection data, fl. in cult. by the Robledos at La Ceja, 22 November 1981, *C. Luer 6745* (Holotype: SEL). Fig. 45.

This caespitose species is characterized by a lax, relatively large-flowered raceme that exceeds a narrow, long-petiolate leaf; three-veined, obtuse, densely pubescent sepals with recurved margins; three-veined petals; a lip with the bar thick and rounded; and a stigma with expanded, oblique lobes confluent beneath the rostellum.

*Plant* medium in size, epiphytic, densely caespitose. Ramicauls erect, slender, 3–4 cm long, with a tubular sheath from below the middle and 1–2 tubular sheaths below and at the base. *Leaf* erect, coriaceous, narrowly elliptical, subacute to obtuse, 7–10 cm long including a slender petiole 2–4 cm long, the blade 0.8–1 cm wide in the dry state, narrowed below to the petiole. *Inflorescence* single; 12–13 cm long, the raceme erect, lax, distichous, many-flowered; floral bracts oblique, acute, 5 mm long; pedicels 5 mm long; ovary 2 mm long; the peduncle 1.5–2.5 cm long, subtended by a spathe 7–9 mm long, from a node below the apex of the ramicaul; *sepals* greenish white with a dense, white pubescence, ovate, obtuse with recurved margins, 3-veined, connate below the middle, the dorsal sepal 4.5 mm long, 4 mm wide, the lateral sepals oblique, 3.5 mm long, 4 mm wide; *petals* transversely elliptical, 1 mm long, 2 mm wide, 3-veined, concave below

a thick, rounded apex, without a transverse carina; *lip* type C, subquadrate, 1.3 mm long, 1.3 mm wide, 0.8 mm deep, the bar a smooth, thick, rounded callus extending from near the middle of the posterior surface, where it is hinged to the column. to below the middle of the anterior surface, concave within the rounded apex with a short, obtuse apiculum; *column* stout, ca. 1.5 mm long and wide, the anther and the stigmatic lobes apical, the stigmatic lobes oblique, expanded, confluent beneath the rostellum.

**Etymology:** From the Latin *stigmatosus*, "with remarkable stigma," referring to the expanded, oblique, stigma lobes.

The habit of this species is similar to that of many: medium sized; a lax raceme exceeding narrow leaves; three-veined, pubescent sepals; and three-veined petals. The lip is type C lip with an apiculum, although it differs with the bar being replaced by a smooth, rounded callus that extends from the middle of the back surface to the middle of a front surface. It also differs with oblique, expanded stigma lobes that are confluent beneath the rostellum.

**Stelis stolonifera** Luer & Hirtz, *sp. nov.* TYPE: COLOMBIA. Nariño: E of La Victoria, 3000–3200 m, 4 November 1979, C. Luer, J. Luer & A. Hirtz 4642 (Holotype: SEL). Fig. 46.

This medium-sized to large species is noted for a branching, prolific habit; one or two long, congested, many-flowered racemes; subacute, three-veined sepals; deeply inflated, thin-walled, semiorbicular petals; and an obtuse lip concave below a retuse bar.

*Plant* medium-sized to large, epiphytic, branching, prolific; roots slender. Ramicauls erect, stout, producing another ramicaul at the apex, 3–4 cm long above, to 12 or more cm long below with a tubular, fugacious sheath from near the base, and another at the base. *Leaf* erect, coriaceous, elliptical, acute, 4–6 cm long including a petiole ca. 5 cm long, the blade 1–1.5 cm wide in the dry state, cuneate below into the petiole. *Inflorescence* 1–2; 5–14 cm long, the raceme erect, strict, subflexuous, distichous, flowering from the base; floral bracts inflated, oblique, 2.5 mm long; pedicels 1.5 mm long; ovary 1.5 mm long; the peduncle nil, subtended by a thin spathe ca. 5 mm long, from the apex of the ramicaul; flowers yellow; *sepals* unexpanded, glabrous, ovate, subacute, three-veined, the dorsal sepal 3 mm long, 2.5 mm wide, the lateral sepals antrorse, 3 mm long, 2.25 mm wide; *petals* deeply concave, inflated, thin-walled, semiorbicular, 1 mm long, 1 mm wide, 1-veined; *lip* subquadrate, 1 mm long, 0.8 mm wide, 0.6 mm deep, concave below a retuse bar, the apex obtuse, the dorsum smooth, 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 Latin *stolonifer*, "branch bearing," referring to the prolific habit.

This species is remarkable for the prolific habit of forming plantlets as it ascends. In addition to another ramicaul, one or two congested racemes are produced from the apex of the ramicaul. The sepals are non-spreading with the laterals antrorse. The petals are inflated into hemispheres. The lip is type A.

**Stelis uncinula** Luer & Hirtz, *sp. nov.* TYPE: COLOMBIA. Nariño: SE of Ipiales toward La Victoria, 3800 m, 22 February 1978, C. Luer, J. Luer & A. Hirtz 2706 (Holotype: SEL). Fig. 47.

This small, densely caespitose-ascending species is characterized by a secund raceme much longer than elliptical leaves; shorter ramicauls clad in loose, tubular sheaths; broad, three-veined sepals; three-veined petals; and a rounded lip with a "U"-shaped callus.

*Plant* small, epiphytic, densely caespitose-ascending; roots slender. Ramicauls ascending, erect, stout, 2–3 cm long, enclosed by loose, imbricating, tubular sheaths, one from near the middle, another below the middle, and another about the base. *Leaf* erect, coriaceous, elliptical, subacute, 3–4.5 cm long, 0.8–1 cm wide in the dry state, narrowed below into an ill-defined petiole less than 1 cm long. *Inflorescence* solitary; 8–11 cm tall, the raceme strict, erect, congested, secund, many-flowered with many flowers open simultaneously, the peduncle 5–6 cm long, subtended by a slender spathe 1 cm long, from a node below the apex of the ramicaul; floral bracts erect, tubular, acute, 2 mm long; pedicels 2–2.5 mm long; ovary 1 mm long; flowers dull red; *sepals* similar, diffusely studded with enlarged cells, broadly ovate, obtuse, connate to near the middle, 2 mm long, 2 mm wide, 3-veined; *petals* transversely oblong, concave, broadly rounded at the apex, the margin narrowly thickened, 1 mm long, 1.25 mm wide, 3-veined; *lip* subquadrate, 1 mm long, 1.2 mm wide, 0.6 mm deep, concave within the thin, rounded margin, surrounding an elevated horseshoe-shaped callus that descends from the dorsum, the dorsum slightly convex, microscopically pubescent above the base, 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:** Named for the similarity of the labellar callus to the letter "U."

This small, densely caespitose-ascending species is characterized by an ascending ramicaul clothed by loose, imbricating sheaths, and a raceme borne by a peduncle longer than the leaf. The sepals are broad and deeply connate. *Stelis uncinula* is one of several that are distinguished by a horseshoe-shaped callus on the lip. This callus is a modified glenion with thickened margins that descends from the bar to within the rounded apex. Other species with a similar, "U-shaped," labellar callus are *S. decipula* Luer & R. Escobar and *S. hippocrepica* Luer & R. Escobar.

**Stelis vanescens** Luer, *sp. nov.* TYPE: COLOMBIA. Chocó: San José del Palmar, Cerro Torrá, above heliport, 1920–1950 m, 8 Aug. 1988, P.A. Silverstone-Sopkin 4150 (Holotype: MO; Isotype: CUVC), C. Luer illustr. 21990. Fig. 48.

This caespitose species is characterized by a sublux raceme; elliptical, three-veined sepals; cuneate petals with a truncate, roughened apex; and a lip with a narrow glenion thickened sides.

*Plant* medium in size, epiphytic, densely caespitose; roots slender. Ramicauls slender, 4–7 cm long, enclosed by a tubular sheath from below the middle and another sheath

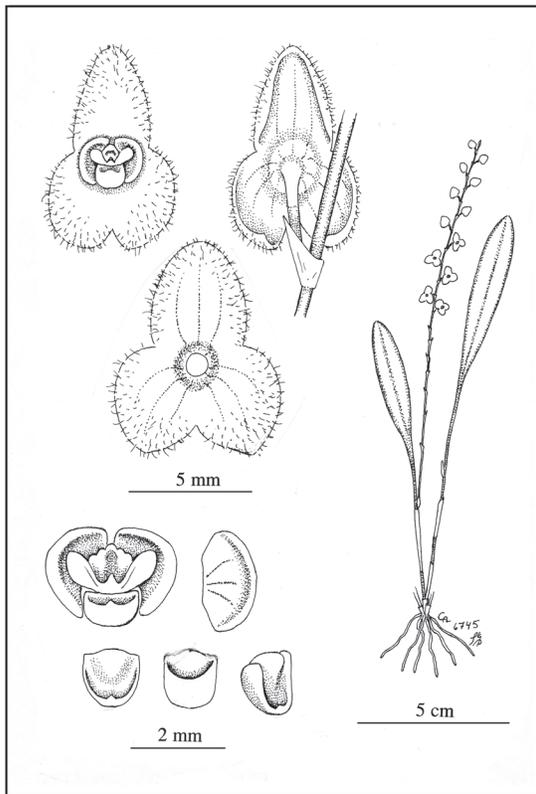


FIGURE 45. *Stelis stigmatosa* Luer & R. Escobar

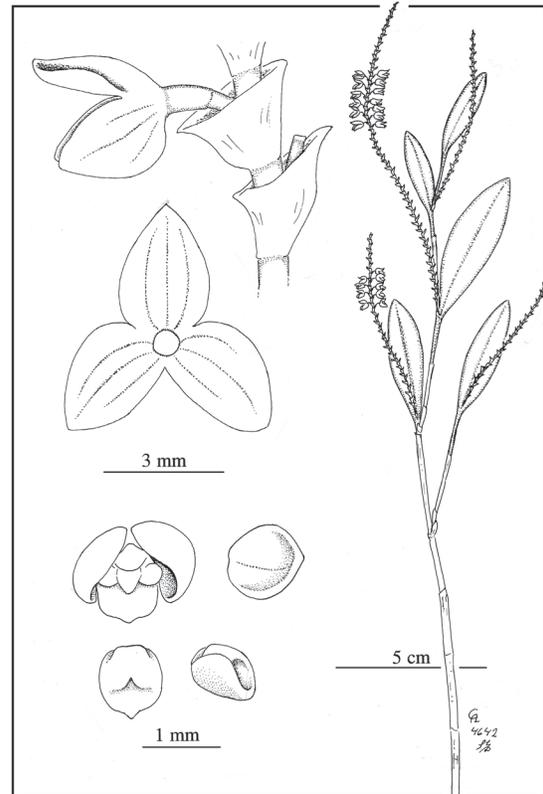


FIGURE 46. *Stelis stolonifera* Luer & Hirtz

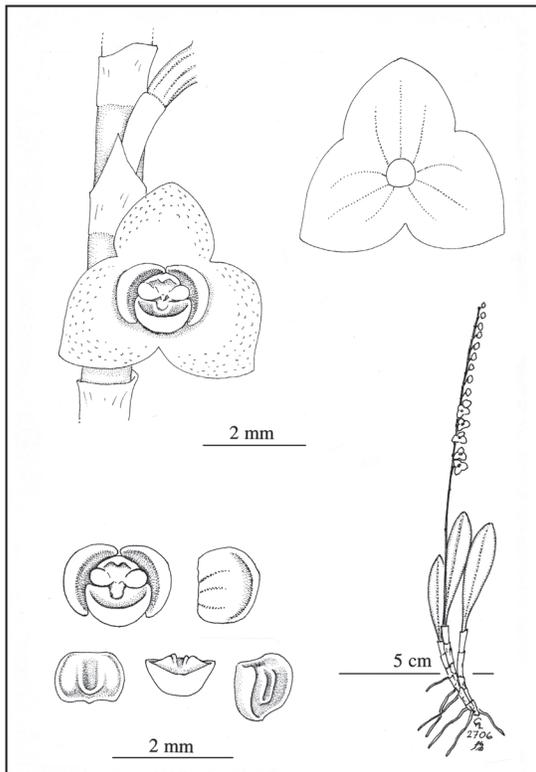


FIGURE 47. *Stelis uncinula* Luer & Hirtz

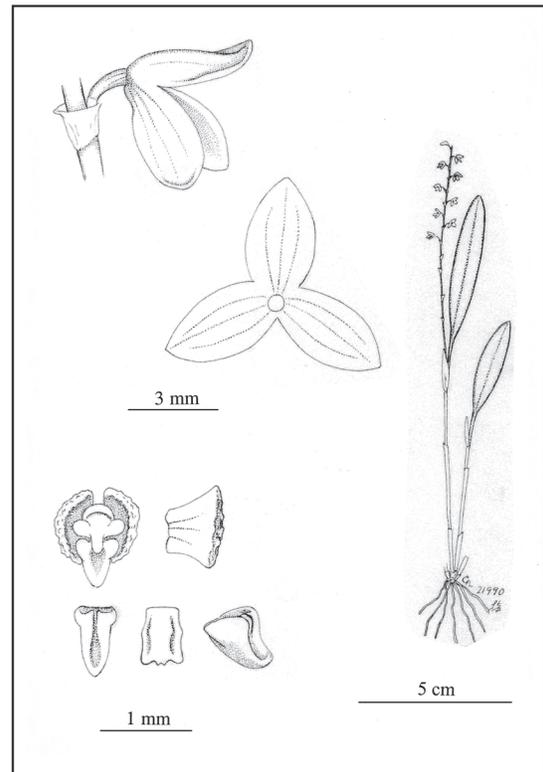


FIGURE 48. *Stelis vanescens* Luer

below and at the base. *Leaf* erect, coriaceous, narrowly elliptical, acute, petiolate, 4.5–7 cm long, 0.7–1 cm wide in dry state, contracted below into a slender petiole 1.5–2 cm long. *Inflorescence* 1–2, 7–10 cm long, the raceme erect, subclax, strict, distichous; floral bracts oblique, acute, 1.5 mm long; pedicels 1.5 mm long; ovary 1.5 mm long; peduncle 1–2 cm long, subtended by a spathe 12–15 mm long, from a node below the apex of the ramicaul; flowers yellow; *sepals* glabrous, similar, elliptical, acute, 4 mm long, 2.5 mm wide, 3-veined, connate basally; *petals* cuneate, 0.5 mm long, 1 mm wide, 3-veined, the apex broadly truncate with a thickened, irregular margin, shallowly concave; *lip* subovoid, 0.8 mm long, 0.5 mm wide, 0.5 mm deep, concave below a bar that is shallowly cleft between a pair of thickened margins of a narrow, descending glenion, the apex obtuse without thickened margins, the base slightly convex, the base truncate, hinged to the base of the column; *column* clavate, ca. 0.5 mm wide and long, the anther and bilobed stigma apical.

**Etymology:** From the Latin *vanescens*, “disappearing,” referring to the difficulty in finding a lip.

This caespitose species is characterized by a subclax raceme of middle-sized flowers; elliptical, three-veined sepals; cuneate, truncate petals; and an elusive lip. The flowers hydrate poorly, but only two lips were recovered from over a dozen flowers examined.

**Stelis variola** Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Norte de Santander, Páramo de Jurisdicciones, 2600 m, collected 10 November 1981, fl. in cult. at Selby Gardens 81-2647, 10 February 1982, *C. Luer, J. Luer & R. Escobar 6825* (Holotype: SEL). Fig. 49.

This medium-sized, caespitose species is characterized by a distichous raceme; elliptical leaves; glabrous, three-veined sepals with irregular, scattered particles of an unidentified substance; semilunate, three-veined petals with nodular margins; and an obtuse, subquadrate lip.

*Plant* medium-sized, epiphytic, caespitose; roots slender. Ramicauls erect, slender, 3–5 cm long, with a tubular sheath from below the middle, and another sheath below at the base. *Leaf* erect, coriaceous, elliptical, obtuse, 8–10 cm long including a petiole 2–2.5 cm long, the blade 1.75–2 cm wide in the dry state, cuneate below into the petiole. *Inflorescence* single; 10 cm long, the raceme erect, strict, subflexuous, distichous; floral bracts inflated, oblique, 2 mm long; pedicels 1 mm long; ovary 1 mm long; the peduncle ca. 2 cm long, subtended by a spathe 1 cm long, from a node below the apex of the ramicaul; flowers light yellow; *sepals* expanded, glabrous, with scattered, minute, irregular deposits of an unidentified substance, elliptical, ovate, subacute to obtuse, three-veined, free to near the base, the dorsal sepal 3 mm long, 1.8 mm wide, the lateral sepals 2 mm long, 1.5 mm wide; *petals* transversely semilunate, 0.6 mm long, 1 mm wide, 3-veined, concave within the rounded apex with a narrow, more or less nodular margin, without a transverse carina; *lip* subquadrate, 0.6 mm long, 0.6 mm wide, 0.5 mm deep, concave below a thick, retuse bar, the apex obtuse, the dorsum smooth, convex, the base truncate,

hinged to the base of the column; *column* stout, ca. 0.6 mm long and wide, the anther and the stigmatic lobes apical.

**Etymology:** Named for smallpox, the viral disease manifested by multiple, irregular, cutaneous lesions, referring to the unidentified substance seen in the sepals.

This medium-sized, caespitose species is another distinguished by a minute, irregular substance scattered within the sepals. The small flowers are borne in a distichous raceme about as long as obtuse leaves; the sepals are elliptical and free to near the base; and the petals are semilunate and concave with a more or less nodular margin. The tiny lip is type A with a thick, retuse bar.

**Stelis verruculosa** Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Santander: forest between Santa Barbara and Guaca, 2700 m, 6 November 1981, *C. Luer & R. Escobar 6602* (Holotype: SEL). Fig. 50.

This small, repent species is distinguished by a flexuous, successively flowered inflorescence about twice as long as the leaf; ovate, pubescent, three-veined sepals; thick, concave, single-veined petals with the thickened margin minutely verrucose; a subquadrate lip with a similar margin; and pedunculate, microscopically verrucose stigmatic lobes.

*Plant* small, epiphytic, repent, the rhizomes thin, 0.5–1 cm between ramicauls. Ramicauls erect, slender, 1.5–2.5 cm long, with a tubular sheath from below the middle, and another 1–2 tubular sheaths below and at the base. *Leaf* erect, coriaceous, elliptical, acute, 2–3.5 cm long including a petiole 5.0–8.0 cm long, the blade 0.5–0.7 cm wide in the dry state, cuneate below to the petiole. *Inflorescence* single; 5–8 cm long, the raceme erect, loose, flexuous, successively fewer than 10-flowered; floral bracts oblique, acute, 1.5 mm long; pedicels 2 mm long; ovary 1.25 mm long; the peduncle 3–5 cm long, from a node below the apex of the ramicaul; flowers purple, the pubescence white; *sepals* pubescent, expanded, ovate, subacute, 3-veined, connate below the middle, the dorsal sepal 2.5 mm long, 2 mm wide, the lateral sepals 2 mm long, 1.8 mm wide; *petals* thick, transversely ovate, 0.8 mm long, 1 mm wide, 1-veined, concave below a thickened, verrucose margin of the rounded apex; *lip* subquadrate, 0.5 mm long, 0.8 mm wide, 0.8 mm deep, concave below a rounded bar, the apex rounded with thickened, verrucose margin, the base truncate, hinged to the base of the column; *column* clavate, ca. 1 mm long and wide, the anther and the pedunculate, microscopically verrucose stigmatic lobes apical.

**Etymology:** From the Latin *verruculosus*, “minutely verrucose,” referring to the minutely verrucose, thickened margins of the petals and lip as well as the pedunculate stigmatic lobes.

This small, repent species forms tangled clusters; a delicate, flexuous, successively flowered raceme exceeds the leaves; and the purple sepals are covered with a fine, white pubescence. The rounded, single-veined petals are proportionately large with a thickened, verrucose margin. The lip is deep and short with a broad, similarly verrucose margin. The stigmatic lobes are pedunculate and microscopically verrucose.

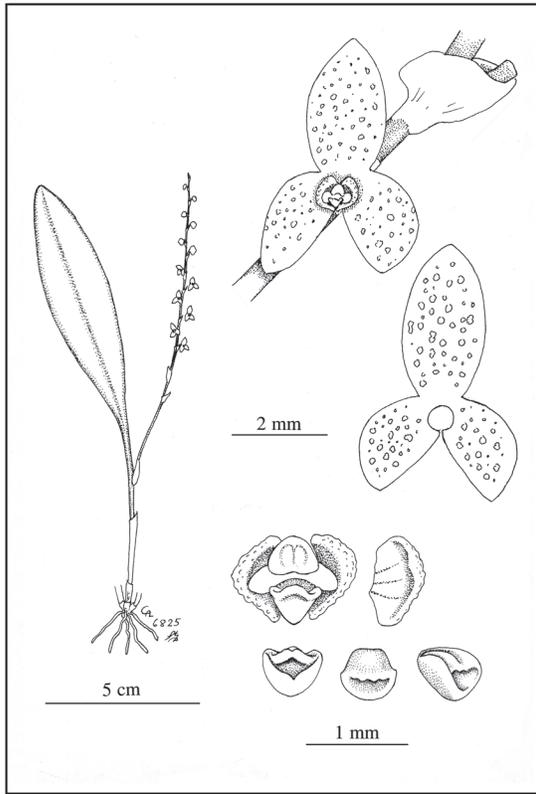


FIGURE 49. *Stelis variola* Luer & R. Escobar

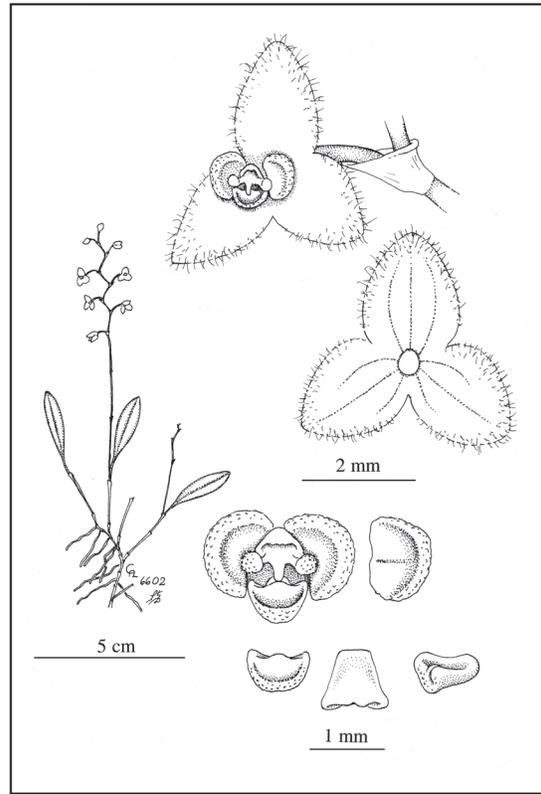


FIGURE 50. *Stelis verruculosa* Luer & R. Escobar

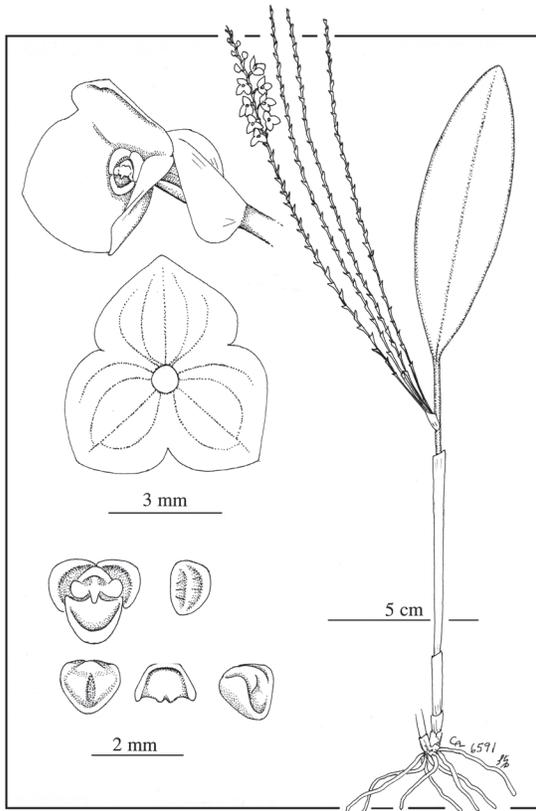


FIGURE 51. *Stelis vigoris* Luer & R. Escobar

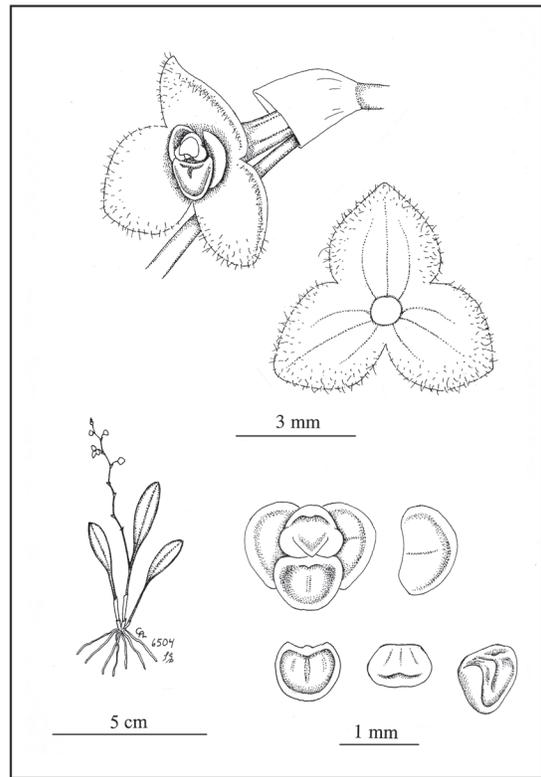


FIGURE 52. *Stelis zelleri* Luer

**Stelis vigoris** Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Santander: terrestrial on road embankment between Santa Barbara and Guaca, 2400 m, 6 November 1981, C. Luer & R. Escobar 6591 (Holotype: SEL). Fig. 51.

This large, caespitose species is characterized by robust ramicauls; a small spathe with a fascicle of up to seven many-flowered racemes that exceed a large, elliptical leaf; transverse, obtuse, deeply connate sepals, the dorsal being five-veined; three-veined petals; and an obtuse, type A lip.

*Plant* large, epiphytic, densely caespitose. Ramicauls erect, stout, 12–15 cm long, with a loose tubular sheath from below the middle, another 2–3 tubular sheaths below at the base. *Leaf* erect, coriaceous, elliptical, subacute, 10–12 cm long including a petiole 1.5 cm long, the blade 3–3.5 cm wide in the dry state, cuneate below to the petiole. *Inflorescence* up to 7 simultaneous; 20–25 cm long, the racemes erect, congested, distichous, many-flowered; floral bracts oblique, subacute, inflated 4 mm long; pedicels 2 mm long; ovary 1.5 mm long; the peduncle 3–7 cm long, subtended by a spathe 4–5 mm long, from a node below the apex of the ramicaul; *sepals* purple, light purple within, glabrous, not widely expanded, transversely ovate, obtuse, connate to near the middle, the dorsal sepal 3 mm long, 4.5 mm wide, 5-veined, the lateral sepals 3.5 mm long, 4.5 mm wide, 4-veined; *petals* yellow, transversely ovate, 1.5 mm long, 1.75 mm wide, 3-veined, concave below a thick, rounded apex, with a transverse carina; *lip* yellow, type A, subquadrate, 1 mm long, 1.3 mm wide, 0.8 mm deep, concave below a sulcate bar with a glenion, the apex rounded, the dorsum low, 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 Latin *vigoris*, “vigorous,” referring to the robust habit with the inflorescence fasciculate with many-flowered racemes.

This large, robust, caespitose species is characterized by stout ramicauls that bear a large, elliptical leaf. One or up to seven many-flowered racemes are produced simultaneously with a proportionately small spathe. The sepals are broad, obtuse and deeply connate into an incompletely expanded flower. The three-veined sepals and the type A lip are not unusual.

**Stelis zelleri** Luer, *sp. nov.* TYPE: COLOMBIA. Risaralda: Pueblo Rico, 1800–2000 m, collected 20 July 1980, and fl. in cult. near Ulm, Germany, 20 September 1981, by Ernst Zeller *s.n.*, C. Luer 6504 (Holotype: SEL). Fig. 52.

This small, caespitose species is distinguished by a flexuous, successively flowered inflorescence about twice as long as the leaf; ovate, pubescent, three-veined sepals; concave, single-veined petals with a thin margin; and a subcircular lip similar to the petals.

*Plant* small, epiphytic, caespitose. Ramicauls erect, slender, 2–2.5 cm long, with a tubular sheath from below the middle, and another 1–2 tubular sheaths below and at the base. *Leaf* erect, coriaceous, elliptical, acute, 2–3.5 cm long including a petiole less than 1 cm long, the blade 0.5–0.7 cm wide in the dry state, cuneate below to the petiole. *Inflorescence* single; 5 cm long, the raceme erect, loose, flexuous, successively flowered; floral bracts oblique, acute, 2 mm long; pedicels 1 mm long; ovary 1 mm long; the peduncle 1–1.5 cm long, from a node below the apex of the ramicaul; flowers light green, the pubescence white; *sepals* pubescent, expanded, similar, ovate, subacute to obtuse, 2.5 mm long and wide, 3-veined, connate below the middle; *petals* green with purple margins, semicircular, 0.8 mm long, 1.2 mm wide, 1-veined, concave below the thin, margin of the rounded apex; *lip* subquadrate, 0.8 mm long, 0.8 mm wide, 0.5 mm deep, shallowly concave below a rounded bar, 3-veined, the apex rounded with a thin margin, the base truncate, hinged to the base of the column; *column* clavate, ca. 0.8 mm long and wide, the anther and the stigmatic lobes apical.

**Eponymy:** Named for Ernst Zeller of Ulm, Germany, who collected and cultivated this species.

This small, caespitose species from the Central Cordillera has many features similar to *Stelis verruculosa* Luer & R.Escobar, a repent species from the Eastern Cordillera. Both share a flexuous, successively flowered raceme of superficially similar flowers with pubescent sepals, but differing markedly in morphology of the petals, lip and column. The lip of *Stelis zelleri* resembles the petals with a narrowly margined, rounded apex.

#### LITERATURE CITED

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

##### CORRIGENDA FOR *ICONES STELIDARUM (ORCHIDACEAE) COLOMBIAE* III (LUER, 2017)

- Stelis amaliana* Luer  
 Replaced synonym: *Stelis amaliae* Luer & R. Escobar, Harvard Pap. Bot. 22(1): 27. 2017, non *Stelis amaliae* (Luer & R.Escobar) Pridgeon & M.W.Chase, 2001.
- Stelis attenuata* Lindl., Folia Orch., *Stelis* 2. 1858.  
 Synonyms: *Stelis eumeces* Luer & Hirtz, Monogr. Syst. Bot. Missouri Bot Gard. 112: 251. 2007.  
*Stelis dinamica* Luer & R.Escobar, Harvard Pap. Bot. 22(1): 36. 2017.
- Stelis dispar* C.Schweinf., Fieldiana Bot., 28: 177. 1958.  
 Synonym: *Stelis dendrophila* Luer & R.Escobar, Harvard Pap. Bot. 22(1): 34. 2017.
- Stelis escobarii* Luer  
 Replaced Synonym: *Stelis rodrigoii* Luer, Harvard Pap. Bot. 22(1): 85. 2017, non *Stelis rodrigoii* (Luer) Pridgeon & M.W.Chase, 2001.
- Stelis eucalypta* Luer, Harvard Pap. Bot. 22(1): 39. 2017, non *superfl.*  
 The author overlooked *Stelis alloinfundibulosa* J.M.H.Shaw Orchid Rev. 122: 77 (2014) had already been published to replace *Stelis infundibulosa* Luer.
- Stelis oscarii* Luer  
 Replaced synonym: *Stelis duquei* Luer, Harvard Pap. Bot. 22, 1: 64. 2017, non *Stelis duquei* P.Ortíz, 2011.
- Stelis sesquipedalis* Lindl., Orch. Lind. 3. 1846.  
 Synonym: *Stelis ephippium* Luer & R.Escobar, Harvard Pap. Bot. 22(1): 39. 2017.
- Stelis volcani* Rehb.f., Otia Bot. Hamburg. 1: 19. 1878.  
 Synonym: *Stelis inedita* Luer & R.Escobar, Harvard Pap. Bot. 22(1): 48. 2017.