

ICONES STELIDARUM (ORCHIDACEAE) COLOMBIAE

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

Keywords: Colombia, Orchidaceae, Pleurothallidinae, *Stelis*

The earliest Colombian collections of species of the genus *Stelis* Sw. were made under the direction of José Celestino Mutis in the late eighteenth century, but their paintings were not published until the 1960s (Schweinfurth and Fernández Pérez, 1963: 55–61, tab. 43–52). Hipólito Ruiz and Antonio Pavón made collections in Peru, also in the late eighteenth century, that have subsequently been found to occur in Colombia.

The Colombian collections of Humboldt and Bonpland made in the first years of the nineteenth century were published in 1816 (Kunth, 1816: 361–364). Between 1836 and 1859, John Lindley described 27 species from Colombia (1859), and between 1854 and 1878, Heinrich G. Reichenbach f. published 19 species. The first and only list of the known species from Colombia was published in 1920 by Rudolf Schlechter (1920) when 48 species were counted. The largest numbers of new species were published afterward: 56 by Schlechter (1924), and 52 by Oscar Duque (1997, 2010).

As of today, about 240 species attributed to *Stelis*, excluding those of other genera transferred to *Stelis* by Pridgeon and Chase (e.g., 2001), have been reported from Colombia.

While preparing to revise the genus *Stelis* for Colombia, the following species described as new will constitute the first of a series of 50 that have not been identified with any of the previously known species.

For lip types in *Stelis* consult Luer (2009).

Stelis acuminosa Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Antioquia: Pabón, road to Santa Ana, 2050 m, 31 May 1995, C. Luer, J. Luer, R. Escobar *et al.* 17660 (Holotype: MO). Fig. 1.

This medium-sized, densely caespitose species produces a few, simultaneously many-flowered racemes about as long as narrowly linear-elliptical leaves; ovate, three-veined sepals with the lateral sepals oblique, antrorse, acute; thin, faintly single-petals; and a lip with an acuminate apex.

Plant medium in size, epiphytic, densely caespitose; roots slender. Ramicauls erect, very slender, 6–8 cm long, enclosed by a close, tubular sheath from below the middle

and another sheath at the base. *Leaf* erect, coriaceous, narrowly linear-elliptical, acute, 6–7.5 cm long, including an ill-defined petiole ca. 1 cm long, the blade 5–7 mm wide in the dry state, narrowed below into the petiole. *Inflorescence* 2–3; 6–8 cm tall, the racemes erect, crowded, distichous, many-flowered, with most flowers open simultaneously, flowering from the base; floral bracts oblique, subacute, 2 mm long; pedicels 1.5 mm long; ovary 1 mm long; the peduncle less than 1 cm long, from a node at the apex of the ramicaul; flowers light yellow–green; *sepals* glabrous, ovate, 3-veined, the dorsal sepal 2.5 mm long, 2 mm wide, the lateral sepals oblique, acute, 3.5 mm long, 1.5 mm wide; *petals* transversely elliptical, shallowly concave, the apex broadly rounded without a thickened margin, 0.6 mm long, 0.76 mm wide, faintly 1-veined; *lip* ovoid, 1 mm long, 0.6 mm wide, 0.5 mm deep, concave below a transverse callus across the base, the sides incurved, the apex sharply acuminate, the dorsum narrow, truncate, hinged to the base of the column; *column* clavate, ca. 0.75 mm long and wide, the anther and the stigmatic lobes apical.

Etymology: From the Latin *acuminosus*, “with well-developed acumen,” referring to the apex of the lip.

This species is characterized by two or three densely many-flowered racemes that are slightly shorter than, to slightly longer than narrow, linear-elliptical leaves. The dorsal sepal is erect, ovate and subacute, while the longer, acute lateral sepals are antrorse. The petals are thin and faintly single-veined. The lip is ovate and concave with involute sides. The bar is a transverse callus across the base. The apex is acuminate into a sharp point.

Stelis alleyoop Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Cundinamarca: terrestrial in thin forest above power line near pass between Bogotá and Fusagasuga, 2800 m, 22 April 1982, C. Luer, J. Luer & R. Escobar 7517 (Holotype: SEL). Fig. 2.

This medium to large, coarsely repent species is characterized by a thick rhizome; stout ramicauls bearing elliptical leaves and a longer raceme; ovate, five-veined, long-pubescent sepals; three-veined petals; and a subquadrate lip with a glenion and a rounded, concave apex.

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Plant medium to large, epiphytic to terrestrial, coarse, caespitose-fasciculate, or ascending-repent, the rhizome with tubular sheaths, stout, branching, ca. 5 mm thick, up to 2 cm long between ramicauls; roots slender. Ramicauls ascending to erect and fasciculate, stout, 2–4 cm long, enclosed by a tubular sheath from near the middle, and 1–2 sheaths below about the base. *Leaf* erect, coriaceous, elliptical, subacute, 3–6 cm long, 1–1.5 cm wide in the dry state, narrowed below into an ill-defined petiole ca. 1 cm long; *Inflorescence* single; 12–16 cm long, the raceme strict, erect, congested, secund, many-flowered with many capsules, floral bracts tubular, oblique, obtuse, 2.5 mm long; pedicels 1.5 mm long; ovary 1.5 mm long; the peduncle 5–8 cm long, subtended by a spathe less than 1 cm long, from a node below the apex of the ramicaul; *flowers* light yellow-green; *sepals* long-pubescent, ovate, obtuse, connate below the middle, 3-veined, the dorsal sepal 3 mm long, 3 mm wide, the lateral sepals 2.5 mm long, 2.5 mm wide; *petals* thin, minimally thickened on the apical margin, transversely oblong, concave, broadly subtruncate at the apex, 1.2 mm long, 1.5 mm wide, 3-veined; *lip* subquadrate, 1 mm long, 1.3 mm wide, 0.9 mm deep, concave below the thick bar cleft with a glenion, the apex rounded, the dorsum slightly convex, minutely pubescent at the base, the base broadly truncate, hinged to the base of the column; *column* ca. 1 mm long and wide, the anther and the stigmatic lobes apical.

Eponymy: Named for the rough, hairy-faced caveman Alley Oop, a 1933 cartoon character created by V.T. Hamlin.

Additional specimens examined: Colombia: Boyacá: epiphytic between Arcabuco and Moniquira, 2500 m, 25 April 1982, *C. Luer, J. Luer & R. Escobar* 7532 (SEL).

Both caespitose and creeping phases of the habit of this species occur, apparently depending on local conditions. Most notable is a robust, five-millimeter thick ascending or branching rhizome that is clad in tubular, disintegrating sheaths. Ramicauls arise singly, or several in a fascicle. A single, many-flowered, secund raceme that produces numerous capsules far exceeds the leaf. The sepals are five-veined and long-pubescent; the petals are thin and three-veined; and the lip type A with a glenion and rounded apex.

Stelis arbuscula Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Antioquia: Frontino, above Frontino toward Nutibara, 1900 m, 3 May 1983, *C. Luer, J. Luer, R. Escobar et. al.*, 9029 (Holotype: SEL). Fig. 3.

This small, repent, suberect species is distinguished by a stout, branching rhizome; short ramicauls with a loose, tubular sheath; two to three densely flowered racemes about as long as elliptical leaves; obtuse, pubescent sepals; three-veined petals; and an obtuse lip concave below a bar with a glenion.

Plant small, epiphytic, repent to suberect, the rhizome stout, ascending, enclosed by loose sheaths, 0.5–1 cm long between ramicauls; roots slender. Ramicauls ascending to suberect, relatively stout, 1–1.5 cm long, enclosed by a loose, tubular sheath and another loose sheath at the base. *Leaf* erect, coriaceous, elliptical, subacute to obtuse, 2.5–3.5 cm long, 1–1.3 cm wide in the dry state, cuneate below into

a petiole 2–3 mm long. *Inflorescence* 2–3; 2.5–3.5 cm long, the racemes erect, strict, simultaneously many-flowered with most flowers open simultaneously, flowering to the base; floral bracts oblique, acuminate, acute, 3 mm long; *pedicels* 1 mm long; ovary 1 mm long; peduncle abbreviated, if at all, from a node at the apex of the ramicaul; *flowers* light yellow; *sepals* expanded, shortly pubescent, broadly ovate, obtuse, 3-veined, connate to near the middle, the dorsal sepal 2 mm long, 2 mm wide, the lateral sepals 1.6 mm long, 2 mm wide; *petals* transversely ovate, 0.5 mm long, 0.9 mm wide, 3-veined, the apex broadly rounded with a thickened margin, with a transverse carina; *lip* thickly subtriangular, 0.6 mm long, 0.75 mm wide, 0.5 mm deep, shallowly concave below the bar with a glenion, the apex obtuse with minimally thickened margins, the dorsum with a low, rounded callus, the base truncate, hinged to the base of the column; *column* stout, ca. 0.5 mm long and wide, the anther and the stigmatic lobes apical.

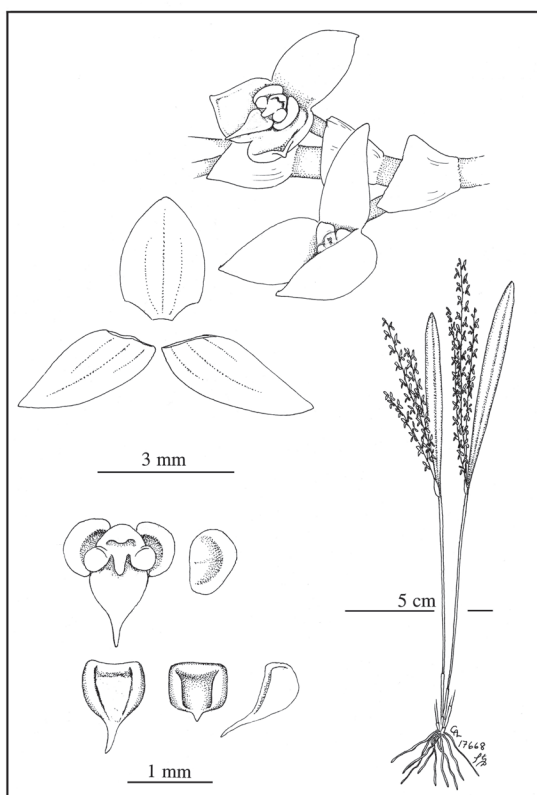
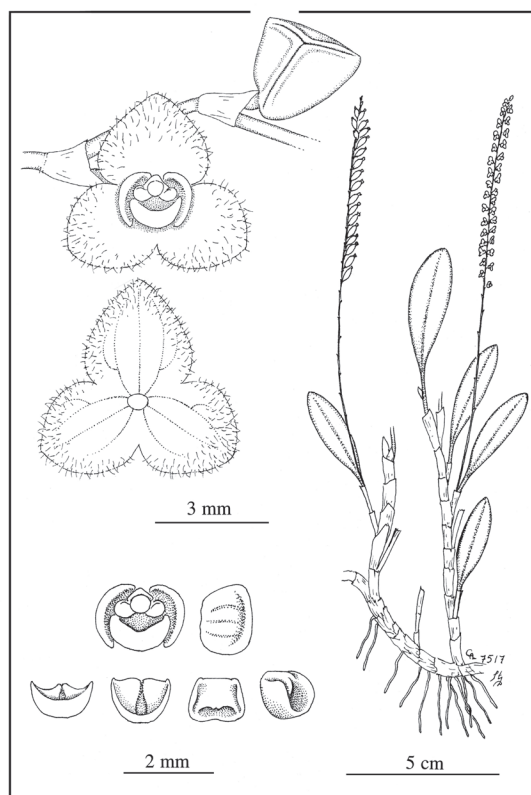
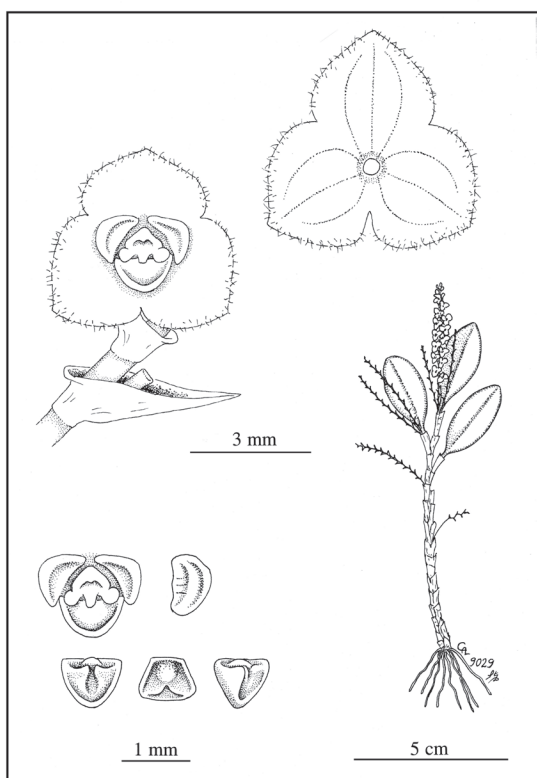
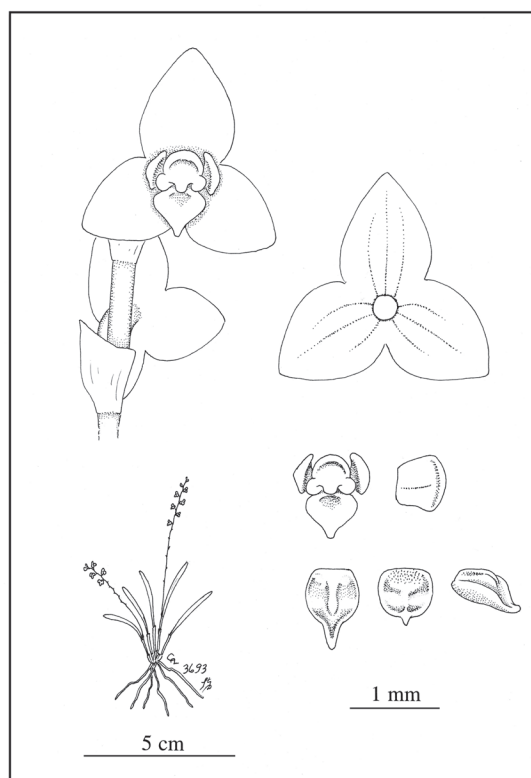
Etymology: From the Latin *arbuscula*, “a little tree,” referring to the habit.

This small, creeping to suberect species is characterized by a thick, branching rhizome clothed in loose sheaths, and closely spaced short ramicauls with elliptical leaves and congested racemes that barely surpass them, if at all. The floral bracts are long-acuminate; the sepals are broadly ovate, obtuse and shortly pubescent; the petals are three-veined; and the lip is classical type A.

Stelis atomacea Luer & R. Escobar, *sp. nov.* COLOMBIA. Antioquia: Cerro Padre Amaya, W of Medellín, 2900 m, 16 January 1979, *C. Luer, J. Luer & R. Escobar* 3693 (Holotype: SEL). Fig. 4.

This very small species is distinguished by narrowly linear leaves; a much longer, successively many-flowered raceme of tiny flowers; subacute sepals about one millimeter long; single-veined petals; and an ovate lip with a low, oblong callus and an acuminate apex.

Plant very small, epiphytic, caespitose, sometimes forming large clumps, roots slender. Ramicauls erect, slender, 5–10 mm long, enclosed by 2 close, tubular sheaths. *Leaf* erect, coriaceous, narrowly linear, acute, 15–25 mm long, 1–2 mm wide in the dry state, narrowed below to the base. *Inflorescence* single; 3–6 cm long, the raceme erect, successively many-flowered with several flowers open simultaneously, floral bracts oblique, acute, 1 mm long; pedicels 0.5 mm long; ovary 0.5 mm long; the peduncle 1–25 mm long, from a node from near the tip of the ramicaul; *flowers* greenish white; *sepals* glabrous, expanded, ovate, acute to subacute, 3-veined, connate basally, 1 mm long, 1 mm wide; *petals* obcuneate, thin, slightly thickened on the rounded margin, 0.4 mm long, 0.5 mm wide, 1-veined; *lip* subovate, 0.7 mm long, 0.5 wide, 0.3 mm deep, shallowly concave and acuminate below the middle to a narrowly obtuse tip, the disc filled with an low, elevated callus with a central, longitudinal depression that descends from the dorsum, the base truncate, hinged to the base of the column; *column* clavate, 0.5 mm wide, anther and the stigmatic lobes apical.

Figure 1. *Stelis acuminosa* Luer & R. Escobar.Figure 2. *Stelis alleyoop* Luer & R. Escobar.Figure 3. *Stelis arbuscula* Luer & R. EscobarFigure 4. *Stelis atomacea* Luer & R. Escobar

Etymology: From the Latin *atomaceus*, "like an atom," referring to the minute floral parts.

This very small, slender, caespitose species with narrowly linear leaves sometimes forms large clumps. A successively many-flowered raceme bears tiny flowers with subacute sepals about one millimeter long, and petals less than half that size. *Stelis atomacea* is similar to the ubiquitous *Stelis pusilla* Kunth, but differs in morphology of the lip, in addition to subacute tips of the sepals, instead of obtuse. Instead of type A with a minute apiculum on a rounded apex, the lip is acuminate above the middle into a narrowly obtuse tip.

Stelis caespitula Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Antioquia: El Retiro, above Colomborquídeas, coll. by Walter Teague, 17 April 1988, C. Luer 13221 (Holotype: MO). Fig. 5.

This tiny, densely caespitose plant produces a many-flowered raceme with obtuse, three-veined sepals; thin, single-veined petals, and an ovoid, lip with a tall, broadly channeled callus that extends from the base to the acute tip.

Plant very small, epiphytic, densely caespitose; roots slender. Ramicauls erect, slender, 3–4 mm long, enclosed by a tubular sheath and another sheath at the base. *Leaf* erect, coriaceous, elliptical, acute, 8–20 mm long, 2.5–4 mm wide, cuneate below to the base. *Inflorescence* single; 4–8 cm long; the raceme erect, subax, distichous, many-flowered with most flowers open simultaneously; floral bracts oblique, acute, 1–1.5 mm long; pedicels 1 mm long; ovary 0.5 mm long; the peduncle ca. 2 cm long, from a node at the apex of the ramicaul; *sepals* yellow, more or less suffused with purple, microscopically cellular, connate in lower third, broadly ovate, obtuse, 3-veined, the dorsal sepal 1.2–2 mm long, 1.5 mm wide, the lateral sepals oblique, 1.2–1.4 mm long, 1–1.2 mm wide; *petals* yellow or green, thin, obcuneate, broadly obtuse, slightly thickened on the margin, without a transverse callus, 0.4 mm long, 0.6 mm wide, 1-veined; *lip* yellow or green, ovoid, acute, 0.6 mm long, 0.6 mm wide, 0.3 mm deep, with a thick, broadly channeled, ovoid callus from the base to near the tip, the base broadly truncate, hinged to the base of the column; *column* clavate, ca. 0.7 mm long and wide, the anther and the stigmatic lobes apical.

Etymology: From the Latin *caespitulus*, "small-caespitose," referring to the tiny habit.

Additional specimens examined: COLOMBIA. Antioquia: El Retiro, above Colomborquídeas, 2280 m, 26 April 1983, C. Luer & J. Luer 8837 (SEL).

This tiny, caespitose species occurs in the forest above Colomborquídeas in Retiro, Colombia. It produces a many-flowered raceme with little flowers that are superficially similar to those of *Stelis pyramidalis* O. Duque that is distinguished by erect, branching rhizomes. In both species the sepals are obtuse and three-veined, and the petals are thin and single-veined. The lip of *S. caespitula* is ovoid and acute with a tall, widely cleft callus that extends from the base to the acute, non-apiculate apex. The lip of *S. pyramidalis* is obovate with the apex broad and minutely

apiculate, the callus is cleft with both halves rounded, and a microscopically pubescent callus is present above the base.

Stelis calculosa Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Risaralda: Pueblo Rico, 2400 m, 14 May 1983, C. Luer, J. Luer & R. Escobar 16838 (Holotype: MO). Fig. 6.

This small, caespitose species is distinguished by elliptical, petiolate leaves exceeded by a delicate, flexuous, successive, many-flowered raceme; obtuse, three-veined, cellular papillose sepals; single-veined petals; and a lip with a low callus surrounded by cavity within the margin.

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 dry, gradually narrowed below to a subpetiolate base. *Inflorescence* single; 4–6 cm tall, the raceme erect, flexuous, distichous, successively many-flowered, with several flowers open simultaneously; floral bracts oblique, acute, 1–1.5 mm long; pedicels 0.75 mm long; ovary 1 mm long; the peduncle ca. 2 cm long, from a node at the tip of the ramicaul; *sepals* yellow-green, cellular papillose within, expanded, broadly ovate, obtuse, 3-veined, connate below the middle, the dorsal sepal 2.5 mm long, 2.8 mm wide; the lateral sepals 2 mm long, 2 mm wide; *petals* translucent tan, thin, transversely obovate, concave, slightly thickened on the margin of a rounded apex, 0.7 mm long, 1 mm wide, 1-veined; *lip* purple, subquadrate, 0.6 mm long, 0.6 mm wide, 0.6 mm deep, concave within the rounded apical margin, surrounding a large, low callus that extends from the base to within the apical margin, without a glenion, microscopically pubescent, the base truncate, hinged to the base of the column; *column* clavate, 0.6 mm wide, the anther and the bilobed stigma apical.

Etymology: From the Latin *calculosus*, "full of pebbles," referring to the cobblestone sepals.

This little, caespitose species is characterized by ramicauls shorter than elliptical leaves; an erect, delicate, flexuous, successively many-flowered raceme far exceeding the leaves; broad, yellow-green, minutely papillose, or cobble-stoned sepals; thin, single-veined petals; and a subquadrate lip with a large, low callus surrounded with a moat-like cavity within the margin.

Stelis caldodsonii Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Antioquia: El Carmen, Alto de San Lorenzo, 2600 m, 17 September 1984, C. H. Dodson & R. Escobar 15316 (Holotype: MO), C. Luer illustration 21946. Fig. 7.

This tall, caespitose species is distinguished by a long-pedunculate, congested, many-flowered raceme that far surpasses the leaf; acute, three-veined sepals; subcircular, one-veined petals; a thin, shallowly concave, rounded lip; and an elongated, clavate column that protrudes beyond the petals.

Plant large, epiphytic, caespitose. Ramicauls erect, slender, 4–6 cm long, with a tubular sheath below the middle and another 1–2 at the base. *Leaf* erect, coriaceous,

elliptical-ovate, acute to subacute, petiolate, 6–11 cm long, including a petiole 1.6–3 cm long, the blade 0.9–1.3 cm wide in the dry state, cuneate below into the petiole. *Inflorescence* single: 20–30 cm tall, the raceme erect, distichous, crowded, simultaneously many-flowered, floral bracts tubular, obtuse, 3 mm long; pedicels 2.5 mm long; ovary 2 mm long; the peduncle 9–14 cm long, with distant bracts, subtended by a slender spathe 1.5 cm long, from a node below the apex of the ramicaul; *sepals* rose-colored, glabrous, ovate, acute, 3-veined, the dorsal sepal 4 mm long, 2.5 mm wide, the lateral sepals oblique, antrorse, 4 mm long, 2.8 mm wide, connate basally; *petals* thin, subcircular, shallowly concave, the margins not thickened, 1 mm long, 1 mm wide, 1-veined; *lip* thin, subcircular, 1.5 mm long, 1.5 mm wide, 0.5 mm deep, shallowly concave, the apex rounded, not thickened, the base truncate, narrowly thickened, hinged to the base of the column; *column* clavate 1.5 mm long and wide, protruding beyond the petals, the anther and the stigmatic lobes apical.

Eponymy: Named for Calaway H. Dodson, co-collector of this species.

This tall, slender species is characterized by a peduncle about as long as the leaf, and a many-flowered raceme about twice longer. The sepals are acute with the laterals antrorse. Small, rounded, single-veined petals flank the most unusual, longer shaft of the column. The lip is rounded and shallowly concave.

Stelis carnalis Luer & R. Escobar. *sp. nov.* TYPE: COLOMBIA. Antioquia: NE of Santa Rosa, above the Miraflores dam, 2050 m, 15 May 1985, C. Luer & R. Escobar 11376 (Holotype: MO). Fig. 8.

This small, caespitose species is distinguished by obtuse, narrowly elliptical-obovate, fleshy leaves far exceeded by a subdense raceme of flowers with transversely ovate, deeply connate, three-veined sepals; three-veined petals; and an obtuse lip with a dorsal, rounded callus.

Plant small, epiphytic, densely caespitose, roots slender. Ramicauls erect, stout, 1–1.5 cm long, with a tubular sheath from below the middle and another 1–2 sheaths near and at the base. *Leaf* erect, thickly coriaceous, narrowly elliptical-obovate, obtuse, 3–5 cm long, 0.5–0.8 cm wide in dry state, gradually narrowed below to the base without a distinct petiole. *Inflorescence* single; 12–15 cm tall, the raceme erect, strict, distichous, subdensely many-flowered, with several flowers open simultaneously; floral bracts oblique, acute, 4–5 mm long; pedicels 2.5 mm long; ovary 2.5 mm long; the peduncle 4–9 cm long, from a node at the tip of the ramicaul, with a spathe ca. 1 cm long; *sepals* yellow, purple below the middle, glabrous, expanded, transversely ovate, obtuse, 3-veined, connate to near the middle, the dorsal sepal 3 mm long, 5 mm wide, the lateral sepals 3 mm long, 4.5 mm wide; *petals* purple, transversely ovate, concave, thickened on the margin of a rounded apex, 1 mm long, 1.5 mm wide, 3-veined, with a transverse carina; *lip* purple, subquadrate, 0.8 mm long, 1.3 mm wide, 0.7 mm deep, concave below the bar with an indistinct glenion, the apex obtuse, thickened, the dorsum with a small, central,

hemispherical callus, the base truncate, hinged to the base of the column; *column* clavate, ca. 1 mm wide and long, the anther and the bilobed stigma apical.

Etymology: From the Latin *carnalis*, “fleshy,” referring to the succulent-like leaves.

This little, caespitose species is characterized by thick, narrowly elliptical-obovate leaves borne by much shorter ramicauls. An erect raceme bears medium-sized flowers with transverse, three-veined sepals that are yellow above the middle and purple below the middle. The petals are three-veined, and the lip is type A with a small, rounded callus on the dorsum.

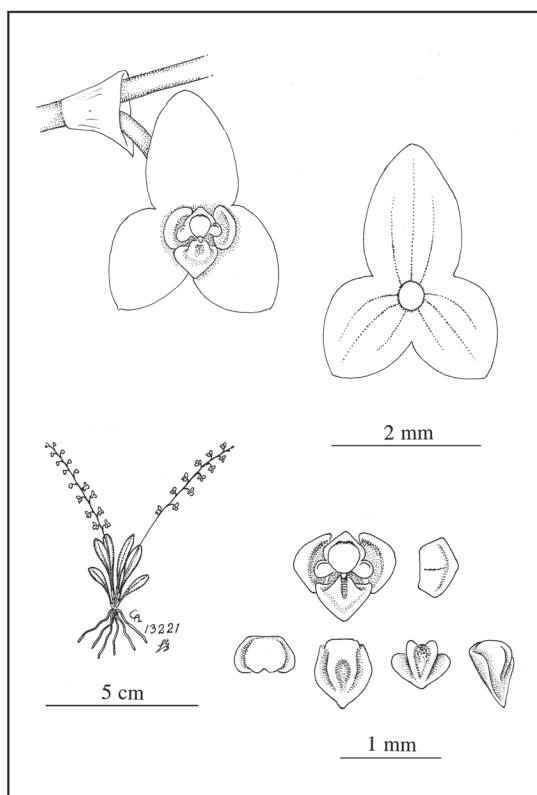
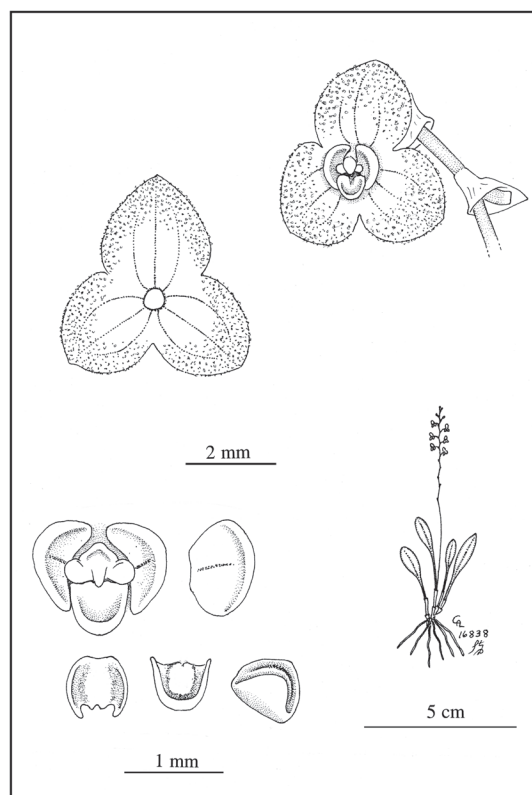
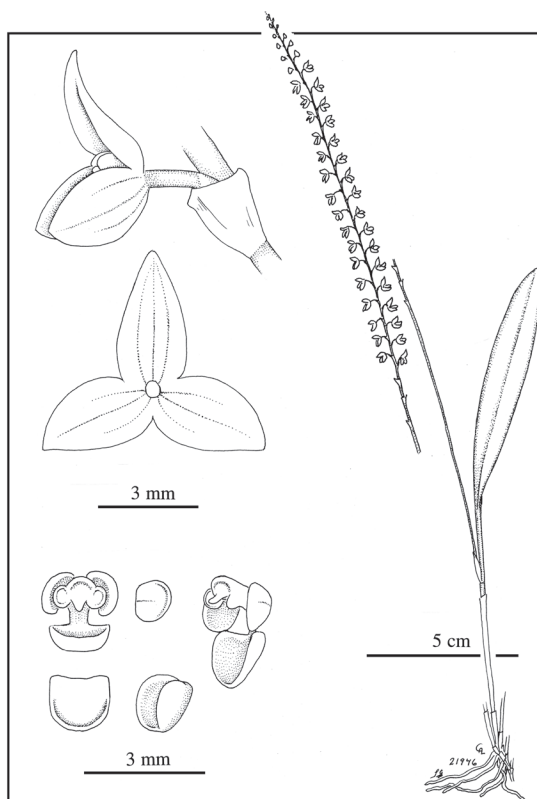
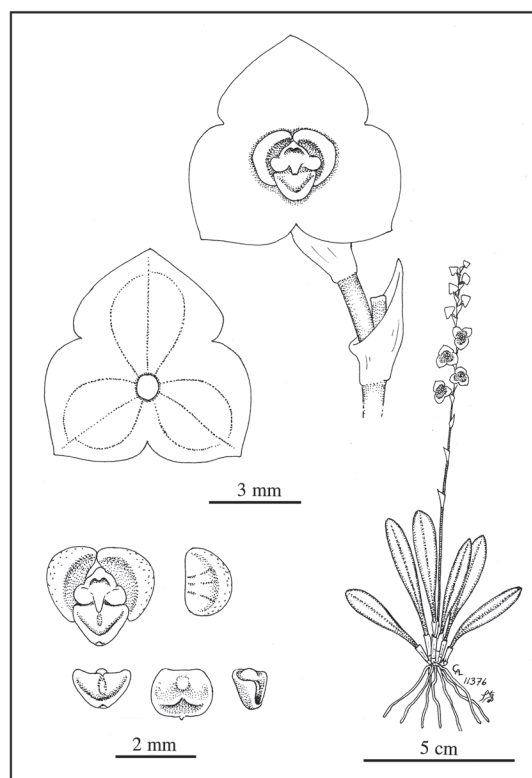
Stelis cochliops Luer & Hirtz, *sp. nov.* TYPE: COLOMBIA. probably Nariño: probably coll. by Aguirre, obtained from Orquídeas del Valle by Ecuagenera, cultivated at Ecuagenera, Gualaceo, Ecuador, 11 January 2004, A. Hirtz 8562 (Holotype: MO), C. Luer illustration 20845. Fig. 9.

Planta perparva caespitosa, racemo laxo flexuoso folio elliptico excedenti, sepalis ellipticis obtusis, petalis reniformibus apice acuminatis, labello minutissimo oblongo apice lobato concavo anguste rotundo, infra lobum apicalem subquadrato incrassato, columna furcata stigmata pedunculata distinguitur.

Plant very small, epiphytic, caespitose; roots slender. Ramicauls erect, stout, 12–18 mm long, enclosed by 2 ribbed, tubular sheaths. *Leaf* erect, thickly coriaceous, elliptical, subacute to obtuse, 20–23 mm long including a petiole 3–5 mm long, the blade 6 mm wide, cuneate below into an ill-defined petiole. *Inflorescence* 2; 1–3 cm long, the raceme erect, loose, subflexuous, successively several-flowered; floral bracts oblique, acute, 1–1.5 mm long; pedicel 0.5 mm long; ovary 1 mm long; the peduncle 0.5–1 cm long, from near the apex of the ramicaul; *flowers* olive-black with olive borders; *sepals* glabrous, broadly elliptical, obtuse, 3-veined, free to near the base, the dorsal sepal 2.5 mm long, 1.8 mm wide, the lateral sepals oblique, 1.8 mm long, 1.5 mm wide; *petals* transversely ovate, the apex broad, acuminate into a thick, narrowly obtuse apiculum, 1 mm long with the apiculum, 1 mm wide, 1-veined, the margins thickened and minutely papillose; *lip* minute, oblong-subquadrate, trilobed, 0.5 mm long, 0.3 mm wide, 0.3 mm deep, concave below a thick, rounded bar between antrorse, rounded, lateral lobes, the apex contracted into a thick, narrowly obtuse lobe, the dorsum microscopically pubescent, the base truncate, hinged to the base of the column; *column* stout, 0.5 mm long, 0.6 mm wide across stigmatic processes, the anther and stigmatic lobes apical.

Etymology: From the Greek *cochliops*, “snail-eyes,” referring to the stalked stigmatic lobes.

This tiny species is apparently endemic in southern Colombia. It is characterized by a petiolate leaf a little longer than the ramicaul. Two specimens are present, each with two racemes, one exceeding the leaf, the other, less than half the length of the leaf. The racemes are loose, flexuous and successively flowered. The sepals are broadly ovate and free nearly to the base. A thick apiculum projects from the margin of the petals. The lip is similar to that of

Figure 5. *Stelis caespitula* Luer & R. EscobarFigure 6. *Stelis calculosa* Luer & R. EscobarFigure 7. *Stelis caldodsonii* Luer & R. EscobarFigure 8. *Stelis carnalis* Luer & R. Escobar

S. sphulata, but the apical lobe is oblong and obtuse instead of acute. The elongated stigmatic lobes of the column are most remarkable as they protrude to either side, resembling the stalked eyes of a snail.

Stelis crascens Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Antioquia: Concepción. between Barbosa and Concepción, 2380 m, 12 April 1988, C. Luer, J. Luer & R. Escobar 13173 (Holotype: MO). Fig. 10.

This caespitose species is characterized by very slender ramicauls that produce two to four many-flowered racemes about as long as acute, narrowly linear-ovate leaves; small flowers with a five-veined dorsal sepal and three-veined lateral sepals; three-veined petals; and a lip with rounded apex and a cleft bar.

Plant large, epiphytic, densely caespitose. Ramicauls erect, very slender, 5–14 cm long, with a close, tubular sheath from below the middle, another 2 sheaths below and at the base. *Leaf* erect, coriaceous, acute, narrowly linear-ovate, 6–10 cm long including a petiole, 1.5 cm long, the blade 0.5–0.7 cm wide in the dry state, narrowly cuneate below to the petiole. *Inflorescence* 2–4; 4–9 cm long, the racemes erect, congested, distichous, many-flowered with most flowers open simultaneously; floral bracts tubular, close, obtuse, 1.5 mm long; pedicels 1 mm long; ovary 1 mm long; the peduncle 5 cm long, subtended by a spathe 1.2 cm long, from a node below the apex of the ramicaul; flowers red-purple; *sepals* glabrous, ovate, subacute to obtuse, connate below the middle, the dorsal sepal 2.25 mm long, 2.5 mm wide, 5-veined, the lateral sepals 2 mm long, 2.25 mm wide, 3-veined; *petals* transversely semilunate, 0.75 mm long, 1.5 mm wide, 3-veined, concave below the rounded apex, with a transverse carina; *lip* subquadrate, 0.6 mm long, 0.8 mm wide, 0.6 mm deep, the apex rounded with thickened margin, concave below a cleft, protruding bar, the dorsum with a suborbicular callus, 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: From the Latin *crascens*, “slender, graceful,” referring to qualities of the plant.

This slender, comparatively graceful species is related to *Stelis lindenii* Lindl., and distinguished by very slender, densely caespitose ramicauls with narrowly linear-ovate leaves, and fascicles of small-flowered, secund racemes about as long as the leaf. The petals are thick and three-veined, and the lip is type A with a cleft, more or less protruding bar.

Stelis curiosa Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Without collection data, probably collected near Pereira, Risaralda, flowered in cultivation by Shigenobu Tsubota, 10 May 1993, C. Luer 16772 (Holotype: MO). Fig. 11.

This small, shortly ascending species is distinguished by an erect rhizome with closely spaced ramicauls with acute, narrowly ovate leaves with a few racemes of white flowers nearly as long; ovate, pubescent sepals; single-veined petals; and a subacute, cordate, minutely pubescent lip.

Plant small, epiphytic, shortly repent on an erect rhizome, ramicauls produced 1–3 mm apart, roots slender. Ramicauls ascending-erect, slender, 3–5 cm long, with a loose, tubular sheath from below the middle, and 1–2 other sheaths about the base. *Leaf* erect, coriaceous, narrowly ovate, acute, 4–6 cm long, including a petiole 1–1.2 cm long, the blade 1–1.3 cm wide in dry state, cuneate below into the petiole. *Inflorescence* 2–3; 3.5–4 cm long, the racemes erect, simultaneously many-flowered; floral bracts oblique, acute, acuminate, 2.5 mm long; pedicels 1.5 mm long; ovary 1 mm long; the peduncle ca. 1 cm long, from a node near the apex of the ramicaul; *flowers* white; *sepals* pubescent, expanded, ovate, subacute to obtuse, 3-veined, connate below the middle, the dorsal sepal 2 mm long, 1.75 mm wide, the lateral sepals, 2 mm long, 1.6 mm wide; *petals* broadly ovate, concave, the margin thickened at the obtuse apex, 0.5 mm long, 0.6 mm wide, 1-veined; *lip* subcordate, minutely pubescent, 0.6 mm long, 0.6 mm wide, 0.3 mm deep, shallowly concave below the bar, without a glenion, the apex thick, subacute to narrowly rounded, the dorsum with a low, central, rounded callus, the base truncate, hinged to the base of the column; *column* clavate, 0.5 mm wide and long, the anther and the bilobed stigma apical.

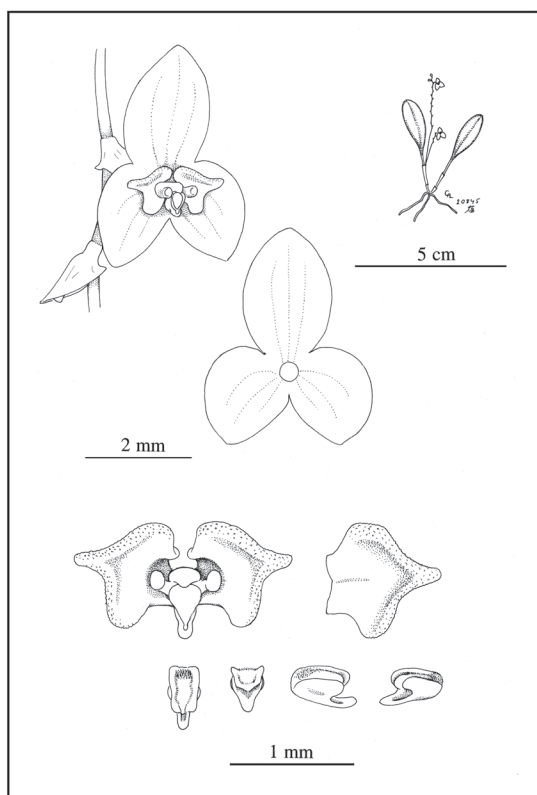
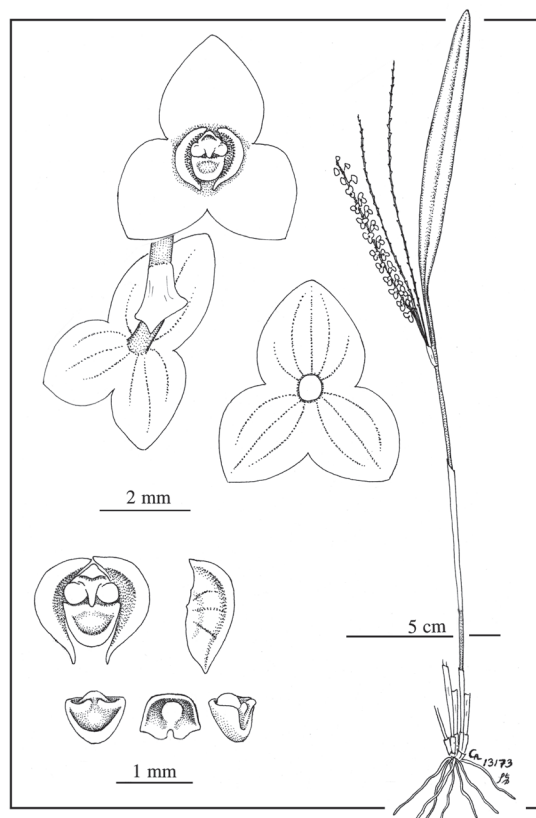
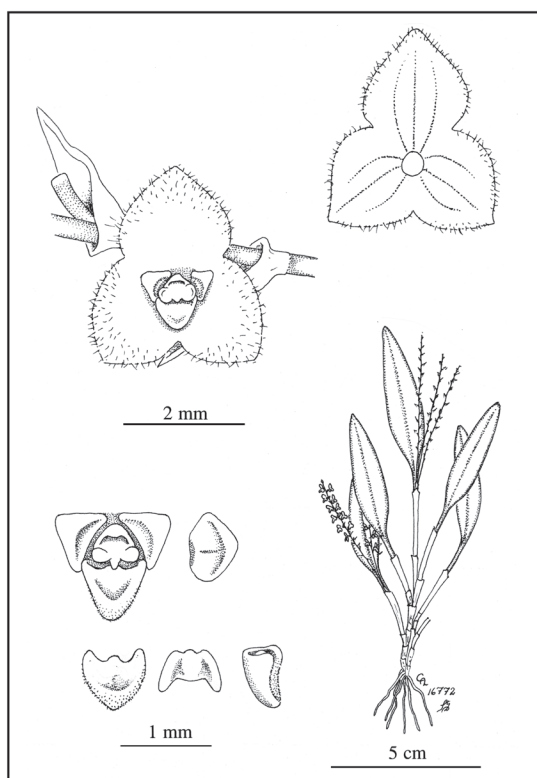
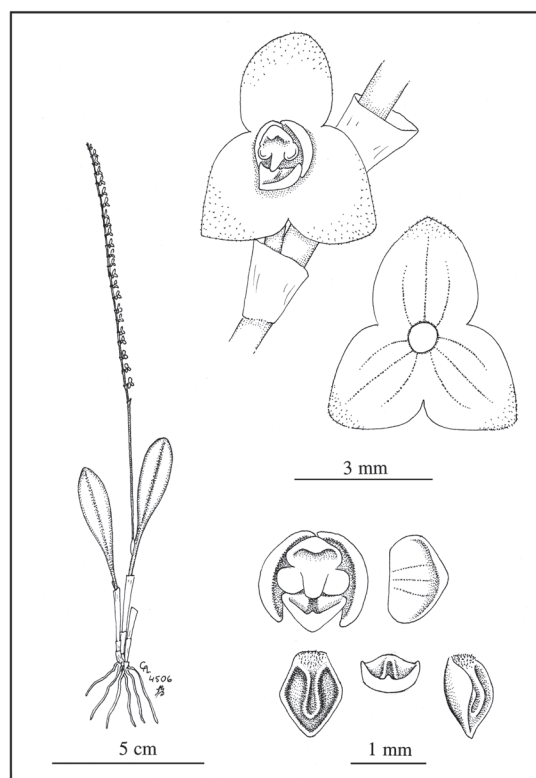
Etymology: From the Latin *curiosus*, “curious,” referring to the unusual habit.

This small, shortly repent species is characterized by an erect rhizome that produces erect, ascending ramicauls only a millimeter or two apart. The leaves are acute and narrowly ovate, about as long as the two or three densely flowered racemes of white flowers that accompany it. The sepals are ovate and pubescent; the petals are single-veined; and the subcordate lip is minutely pubescent.

Stelis decipula Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Nariño: terrestrial on road embankment E of Ricaurte, 3000 m, 1 November 1979, C. Luer, J. Luer & A. Hirtz 4506 (Holotype: SEL). Fig. 12.

This small, caespitose species is characterized by a second, many-flowered raceme that far surpasses an oblong, obtuse leaf; minutely pubescent, subacute sepals; three-veined petals; and a rhomboid lip with a longitudinal callus that resembles a loop of rope used for a snare.

Plant small, epiphytic, densely caespitose; roots slender. Ramicauls erect, slender, 2.5–3.5 cm long, with loose, tubular sheaths, one above the middle, one below the middle, and one at the base. *Leaf* erect, coriaceous, oblong, obtuse, 3–5.5 cm long, 1.5 cm wide in the dry state, cuneate below into a petiole ca. 1.5 cm long. *Inflorescence* single; 13–15 cm tall, the raceme erect, congested, secund, many-flowered with most flowers open simultaneously, floral bracts tubular, close, obtuse, 2 mm long; pedicels 1.5 mm long; ovary 1 mm long; the peduncle ca. 5 cm long, subtended by a spathe 8–10 mm long, from a node near the apex of the ramicaul; *sepals* light purple, expanded, minutely pubescent, similar, ovate, subacute to obtuse, 2.3 mm long, 2.3 mm wide, 3-veined, connate in lower quarter; *petals* yellow, transversely ovate, obtuse, concave, 3-veined, 1 mm long, 1.5 mm wide; *lip* yellow, rhomboid, 1.3 mm long, 1 mm

Figure 9. *Stelis cochliops* Luer & HirtzFigure 10. *Stelis crascens* Luer & R.EscobarFigure 11. *Stelis curiosa* Luer & R.EscobarFigure 12. *Stelis decipula* Luer & R.Escobar

wide, 0.6 mm deep, shallowly concave with a thick, basal bar that bears a descending glenion with thick margins, now disguised as a callus that is concave medially, round toward the apex, appearing as a loop, or horseshoe, beginning at the minutely pubescent, basal callus, 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 *decipula*, “a snare, a trap,” referring to the callus of the lip.

This small, caespitose species is characterized by an elongated, secund raceme far exceeding oblong, obtuse leaves; minutely pubescent, subacute, three-veined sepals; and three-veined petals. Most distinctive is the rhomboid lip with a longitudinal callus resembling a loop of rope, similar to the horseshoe-shaped callus of *Stelis hippocrepica* Luer & R.Escobar described herein.

Stelis digitifera Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA: Antioquia: Yarumal, road to Briceño, Quebrada Río El Oro, 1850 m, 16 March 1989, C. Luer, J. Luer, S. Dalström & W. Teague 14179 (Holotype: MO). Fig. 13.

This medium-sized, caespitose species is distinguished by a subaxillary raceme of flowers with an elongated dorsal sepal and short, rounded, semiconnate lateral sepals; single-veined petals; and an acute lip.

Plant medium in size, densely caespitose; roots slender. Ramicauls erect, 4–6 cm long, with a tubular sheath from below the middle, and another 2 sheaths below and at the base. *Leaf* erect, coriaceous, elliptical, acute, 6–9 cm long, including a petiole 1–2 cm long, the blade 1–1.3 cm wide. *Inflorescence* 1–2; 10–17 cm long, the raceme a erect, subaxillary, distichous, many-flowered raceme, with many nutant flowers produced simultaneously; floral bracts oblique, acute, acuminate, 6–7 mm long; pedicels 2 mm long; ovary 1.5–2 mm long; the peduncle 6–7 cm long, subtended by a spathe 7–8 mm long, from a node above the abscission layer; *sepals* glabrous, purple, the dorsal sepal oblong, obtuse, 6.5 mm long, 3 mm wide, 3-veined, connate basally, the lateral sepals transversely ovate, subcircular, oblique, obtuse, more or less antrorse, 3 mm long, 3.5 mm wide, 3-veined connate to near the middle; *petals* yellow, transversely ovate, concave, broadly rounded at the apex with the margin narrowly thickened, without a transverse callus, 0.7 mm long, 1 mm wide, 1-veined; *lip* yellow, triangular, 0.5 mm long, 0.8 mm wide, 0.6 mm deep, shallowly concave below shallowly sulcate bar, the dorsum elliptical, with a small, central, suborbicular callus, the base truncate, hinged to the base of the column; *column* semiterete, ca. 0.8 mm long and wide, the anther and the bilobed stigma apical.

Etymology: From the Greek *digitifer*, “finger-bearing,” referring to the elongated dorsal sepal.

This species is remarkable for an oblong dorsal sepal far longer than little, rounded lateral sepals. The dorsal sepal is held horizontally in the nutant flower. The lateral sepals are partially connate and more or less antrorse, suggesting an incomplete synsepal. The petals are single-veined. The apex of the triangular lip is acute.

Stelis duquei Luer & R.Escobar, *nom. nov.* TYPE: COLOMBIA. Antioquia: Cocorná, between Santuario and Cocorná, 2000–2200 m, flowered in cultivation by O. Duque at his finca above Río Cocorná, 20 March 1989, C. Luer 14328 (Holotype: MO). Fig. 14.

Stelis occulta O.Duque [as *S. oculata*], Orquideología 27(2): 131. 2011, *nom. inval.*

This large, caespitose species is distinguished by one or two many-flowered racemes much longer than elliptical, acute leaves; pale green flowers with dorsal sepal seven-veined and the synsepal deeply concave; thick, three-veined petals; and a subquadrate lip obtuse apex, a shortly cleft bar and a trilobed dorsum.

Plant large, epiphytic, densely caespitose; roots slender. Ramicauls erect, 10–12 cm long, with a tubular sheath on the middle third and another 1–2 sheaths below and at the base. *Leaf* erect, coriaceous, elliptical-ovate, acute, 12–15 cm long including a petiole 2 cm long, the blade 3–5 cm wide in the dry state. *Inflorescence* 1–2; 20–30 cm long, the racemes erect, strict, subcongested, distichous, many-flowered, with many flowers open simultaneously; floral bracts tubular, obtuse, 4 mm long, 5 mm wide; pedicels 3 mm long; ovary 3 mm long; the peduncle ca. 10 cm long, from a node below the apex of the ramicaul, with a slender spathe ca. 1 cm long; flowers greenish white; *sepals* glabrous or microscopically pubescent, the dorsal sepal erect, ovate, obtuse, 8–11 mm long, 7–10 mm wide, 7-veined, connate basally, the lateral sepals connate to the tip into a deeply concave synsepal, 8–10 mm long, 10–12 mm wide expanded, each sepal 4–5 veined; *petals* transversely ovate, concave, the apex rounded with a broad, rough margin, 1.5 mm long, 2 mm wide, 3-veined, with a transverse carina; *lip* subquadrate, 1 mm long, 1.3 mm wide, 1 mm deep, concave below a shortly cleft bar without an obvious glenion, the apex obtuse, more or less slightly acuminate at the tip, the dorsum with a transverse, trilobed callus, the base truncate, hinged to the base of the column; *column* clavate, ca. 1.3 mm wide and long, the anther and the bilobed stigma apical.

Eponymy: Named for the late Dr. Oscar Duque of Medellín, Colombia, who originally described it as *Stelis occulta* [as *S. oculata*], from the Latin *occultus*, “occult, hidden,” referring to the author’s claim that the species had escaped attention, in spite of being frequent in the “central Andes” of Colombia.

Additional specimens examined: COLOMBIA. Antioquia: Carmen de Viboral, 2400 m, collector unknown, flowered in cultivation at Colomborquídeas, 15 December 1992, R. Escobar 5034 (MO); without collection data, flowered in cultivation at Colomborquídeas, 23 May 1995, C. Luer 17578 (MO).

Oscar Duque found this robust species to be frequent, but not previously recorded. A long raceme of large, light green flowers with a deeply concave synsepal exceeds a large, elliptical leaf. The dorsal sepal is seven-veined, and the petals are thick and three-veined. The lip is type A with a shortly bifid bar, an obtuse apex, and with a three-lobed callus on the dorsum. The name *S. oculata* is invalid because the author did not specify where the type had been deposited.

Stelis euglossina Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Santander: Bucaramanga, E of Bucaramanga toward Berlin, 3000 m, 7 May 1984, C. Luer, J. Luer & R. Escobar 10191 (Holotype: MO). Fig. 15.

This small, caespitose species is distinguished by elliptical leaves with shorter ramicauls exceeded by a strict raceme with prominent floral bracts; ovate, subacute, pubescent sepals; three-veined petals; and a proportionately large, protruding, elliptical lip.

Plant small, epiphytic, densely caespitose, roots slender. Ramicauls erect, slender, 1.5–2 cm long, enclosed by a loose, tubular sheath above the middle, another sheath below the middle, and 1 at the base. *Leaf* erect, coriaceous, elliptical, subacute, 2–2.5 cm long including a petiole ca. 5 mm long, the blade 5–8 mm wide in dry state, cuneate below into the petiole. *Inflorescence* single; 4–5 cm tall, the raceme erect, strict, distichous, nearly simultaneously flowered; floral bracts oblique, acute, 5 mm long; pedicels 2 mm long; ovary 2 mm long; peduncle 1–3 cm long, from a node near the apex of the ramicaul; flowers yellow or purple; *sepals* expanded, pubescent within, ovate, acute to subacute, 3-veined, connate basally, 5 mm long, 3 mm wide low in the raceme to 3 mm long, 2 mm wide near the tip; *petals* thin, transversely ovate, concave, narrowly thickened on the broadly obtuse apical margin, 1.5 mm long, 2 mm wide, 3-veined; *lip* protruding, elliptical, 3 mm long, 2 mm wide, 2 mm deep, shallowly concave, with a widely cleft bar above the base, the apex shallowly bifid into a pair of obtuse tips, the dorsum narrow with a truncate base, hinged to the base of the column; *column* clavate, 1 mm long and wide, the anther with an elongated rostellum and the bilobed stigma apical.

Etymology: From the Greek *euglossina*, “with a good tongue,” referring to the labellum.

Additional specimens examined: COLOMBIA. Santander: Bucaramanga, between Bucaramanga and Berlin, 3200 m, 27 April 1982, C. Luer, J. Luer & R. Escobar 7603 (SEL).

This small, caespitose species is distinguished by prominently bracted, many-flowered racemes that exceed elliptical leaves, and medium-sized flowers. The sepals are pubescent, ovate, and varying from five millimeters long low in the raceme to three millimeters long near the tip; the petals are thin and three-veined; and the protruding, elliptical lip is three millimeters long. The lip is shallowly concave with the bar widely cleft, and the apex is shallowly notched.

Stelis euthema Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Antioquia: Frontino, El Plateado, near the gold mine, 2060 m, 5 May 1983, C. Luer, J. Luer, R. Escobar *et al.* 9041 (Holotype: SEL). Fig. 16.

This small, caespitose species is distinguished by a loose, flexuous, several-flowered raceme about as long as, or a little longer than the leaves; ovate, obtuse, pubescent, three-veined sepals; three-veined petals with a verrucose margin; and an ovoid, shallowly concave lip with a descending dorsum.

Plant small, epiphytic, densely caespitose, roots slender. Ramicauls erect, slender, 8–15 mm long, enclosed by a tubular sheath and another 1–2 sheaths about the base. *Leaf* erect, coriaceous, elliptical, subacute to obtuse, 25–45 mm long including a petiole 5–12 mm long, the blade 5–7 mm wide in dry state, cuneate below into the petiole. *Inflorescence* single; 3.5–4.5 cm tall, the raceme loose, flexuous, with 5–8 flowers; floral bracts oblique, acute, 2 mm long; pedicels 1.5 mm long; ovary 1.5 mm long; peduncle 5–12 mm long, from a node near the apex of the ramicaul; flowers dull white, suffused with purple; *sepals* expanded, ciliate and long-pubescent near the margins, ovate, obtuse, concave and connate in basal third, 3-veined, the dorsal sepal 3.5 mm long, 4 wide, the lateral sepals 3 mm long, 3.5 mm wide; *petals* purple, transversely elliptical, concave, the apex broadly obtuse, thickened and minutely verrucose on the margin, 1.3 mm long, 2.5 mm wide, 3-veined; *lip* purple, ovoid with the apex rounded, 1.5 mm long, 1 mm wide, 0.75 mm deep, shallowly concave and smooth below the bar (the upper margin of the lip), with a very small cleft or glenion, the dorsum deflexed to the base, hinged to the base of the column; *column* clavate, elongate, 2 mm long, 1.75 mm wide across the expanded stigmatic lobes, the anther and the stigmatic lobes apical.

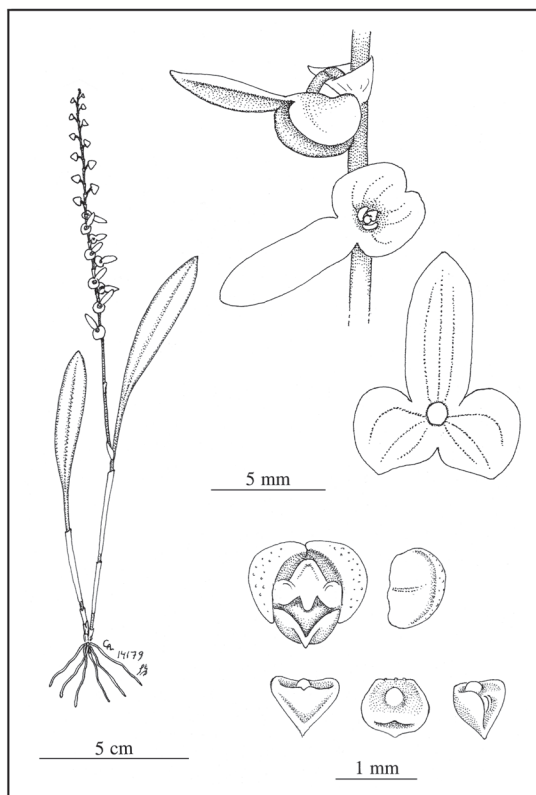
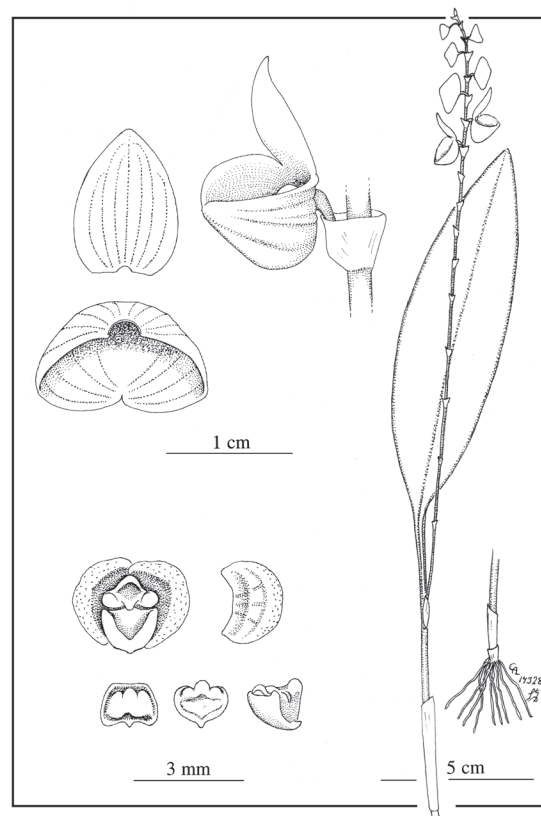
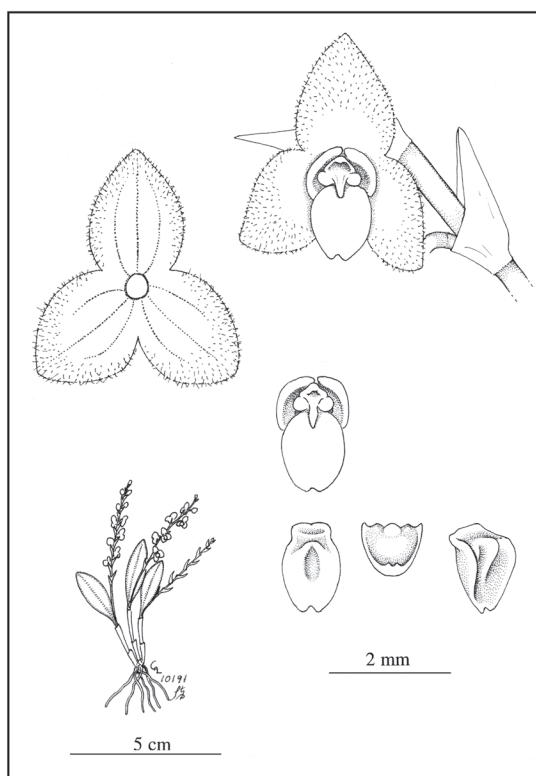
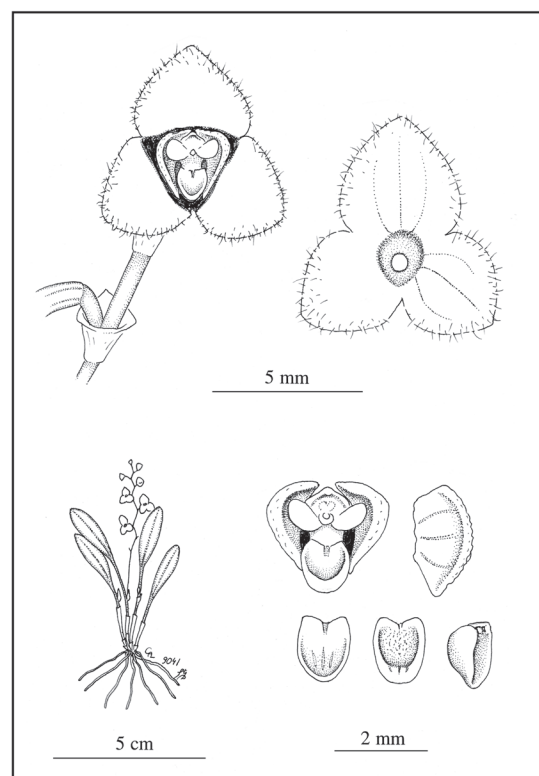
Etymology: From the Greek *euthemos*, “well-arranged, neat,” referring to the morphology of the plant.

This small, caespitose species is distinguished by a loose, flexuous, several-flowered raceme that often exceeds the leaves. The sepals are long-pubescent, obtuse and connate in their basal thirds to create a triangular cavity for the central apparatus. The petals are concave with a verrucose margin. The upper margin of the lip is the bar between the slightly concave anterior surface and the deflexed dorsum. The column exceeds the dorsum of the lip with expanded apical lobes overlying the petals.

Stelis exaltata Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Risaralda: Pueblo Rico, Alto de Linea, 2100 m, 11 May 1993, C. Luer, J. Luer & R. Escobar 16791 (Holotype: MO). Fig. 17.

This large, densely caespitose species is distinguished by slender, fasciculate ramicauls about 40 centimeters long and thin leaves about 20 centimeters long and six centimeters wide; a many-flowered raceme only slightly longer; large flowers with multiveined dorsal sepal and synsepal; three-veined petals; and a subquadrate, shallowly concave, rounded apex.

Plant large, epiphytic, densely caespitose; roots slender. Ramicauls erect, fasciculate, slender, 35–45 cm long, with a close tubular sheath above the middle, another sheath below the middle and at the base. *Leaf* erect, thinly coriaceous, ovate, acute, acuminate, 15–20 cm long, 5–6 cm wide in the dry state, cuneate below into a petiole 2–2.5 cm long. *Inflorescence* solitary, to 22 cm long, the raceme erect, secund, densely many-flowered; floral bracts oblique, acute, 4–5 mm long; pedicels 3 mm long; ovary 2 mm long; the peduncle ca. 10 cm long, subtended by a spathe ca. 1 cm long, from a node below the apex of the ramicaul; *sepals*

Figure 13. *Stelis digitifera* Luer & R.EscobarFigure 14. *Stelis duquei* Luer & R.EscobarFigure 15. *Stelis euglossina* Luer & R.EscobarFigure 16. *Stelis euthema* Luer & R.Escobar

purple, glabrous, the dorsal sepal oblong-ovate, obtuse, 13 mm long, 7 mm wide, 9-veined, connate to the synsepal 2 mm, the lateral sepals connate into a concave, obtuse synsepal, 11 mm long, 11 mm wide, 11-veined; *petals* yellow, thick, transversely elliptical, 2 mm long, 2 mm wide, 3-veined, with the apical margin broadly thickened, obtuse, with a transverse callus; *lip* yellow, subquadrate, 0.8 mm long, 1.5 mm wide, 0.8 mm deep, shallowly concave below a thick bar with a glenion, round at the apex, the dorsum with three, rounded calli, the base truncate, hinged to the base of the column; *column* ca. 1 mm broad and long, the proportionately small anther and stigmatic lobes apical.

Etymology: From the Latin *exaltatus*, "very high," referring to the great height of the plant, excluding the inflorescence.

This species is one of the largest of the genus, standing over half a meter tall excluding the inflorescence. The leaves are nearly as large as the largest of *Stelis allenii* L.O. Williams, but they are petiolate and thinly coriaceous and acuminate, instead of sessile, thickly coriaceous and non-acuminate. The flowers are similar to those of *Stelis maxima* Lindl., the species differing mostly in their vegetative parts.

Stelis flagellifera Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Putumayo: between Sibundoy and Mocoa, 2200 m, 20 January 1979, C. Luer, J. Luer & O. Ospina 3719 (Holotype: SEL). Fig. 18.

This large species is characterized by an acute, elliptical leaf longer than the ramicaul; a much longer, whiplike inflorescence; a five-veined dorsal sepal; three-veined petals; and an obtuse lip with a glenion and with three, rounded calli on the dorsum.

Plant large, epiphytic, caespitose. Ramicauls erect, relatively stout, 3–5 cm long, with a loose, tubular sheath from below the middle, and another 1–2 sheaths at the base. **Leaf** erect, coriaceous, ovate, acute, 5–12 cm long including a petiole 1–2 cm long, 2–2.5 cm wide in the dry state, cuneate below into the petiole. **Inflorescence** single; 17–33 cm long, the raceme erect, strict, lax below, congested above, distichous, many-flowered with most flowers open simultaneously; floral bracts oblique, acute, 3–4 mm long; pedicels 2 mm long; ovary 1.5 mm long; the peduncle 10–18 cm long, subtended by a spathe 6–8 mm long, from a node below the apex of the ramicaul; *sepals* dull gray above the middle, dull purple below the middle, glabrous, expanded, broadly ovate, obtuse, connate to near the middle, the dorsal sepal 4 mm long, 4.5 mm wide, 5-veined, the lateral sepals 3 mm long, 4 mm wide, 4-veined; *petals* purple, semilunate, 1 mm long, 2 mm wide, 3-veined, the apex broadly rounded, thickened, concave below a transverse carina; *lip* subquadrate, 1 mm long, 1.4 mm wide, 0.8 mm deep, concave below the bar with a glenion, the apex obtuse, thickened, the dorsum slightly concave with a row of three small, rounded calli, 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.

Etymology: From the Latin *flagellifer*, "whip bearer," referring to the long inflorescence.

This large species is characterized by acute, ovate leaves borne by slightly shorter Ramicauls with loose, tubular sheaths. A whiplike inflorescence far exceeds the leaf. The flowers are medium in size with the dorsal sepal five-veined. The petals are three-veined, and the lip is type A with a glenion and three small calli on the dorsum.

Stelis flexuella Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Nariño: above abandoned Magnesium mine, E of Ricaurte, 1800 m, 1 November 1979, C. Luer, J. Luer & A. Hirtz 4514 (Holotype: SEL). Fig. 19.

This small, caespitose species is distinguished by elliptical leaves; much shorter ramicauls; an elongating, flexuous raceme; broadly ovate, obtuse sepals; round, three-veined petals; and a subquadrate lip shallowly concave below the bar with a narrow glenion.

Plant small, epiphytic, caespitose, roots slender. Ramicauls erect, slender, 5–8 mm long, with a tubular sheath from near the base. **Leaf** erect, coriaceous, elliptical, obtuse, 10–25 mm long including a petiole 5–8 mm long, the blade 5–8 mm wide in dry state, cuneate below into the petiole. **Inflorescence** single; 7 cm long, the raceme flexible, flexuous, successively flowering, often with a single flower; floral bracts oblique, acute, 1 mm long; pedicels 1.5 mm long; ovary 1 mm long; the peduncle 1.5–2 cm long, from a node from the ramicaul within the sheath; flowers purple; *sepals* glabrous, expanded, broadly ovate, obtuse, 3-veined, connate to below the middle, 1.5–3 mm long, 1.5–1.75 mm wide; *petals* transversely obovate, concave, slightly thickened on the margin of a rounded apex, 0.75 mm long, 1 mm wide, 3-veined; *lip* subquadrate, type A, 0.8 mm long, 1 mm wide, 0.75 mm deep, shallowly concave below the bar with a narrow glenion, the apex rounded with a narrow margin, the dorsum convex centrally around an extension of the glenion, the base truncate, hinged to the base of the column; *column* clavate, 1 mm wide, the anther and the bilobed stigma apical.

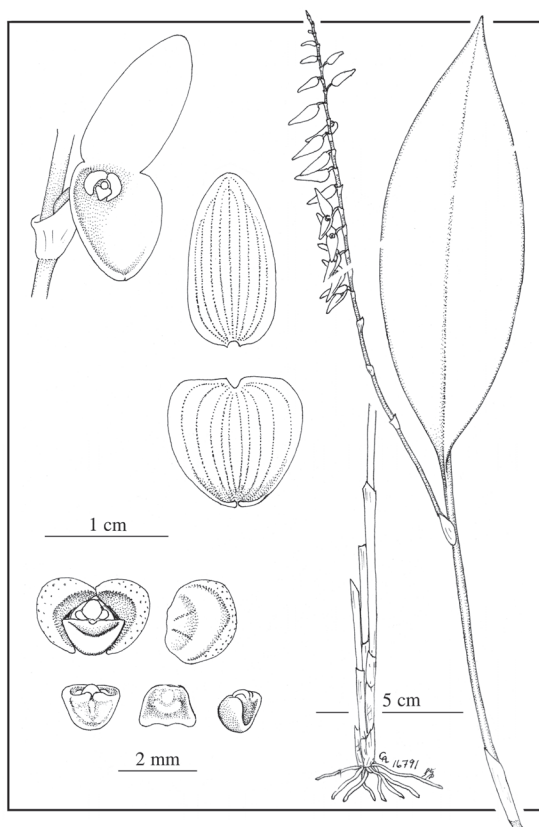
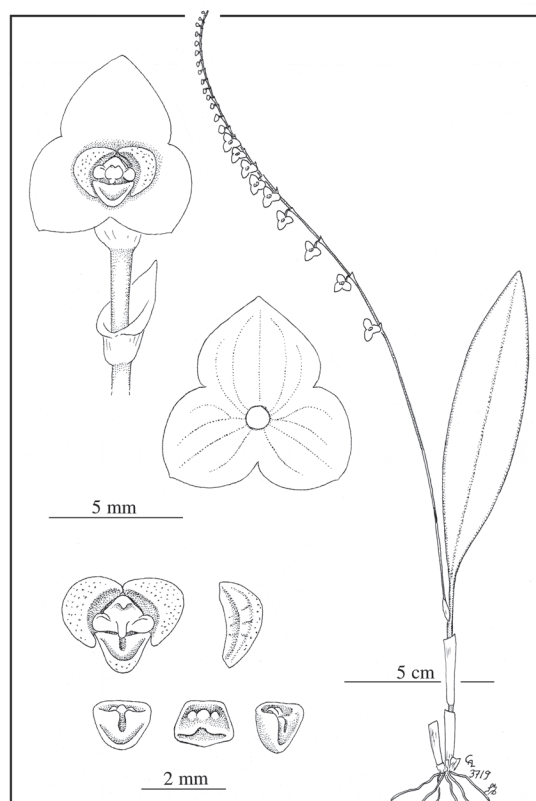
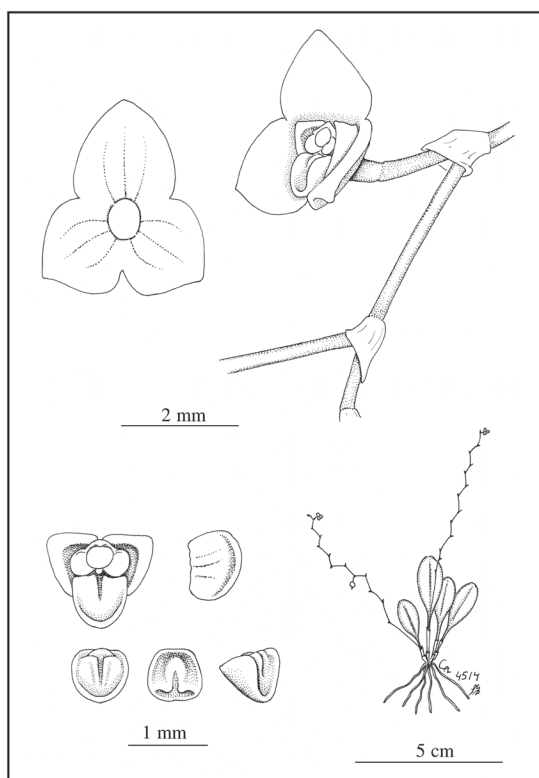
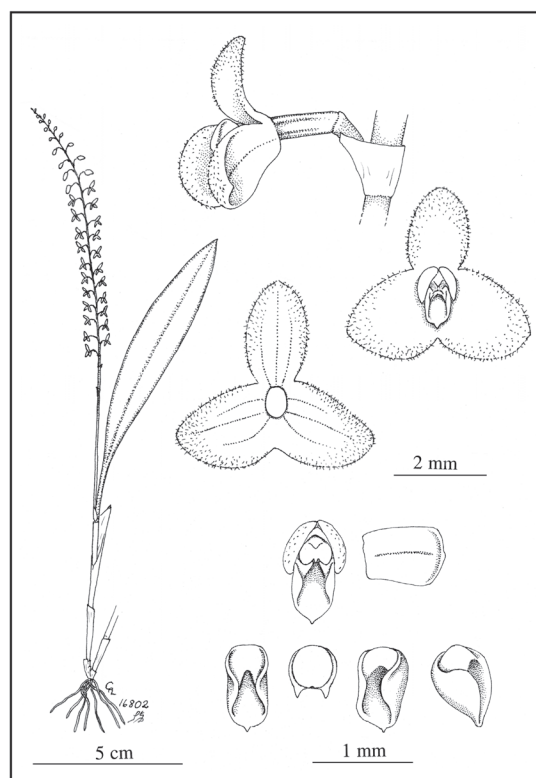
Etymology: From the Latin *flexuella*, "a little flexuous one," referring to the raceme.

This dainty, little species is characterized by ramicauls shorter than elliptical leaves; a flexuous, successively flowered raceme far exceeding the leaves, usually with only a single flower; purple flowers with obtuse, broadly ovate sepals; subcircular, three-veined petals; and a subquadrate, type A lip with a narrow glenion that extends from the bar both downward and backward onto the dorsum.

Stelis fornix Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Valle del Cauca: Alto de Los Galápagos, 2050 m, 13 May 1993, C. Luer, J. Luer & R. Escobar 16802 (Holotype: MO). Fig. 20.

This medium-sized species is characterized by acute, elliptical leaves exceeded by a slender, secund, multiflowered raceme with shortly pubescent sepals; oblong, single-veined petals; and a deeply hollowed out lip that gapes to expose a thin, broadly incised bar.

Plant medium in size, epiphytic, caespitose. Ramicauls erect, slender, 2.5–4 cm long, with a loose, tubular sheath

Figure 17. *Stelis exaltata* Luer & R.EscobarFigure 18. *Stelis flagellifera* Luer & R.EscobarFigure 19. *Stelis flexuella* Luer & R.EscobarFigure 20. *Stelis fornix* Luer & R.Escobar

from below the middle, and another 1–2 sheaths at the base. *Leaf* erect, coriaceous, elliptical, acute, 8–11 cm long including a petiole 2.5–3 cm long, the blade 1.2–1.5 cm wide in the dry state, narrowed below into the petiole. *Inflorescence* 1–2; 15–18 cm tall, the raceme erect congested, distichous in liquid to secund when pressed and dry, many-flowered with most flowers open simultaneously, floral bracts oblique, acute, 1 mm long; pedicels 1.5 mm long; ovary 1.5 mm long; the peduncle 6 cm long, subtended by a slender spathe ca. 15 mm long, from a node at the apex of the ramicaul; flowers greenish white; *sepals* shortly pubescent within, ovate, obtuse, connate basally, 3-veined, the dorsal sepal 2 mm long, 1.1 mm wide, the lateral sepals antrorse, 2 mm long, 1.6 mm wide; *petals* thin, oblong, shallowly concave, 1 mm long, 0.75 mm wide, 1-veined, subverrucose on the truncate apex; *lip* subhemispherical, deeply hollowed out, 1 mm long, 0.5 mm wide, 0.5 mm deep, the sides erect with thin rounded, margins supporting a partially cleft bar above a deep cavity, the apex obtuse without thickening, the rounded base connate to the base of the column; *column* stout, ca. 0.5 mm long and wide, the anther and the stigmatic lobes apical.

Etymology: From the Latin *fornix*, “a vault, or crypt,” referring to the hollowed-out lip.

This medium-sized species with acute, elliptical leaves is exceeded by a slender, long-pedunculate raceme of crowded flowers. The sepals are shortly pubescent, three-veined and obtuse, the dorsal sepal being noticeably narrower than the lateral sepals. The petals are thin and single-veined. The lip is deeply concave between thin, erect, rounded margins, and below a convex, shortly cleft, shelf-like bar. The apex is thin and obtuse.

Stelis galapagosensis Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Valle del Cauca: Alto de Los Galápagos, 2050 m, at the pass between Valle del Cauca and Chocó, 13 May 1993, C. Luer, J. Luer & R. Escobar 16816 (Holotype: MO). Fig. 21.

This tall, caespitose species is characterized by slender ramicauls much longer than acute, ovate leaves with two racemes as long, or a little longer; a five-veined dorsal sepal; three-veined petals; and a shallow lip with a broad, obtuse margin, and a suborbicular callus on the deflexed dorsum.

Plant medium to large, epiphytic, caespitose. Ramicauls erect, slender, 5–14 cm long, with a short, tubular sheath from near the middle, and another short, tubular sheath at the base. *Leaf* erect, coriaceous, ovate, acute, 6–9 cm long including a petiole 1.5 cm long, the blade 1–1.8 cm wide in the dry state, cuneate below into the petiole. *Inflorescence* 2; 8–11 cm tall, the raceme erect congested, with opposite-facing rows, many-flowered with most flowers open simultaneously; floral bracts oblique, acute, 2 mm long; pedicels 1 mm long; ovary 1 mm long; the peduncle ca. 1 cm long, subtended by a slender spathe 7 mm long, from a node near the apex of the ramicaul; *sepals* expanded, shiny purple externally, greenish purple within, glabrous, ovate, obtuse, connate to near the middle, the dorsal sepal 3.5 mm long, 4 mm wide, 5-veined, the lateral sepals oblique,

3 mm long, 3 mm wide, 4-veined; *petals* purple, transversely semilunate, 0.75 mm long, 2 mm wide, the apex broadly rounded, concave below a wide, flat margin, 3-veined; *lip* purple, shallowly ovoid, shallowly concave below a narrow, transverse bar, the apex obtuse with a broad, flat margin similar to that of the petals, 1 mm long, 1 mm wide, 0.5 mm deep, the dorsum acutely deflexed, with a suborbicular callus at the base, the base connate to the base of the column; *column* stout, clavate, ca. 1 mm long and wide, the anther and the stigmatic lobes apical.

Eponymy: Named for the Alto de Los Galápagos where this species was collected.

This caespitose species is characterized by long, slender ramicauls with shorter, acute, ovate leaves and a pair of racemes equaling or surpassing the leaves. The flowers with broadly ovate sepals are produced in two opposite-facing ranks. The petals are semilunate with wide, flat margins. The lip is remarkable with a narrow, transverse bar between the anterior surface and the acutely deflexed dorsum with a suborbicular callus.

Stelis giraffina Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. without collection data, flowered in cultivation at Colomborquídeas, 23 May 1995, C. Luer 17581 (Holotype: MO). Fig. 22.

This small, long-repent species is distinguished by obtuse, three-veined sepals and a long, erect column that exceeds the thin, three-veined petals and the subdiscoid lip.

Plant small, epiphytic, long-repent, the rhizome stout, ascending, ca. 2 cm between ramicauls, roots slender. Ramicauls erect, slender, 2–3 cm long, with a tubular sheath from below the middle third, and another sheath at the base. *Leaf* erect, coriaceous, elliptical, subacute, 3.5–5 cm long including a petiole ca. 1 cm long, the blade 0.8–1.2 cm wide in dry state, cuneate below into the petiole. *Inflorescence* single; 10–11 cm long, the racemes strict to subflexuous, successively many-flowered with ca. 10 flowers open simultaneously; floral bracts tubular, obtuse, 2 mm long; pedicels 2 mm long; ovary 1 mm long; the peduncle 4–5 cm long, from a node above the apex of the ramicaul; *sepals* similar, green, diffusely dotted with minute, purple cells, glabrous, expanded, ovate, obtuse, connate below the middle, 2.5 mm long, 2.5 mm wide. *Petals* green, thin, concave, transversely semilunate, the apex broadly obtuse and thickened on the margin, 0.6 mm long, 1.5 mm wide, 3-veined; *lip* green, shallowly subquadrate, 1.2 mm long, 1.6 mm wide, 0.4 mm deep, shallowly concave below a bar with a glenion, the apex broadly rounded with a narrow margin, the dorsum deflexed 180° down about half the length of the lip, where it is hinged to the base of the column; *column* erect, ca. 1.2 mm wide across the stigmatic lobes at the apex, the shaft terete, ca. 1.5 mm long.

Etymology: Named for the mammalian genus *Giraffa*, remarkable for an elongated neck.

This long-repent, ascending species is most remarkable for the terete, elongated shaft of the column that lifts the clinandrium and the pair of stigmatic lobes above the lip

and petals. The sepals are obtuse; the petals are thin and three-veined; and the lip is shallow and subdiscoid, with a rounded apex and a glenion descending from a narrow bar across the width, while the dorsum is acutely deflexed.

Stelis grvida Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Antioquia: Yarumal, along Río El Oro, 2700 m, 1 May 1984, C. Luer, J. Luer & R. Escobar 10079 (Holotype: MO). Fig. 23–24.

Among the small, or medium-sized, caespitose species, this species is distinguished by narrowly linear leaves; ovate, three-veined sepals; single-veined, or faintly three-veined petals; and a minute, subquadrate lip with a proportionately large, smooth, ovoid callus.

Plant small to medium size, epiphytic, densely caespitose; roots slender. Ramicauls erect, slender, 1–6 cm long, enclosed by a thin tubular sheath above the middle, another sheath below the middle, and at the base. *Leaf* erect, coriaceous, narrowly linear, acute, 3–7 cm long, 1–3 mm wide when dry, narrowed below to the base. *Inflorescence* single; 4–12 cm long, the raceme erect, strict, congested, many-flowered, with many flowers open simultaneously, flowering to near the base; floral bracts oblique, acute, 1–1.5 mm long; pedicels 1 mm long; ovary 0.75–1 mm long; the peduncle less than 1 cm long, from a node at the apex of the ramicaul; flowers light yellow-green; *sepals* glabrous, ovate, subacute to obtuse, 3-veined, the dorsal sepal 1.5 mm long, 1.25 mm wide, the lateral sepals oblique, 1 mm long, 1 mm wide; *petals* membranous, transversely elliptical, concave, broadly obtuse, slightly thickened along the apical margin, without a transverse callus, 0.4 mm long, 0.6 mm wide, single-veined or faintly 3-veined; *lip* subquadrate, 0.6 mm long, 0.6 mm wide, 0.4 mm deep, shallowly concave within the broadly obtuse, apical margin and surrounding a proportionately large, smooth, ovoid callus that fills the disc and extends to the base, the base broadly truncate, hinged to the base of the column; *column* ca. 0.5 mm long and wide, the anther and the stigmatic lobes apical.

Etymology: From the Latin *gravidus*, “pregnant,” referring to the appearance of the callus of the lip.

Additional specimens examined: COLOMBIA. Antioquia: La Union, along a stream 5 km W of Mesopotamia, 2400 m, April 1988, C. Luer, J. Luer & R. Escobar 13076 (MO); Yarumal, Quebrada del Oro, 1850 m, C. Luer, J. Luer, S. Dalström & W. Teague 14184; Yarumal, along Río El Oro, N of Yarumal, 2700 m, 1 May 1984, C. Luer, J. Luer & R. Escobar 10070 (MO).

This little, caespitose species with narrowly linear leaves, is variable in the length of the leaf, and the length of the inflorescence. The minute flowers are borne in strict, congested racemes. The sepals are glabrous and three-veined, and the petals are thin, faintly three-veined or with only one vein visible. The lip is filled with a proportionately large, smooth, ovoid callus with the rounded summit protruding upward beneath the column.

Stelis hansenacea Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Risaralda: E of and above Santa Rosa de

Cabal. 2800 m, 12 May 1993, C. Luer, J. Luer & R. Escobar 16796 (Holotype: MO). Fig. 25.

This medium-sized, caespitose species is distinguished by massive deposits of a granular substance in all floral parts; the flowers are produced in a crowded, secund raceme; the sepals are overlapping, broadly ovate and without visible veins; the petals are transversely ovate; and the lip is oblong, thick and shallowly concave above the middle.

Plant medium in size, epiphytic, densely caespitose; roots slender. Ramicauls erect, slender, 5–6 cm long, enclosed by a tubular sheath from below the middle, another sheath below the middle, and another at the base. *Leaf* erect, coriaceous, elliptical, subacute, 6–8 cm long including a petiole 2 mm long, the blade 1.3–1.7 mm wide in the dry state, cuneate below to the petiole. *Inflorescence* single; 9–10 cm long, the raceme erect, congested, secund, many-flowered, with many, overlapping flowers open simultaneously; floral bracts oblique, acute, 3 mm long, pedicels 0.5 mm long; ovary 1 mm long; the peduncle 2–3 mm long, subtended by a slender spathe ca. 1 cm long, from a node at the apex of the ramicaul; *sepals* dull green, broadly ovate, obtuse, minutely ciliate, saturated with numerous, irregular clumps of an unknown substance, the dorsal sepal 2 mm long, 2.25 mm wide, the lateral sepals 1.5 mm long, 2 mm wide, without visible veins; *petals* transversely ovate, concave, broadly obtuse, thickened on the margin, 0.6 mm long, 0.9 mm wide, with few mysterious clumps, faintly 3-veined; *lip* type B, ovate, obtuse, 0.8 mm long, 0.8 mm wide, 0.6 mm deep, concave below a curved bar, with few clumps, the dorsum featureless, the base hinged to the base of the column; *column* ca. 1 mm long and wide, the anther and the stigmatic lobes apical.

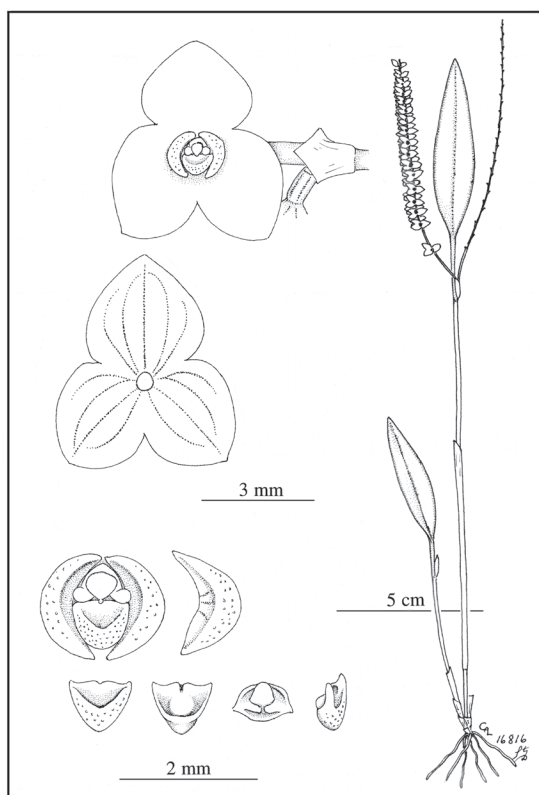
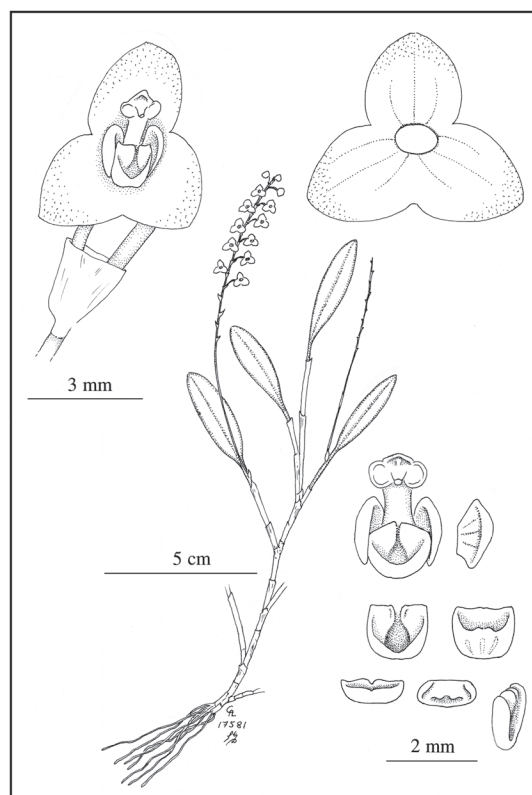
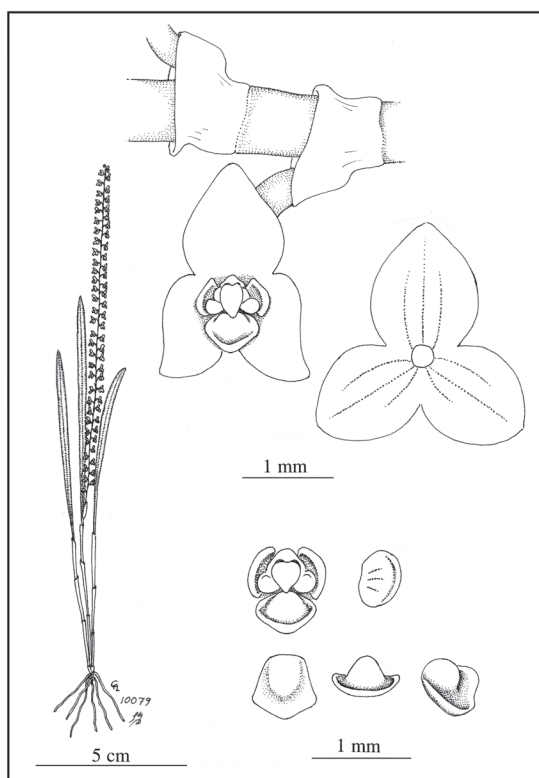
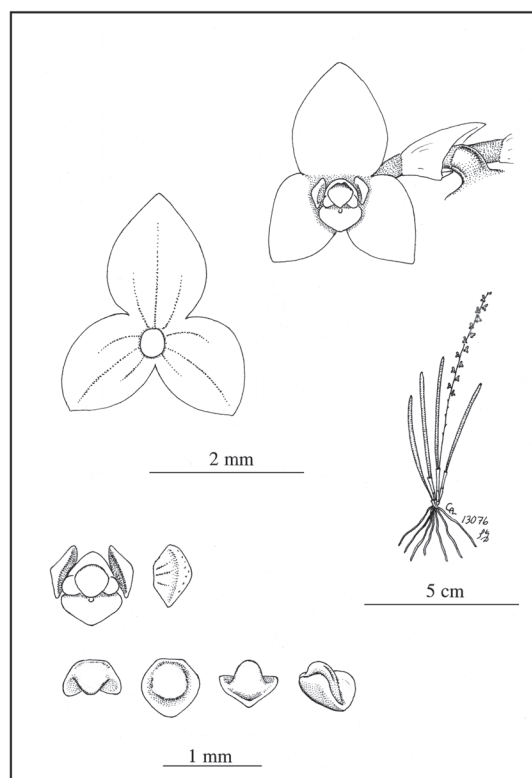
Etymology: Named for the appearance of the superficially similar skin lesions of Hansen’s disease, leprosy, to those of the floral parts of this species.

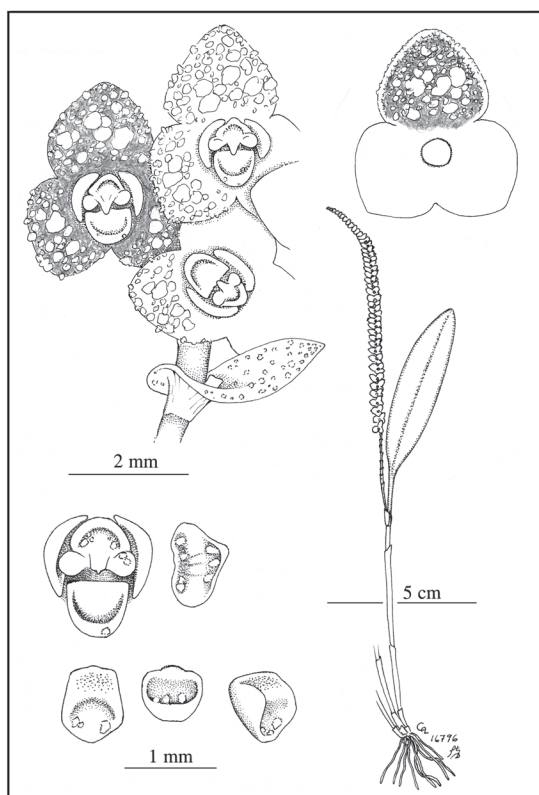
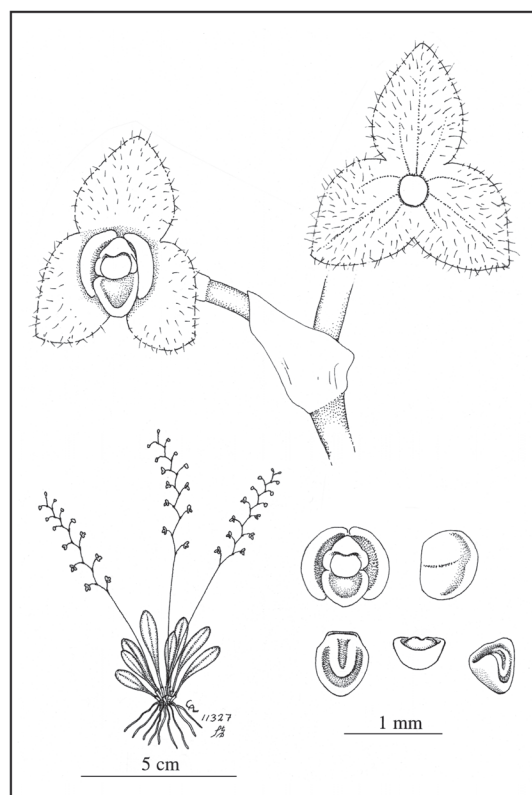
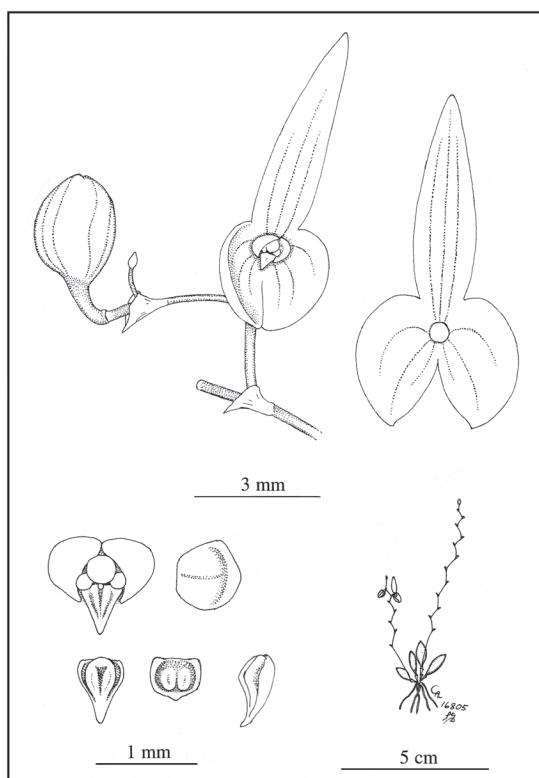
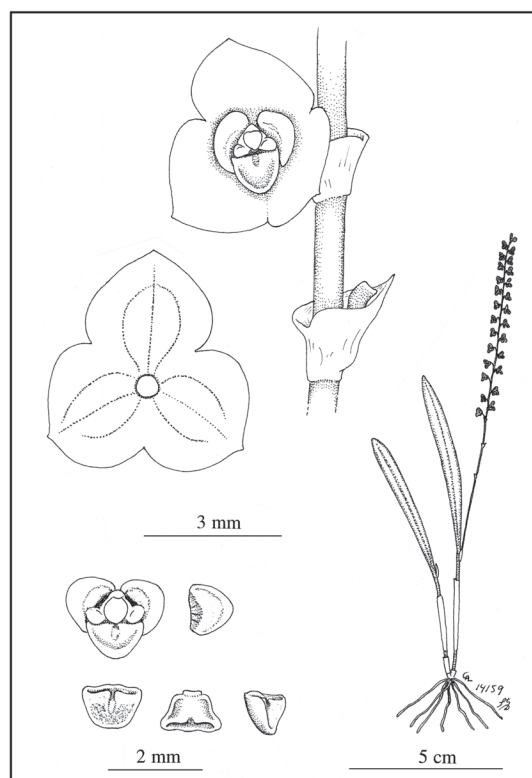
Vegetatively, this medium-sized, caespitose species is similar to many, but it is distinguished by diffuse deposits of a granular substance in all floral parts. The identity of this substance is unknown. It seems to proliferate as seen in the formation of crystals, already noted in *Stelis coralloides* Luer & Hirtz, and seen in *Stelis leprina* Luer & R. Escobar described herein. Could it be an infection by a fungus?

The flowers of this “susceptible” species are produced in an extremely congested raceme of overlapping flowers facing the same direction. The sepals are ovate, obtuse, and filled with this mysterious substance, and without visible veins. The petals are three-veined with the veins “infected.” The lip is a simple type A.

Stelis hippocrepica Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Norte de Santander: at the pass N of Villacaro, 2850 m, coll. 11 May 1984 by C. Luer, R. Escobar & D. Portillo, flowered in cultivation at Colomborquídeas, 11 May 1985, C. Luer 11327 (Holotype: MO). Fig. 26.

This very small, caespitose species is characterized by leaves far surpassed by a subflexuous, successively flowered raceme; long-pubescent, ovate, three-veined sepals; thin, single-veined petals; and a lip with a horseshoe-shaped callus.

Figure 21. *Stelis galapagosensis* Luer & R. EscobarFigure 22. *Stelis giraffina* Luer & R. EscobarFigure 23, *Stelis gravis* Luer & R. EscobarFigure 24, *Stelis gravis* Luer & R. Escobar

Figure 25. *Stelis hansenacea* Luer & R.EscobarFigure 26. *Stelis hippocrepica* Luer & R.EscobarFigure 27. *Stelis index* Luer & R.EscobarFigure 28. *Stelis ionantha* Luer & R.Escobar

Plant very small, epiphytic, caespitose; roots slender. Ramicauls slender, 10–15 mm long, enclosed by 1–2 thin, close, tubular sheaths. *Leaf* erect, coriaceous, narrowly elliptical-obovate, subacute to obtuse, 20–25 mm long including an indistinct petiole 5–10 mm long, the blade 2–4 mm wide in the dry state, narrowed below to the petiole and base. *Inflorescence* single; 5–8 cm long, the raceme erect, subflexuous, distichous, many-flowered; floral bracts oblique, acute, 1–1.5 mm long; pedicel 1.5 mm long; ovary 0.75–1 mm long; the peduncle 2–3 cm long, filamentous, from the apex of a ramicaul; *sepals* yellow, suffused with brown toward the base, long-pubescent within, elliptical-ovate, obtuse, 3-veined, the dorsal sepal 1.4 mm long, 1 mm wide, the lateral sepals 1 mm long, 1 mm wide; *petals* yellow, thin, transversely elliptical, concave, the apical margin rounded, thickened, 0.6 mm long, 0.6 mm wide, 1-veined; *lip* suffused with brown, ovoid, 0.6 mm long, 0.5 mm wide, 0.25 mm deep, concave within the round, thickened apical margin, surrounding the elevated, thickly margined, horseshoe-shaped glenion on the bar that extends onto the dorsum, the base truncate, hinged to the column-foot; *column* stout, 0.5 mm long and wide, the anther and small stigmatic lobes apical.

Etymology: From the Latin *hippocrepicus*, “horseshoe-shaped,” referring to the callus of the lip.

Additional specimens examined: COLOMBIA. Norte de Santander: Páramo de Jurisdicciones, 2600 m, 10 May 1902, *C. Luer, J. Luer & R. Escobar 10218* (MO); Páramo de Jurisdicciones, 2600 m, coll. May 1982, flower in cultivation at Colomborquídeas, 21 April 1983, *C. Luer 8745* (SEL).

This very small, caespitose species is characterized by narrowly elliptical, long-petiolate leaves that become surpassed by a loose, distichous, many-flowered raceme with filamentous peduncle and rachis. The sepals are ovate, subacute and either coarsely or minutely dense-pubescent within, and the petals are single-veined. The lip is concave between the thickened margin of the round apex, and a narrow, horseshoe-shaped callus extending forward from the dorsum across the bar.

Stelis index Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Valle del Cauca: Alto de los Galapagos, at the pass between Valle del Cauca and Chocó, 2050 m, 13 May 1993, *C. Luer, J. Luer, R. Escobar & A. DeWilde 16805* (Holotype: MO). Fig. 27.

This minute species is distinguished by a flexuous, successively flowering raceme with flowers that bear a proportionately large, erect, narrowly ovate dorsal sepal, and free lateral sepals adherent into a synsepal.

Plant minute, epiphytic, caespitose; roots slender. Ramicauls erect, 2 mm long, enclosed by a loose, tubular sheath at the base. *Leaf* purple, erect, coriaceous, elliptical, acute, 7–8 mm long, 2.5 mm wide, 1.5 mm thick. *Inflorescence* solitary; 4–5 cm long, the raceme erect, flexuous, many-flowered, with 1–2 flowers produced successively; floral bracts oblique, acute, 1.5 mm long; pedicels 1.5 mm long; ovary 1 mm long; the peduncle ca. 1.5 cm long from the

tip of the ramicaul; *sepals* dull purple, glabrous, the dorsal sepal erect, narrowly ovate, acute, 5 mm long, 1.5 mm wide, 3-veined, connate basally less than 1 mm, the lateral sepals ovate, concave, oblique, obtuse, free, but adherent to the tip to form a concave synsepal, 2.5 mm long, 2.5 mm wide unexpanded together, 6-veined; *petals* light yellow, transversely obovate, concave, 0.75 mm long, 0.75 mm wide, 1-veined, the apex broadly rounded with a slightly thickened margin, without a transverse callus; *lip* yellow-green, triangular-ovate, acute, 0.75 mm long, 0.5 mm wide, 0.4 mm deep, the bar modified into a longitudinal callus that occupies the lip from base to tip, shallowly channelled, the dorsum slightly convex, the base truncate, hinged to the base of the column; *column* semiterete, 0.5 mm long, 1 mm wide, the anther and the bilobed stigma apical.

Etymology: From the Latin *index*, “the forefinger,” in allusion to the appearance of the dorsal sepal.

Additional specimens examined: Antioquia: Frontino, Alto de Caves, 2050 m, 4 May 1983, *C. Luer, J. Luer & R. Escobar 8944* (SEL).

This species is tiny with a proportionally large flower that is borne singly in a flexuous, successively flowering raceme. A long, narrow dorsal sepal stands above a synsepal composed of adherent lateral sepals; the petals are single-veined, and the lip is triangular with a large callus extending from the base to the acute tip.

Stelis ionantha Luer & R. Escobar. TYPE: COLOMBIA. Antioquia: Yarumal, along road to El Cedro, 1850 m, 15 March 1989, *C. Luer, J. Luer, S. Dalström & W. Teague 14159* (Holotype: MO). Fig. 28.

This small, caespitose species is characterized by small, purple flowers evenly spaced in a distichous raceme about twice longer than a narrowly elliptical leaf; obtuse, three-veined sepals; three-veined petals; and a lip with a rounded apex and a glenion.

Plant small, epiphytic, densely caespitose. Ramicauls erect, slender, 3–4 cm long, with a tubular sheath from below the middle, and 1–2 sheaths below and at the base. *Leaf* erect, coriaceous, subacute to obtuse, narrowly elliptical, 5–8 cm long including a petiole, ca. 1 cm long, the blade 0.4–0.5 cm wide in the dry state, narrowly cuneate below to the petiole. *Inflorescence* 1–2; 10–11 cm long, the raceme erect, congested, distichous, many-flowered with most flowers open simultaneously; floral bracts oblique, acute, 2–2.5 mm long; pedicels 1.5 mm long; ovary 1 mm long; the peduncle ca. 5 cm long, subtended by a spathe 6–7 cm long, from a node at the apex of the ramicaul; flowers purple; *sepals* glabrous, broadly ovate, obtuse, 3-veined, connate to near the middle, the dorsal sepal 2.6 mm long, 3 mm wide, the lateral sepals, 2.2 mm long, 3 mm wide; *petals* transversely ovate, 1 mm long, 1 mm wide, 3-veined, concave, the apex broadly obtuse, with the margin thickened, with a thick, transverse carina; *lip* subquadrate, 0.8 mm long, 1.3 mm wide, 0.8 mm deep, type A, the apex rounded with thickened margin, concave below the bar with a glenion, 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 Greek *ionanthos*, “violet-colored flowers,” referring to the purple flowers.

This small species is distinguished by narrowly elliptical leaves with the inflorescence twice as long. The raceme is erect and crowded with evenly spaced, purple flowers. The sepals are broadly to transversely ovate, obtuse and three-veined. The petals are three-veined below a thick, transverse carina. The lip is type A.

Stelis lancifera Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Nariño: near the pass between Pasto and La Cocha, 3000 m, 21 January 1979, *C. Luer & J. Luer 3733* (Holotype: SEL). Fig. 29.

This tall, caespitose species is characterized by ramicauls much longer than elliptical, petiolate leaves; a distichous raceme no longer than the leaf; flat flowers with transversely ovate, seven-veined dorsal sepals; thick, three-veined petals; and a short lip with rounded apex.

Plant large, epiphytic, caespitose; roots slender. Ramicauls erect, slender, 18–20 cm long, with a close, tubular sheath above the middle, and another 2 sheaths below and at the base. **Leaf** erect, coriaceous, elliptical, acute, petiolate, 11–13 cm long including a distinct petiole 1.5–2 cm long, the blade 2.5–3 cm wide in the dry state, cuneate below into the petiole. **Inflorescence** solitary; 10–12 cm tall, the raceme erect, distichous, strict, many-flowered, with several flowers open simultaneously; floral bracts oblique, acute, 3 mm long; pedicels 1.5 mm long; ovary 2.5 mm long; the peduncle ca. 1 cm long, subtended by a spathe 1 cm long, from a node below the apex of the ramicaul; **sepals** yellow, suffused with purple, expanded, glabrous, transversely ovate, obtuse, connate below the middle, the dorsal sepal, 4.5 mm long, 5 mm wide, 7-veined, the lateral sepals oblique, 3.5 mm long, 4 mm wide, 4-veined; **petals** yellow, thick, transversely obovate, 1 mm long, 2 mm wide, 3-veined, concave below the broadly rounded apex with a thickened margin, with a transverse carina; **lip** yellow, shallowly obovoid, 0.6 mm long, 1.3 mm wide, 1 mm deep, concave below the bar with a glenion, the apex broadly rounded, the dorsum slightly convex with thickening of the three veins, 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 *lancifer*, “spear-bearing,” referring to the lance-like appearance of the plant.

This large, tall, caespitose species is distinguished by slender ramicauls much longer than an elliptical, abruptly petiolate leaf; and racemes about as long as the leaf. The dorsal sepal is transversely ovate and seven-veined; the lateral sepals each 4-veined; the petals are thick, three-veined; and the lip is a short type A.

Stelis lappacea Luer & Teague, *sp. nov.* TYPE: COLOMBIA. Antioquia: El Retiro, above Colomborquídeas, 2400 m, collected by Walter Teague, 17 April 1988, *C. Luer 13224* (Holotype: MO). Fig. 30.

Among the small, caespitose species, this species is distinguished by a second raceme with the lateral sepals

concave and antrorse, single-veined petals, and a lip with the basal half covered by a burr-like callus.

Plant small, epiphytic, densely caespitose; roots slender. Ramicauls erect, slender, 5–7 mm long, enclosed by a loose, tubular sheath and another sheath at the base. **Leaf** erect, coriaceous, elliptical, acute to subacute, 2–4 cm long including a petiole ca. 5 mm long, 6–7 mm wide when dry, cuneate below into the petiole. **Inflorescence** single; 5–6 cm long, the raceme erect, subcongested, many-flowered, secund, with most flowers open simultaneously; floral bracts tubular, obtuse, 1.5 mm long, pedicels 1 mm long; ovary 1 mm long; the peduncle ca. 2 cm long, from a node at the apex of the ramicaul; **sepals** light yellow, glabrous, connate in lower quarter, ovate, subacute, 3-veined, the dorsal sepal 2.5 mm long, 1.6 mm wide, the lateral sepals oblique, more or less concave, antrorse, 2 mm long, 1.5 mm wide; **petals** yellow, thin, concave, transversely elliptical, slightly thickened across the broadly obtuse apex, without a transverse callus, 0.5 mm long, 0.7 mm wide, 1-veined; **lip** yellow, subquadrate, 0.5 mm long, 0.5 mm wide, 0.3 mm deep, shallowly concave below an indistinct, bifid bar to the acute tip, the dorsum with a thick, burrlike callus below the middle, the base broadly truncate, hinged to the base of the column; **column** ca. 0.5 mm long and wide, the anther and the stigmatic lobes apical.

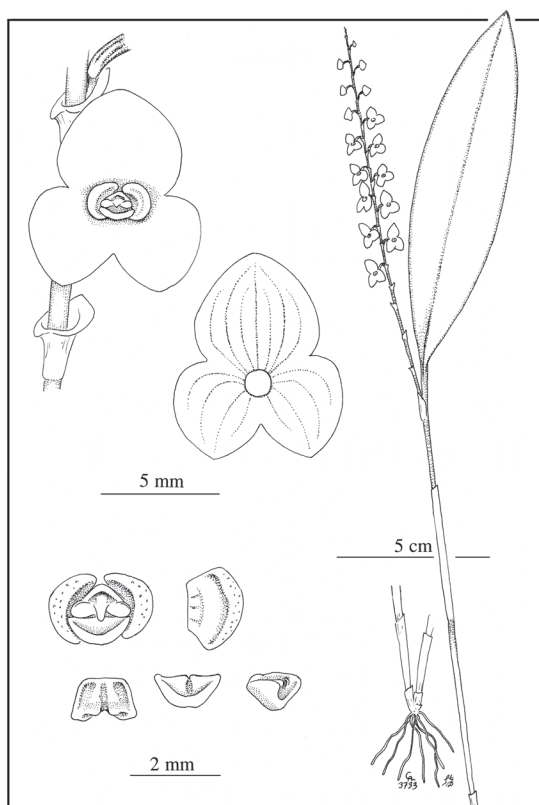
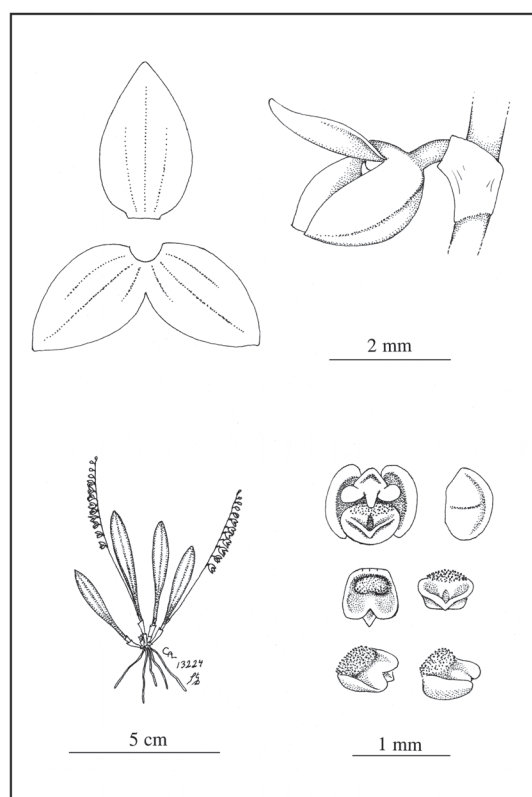
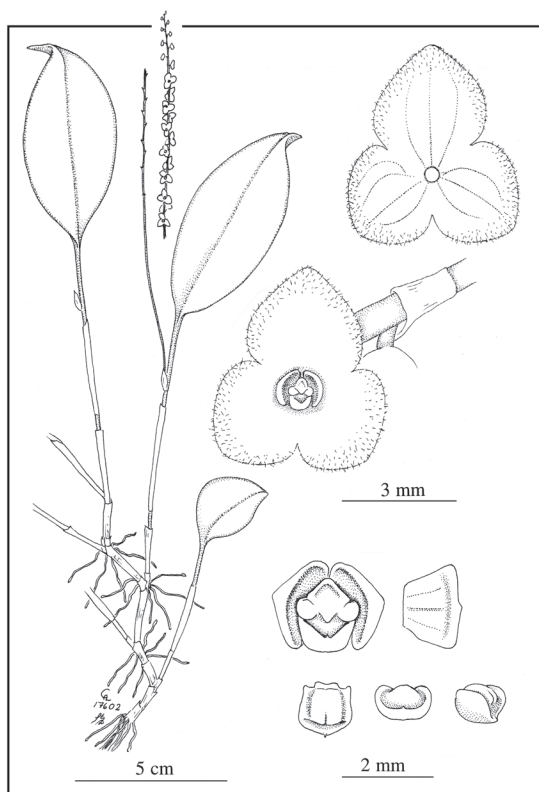
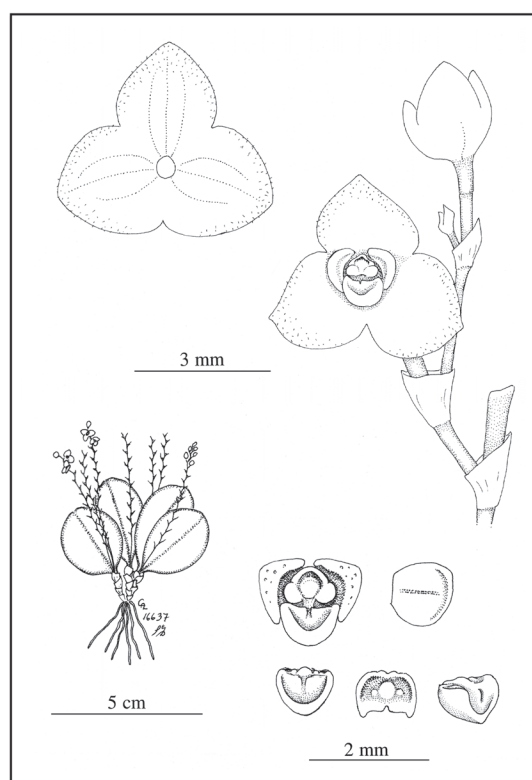
Etymology: From the Latin *lappaceus*, “like a burr,” referring to the callus of the lip.

This little, caespitose species is distinguished by elliptical leaves and a twice longer, secund raceme with light yellow flowers. The lateral sepals are antrorse, ovate, slightly concave and three-veined, and the membranous petals are single-veined. The basal third of the subquadrate lip is covered by a burrlike callus.

Stelis lijiae Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. without collection data, flowered in cultivation at Colomborquídeas, 23 May 1995, *C. Luer 17602* (Holotype: MO). Fig. 31.

This large, repent species is distinguished by a stout, flexuous rhizome; elliptical leaves with an abruptly acuminate tip; an elongated, nearly simultaneously many-flowered raceme of yellow flowers with broadly ovate, minutely pubescent sepals; three-veined petals; and a subquadrate lip with a minute apiculum.

Plant large, epiphytic, repent, the rhizome stout, flexuous, 1.5 cm long between ramicauls; roots slender. Ramicauls erect, slender, 6–7 cm long, enclosed by a tubular sheath from near the middle, and another sheath from near the base. **Leaf** erect, coriaceous, elliptical, subacute, acuminate at the apex, 8–10 cm long including a petiole 2.5 cm long, the blade 2.5–3 cm wide, cuneate below to the petiole. **Inflorescence** solitary, 15–18 cm long, the raceme strict, distichous, nearly simultaneously many-flowered with most flowers open simultaneously; floral bracts tubular, obtuse, 3 mm long; pedicel 1.5 mm long; ovary 1 mm long; the peduncle ca. 7 cm long, subtended by a spathe 8–9 mm long, from a node below the apex of the ramicaul; flowers yellow; **sepals** expanded, minutely pubescent, broadly

Figure 29. *Stelis lancifera* Luer & R.EscobarFigure 30. *Stelis lappacea* Luer & TeagueFigure 31. *Stelis lijiae* Luer & R.EscobarFigure 32. *Stelis monetaria* Luer & R.Escobar

ovate, obtuse, 3-veined, the dorsal sepal 3 mm long, 3 mm wide, the lateral sepals 2.2 mm long, 2.75 mm wide, connate below the middle; *petals* thin, cuneate, concave, the apex truncate, the margin slightly thickened, 0.6 mm long, 1 mm wide, 3-veined; *lip* subquadrate, 0.5 mm long, 0.6 mm wide, 0.3 mm deep, concave below a shallowly cleft, rounded bar, the apex broadly obtuse with a minute, triangular apiculus, the dorsum with a broad, low, microscopically pubescent callus, base truncate, hinged to the column-foot; *column* stout, ca. 0.6 mm long and wide, the anther and stigmatic lobes apical.

Eponymy: Named for Lijia Posada who cultivates this unusual species at Colomborquídeas.

This large, repent species is characterized by a stout, markedly flexuous rhizome with an erect ramicaul at each angle about one and a half centimeters apart. The leaves are broadly elliptical with an abruptly acuminate tip. A many-flowered raceme exceeds the leaf; the petals are thin and three-veined; and the lip is subquadrate, type A, with a minute apiculus.

Stelis monetaria Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Antioquia: El Retiro, above Colomborquídeas, 2400 m, coll. by H. Arroyave, flowered in cultivation at Colomborquídeas, 5 May 1993, *C. Luer 16637* (Holotype: MO). Fig. 32.

This small, caespitose species is distinguished by subcircular, glaucous leaves borne by short ramicauls with large, loose sheaths; a successively single-flowered raceme; broadly obtuse, semiconnate sepals; single-veined petals; and thick lip round at the apex and with a dorsal callus.

Plant small, epiphytic, densely caespitose; roots slender. Ramicauls relatively stout, 8–10 mm long, enclosed by 3–4 loose, ribbed, tubular sheaths. *Leaf* erect, coriaceous, glaucous, broadly obovate to circular, broadly obtuse to rounded at the apex, 20–28 mm long, 15–20 mm wide, abruptly contracted at the base. *Inflorescence* 2–8; 3–4 cm long, the racemes flexuous, successively single-flowered, floral bracts acute, oblique, 2 mm long; pedicels 2–2.5 mm long; ovary 2.5–3 mm long; the peduncle ca. 0.5 cm long, subtended by a spathe ca. 7 mm long, from a node at the apex of the ramicaul; flowers purple; *sepals* microscopically pubescent, broadly ovate, obtuse, connate to near the middle, 3-veined, the dorsal sepal 2.5 mm long, 2.3 mm wide, the lateral sepals 2.5 mm long, 2.5 mm wide; *petals* thin, subcircular, 1 mm long, 1 mm wide, 1-veined, the apex broadly rounded, thickened, concave; *lip* type-A, thick, subquadrate, 0.75 mm long, 1 mm wide, 0.75 mm deep, shallowly concave below a thick bar with a minute glenion, the apex broadly rounded with a thickened margin, the dorsum with a low, rounded callus and a small callus at either side, the base truncate, hinged to the base of the column; *column* stout, ca. 1 mm long and wide, the anther and the bilobed stigma apical.

Etymology: From the Latin *monetarius*, “of the mint,” referring to the round, coin-like leaves.

This small species is distinguished by round, glaucous, overlapping leaves borne by short ramicauls clothed by

three or four loose, ribbed sheaths. A single, purple flower is produced successively in a flexuous raceme that exceeds the leaf. Broad, obtuse sepals are connate to near the middle; membranous, rounded petals are single-veined; and a thick lip is type A.

Stelis monetaria was made from a plant cultivated by Colomborquídeas. It is possible that it was pendent in its habitat.

Stelis mystriion Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Antioquia: Yarumal, road to Briceño, Quebrada El Oro, 1850 m, 16 March 1989, *C. Luer, J. Luer, S. Dalström & W. Teague 14180* (Holotype: MO). Fig. 33–34.

This medium-sized, caespitose species is characterized by narrowly elliptical leaves with shorter ramicauls; a distichous raceme that exceeds the leaf; three-veined sepals with the lateral sepals antrorse; single-veined petals; and a concave lip with a minute apiculus.

Plant medium in size, epiphytic, densely caespitose; roots slender. Ramicauls erect, slender, 2–6 cm long, with a tubular sheath from below the middle, and another 1–2 sheaths at the base. *Leaf* erect, coriaceous, narrowly elliptical, acute, 6–8 cm long including an ill-defined petiole 1–2 cm long, the blade 0.5–0.9 cm wide in the dry state, narrowed below to the base. *Inflorescence* single; 9–12 cm tall, the raceme erect, strict, distichous, nearly simultaneously many-flowered; floral bracts oblique, acute, 1.5–2 mm long; pedicel 1.5 mm long; ovary 1 mm long; the peduncle 1–2 cm long, subtended by a spathe ca. 1 cm long, from a node below the apex of the ramicaul; flowers purple; *sepals* glabrous, ovate, subacute, 3-veined, the dorsal sepal 3 mm long, 2.5 mm wide, the lateral sepals antrorse, 2.5 mm long, 2.25 mm wide, connate above the base; *petals* thin, transversely elliptical, concave, the apex broadly obtuse, the margin slightly thickened, 0.8 mm long, 1 mm wide, 1-veined; *lip* ovate, 1 mm long, 1 mm wide, 0.5 mm deep, concave below a narrow bar, the apex subacute, slightly incurved, with the tip shortly acuminate and minutely apiculate, the dorsum narrow, the base truncate, hinged to the base of the column; *column* stout, ca. 1 mm long and wide, the anther and stigmatic lobes apical.

Etymology: From the Greek *mystriion*, “a little spoon,” referring to the concave lip.

Additional specimens examined: COLOMBIA. Antioquia: Yarumal, N of Santa Rosa de Osa, 14 March 1989, 2580 m, *C. Luer, J. Luer, S. Dalström & W. Teague 14151* (MO).

This caespitose species is characterized by narrowly elliptical leaves and a many-flowered raceme that exceeds the leaf. The sepals are three-veined sepals with the lateral sepals antrorse. The petals are single-veined. The lip is spoon-shaped with a minute apiculus at the tip.

Stelis palimmeces Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Risaralda: road to TV antenna S of Pueblo Rico, 2400 m, 14 May 1993, *C. Luer, J. Luer, R. Escobar et al. 16832a* (Holotype: MO). Fig. 35.

This large, caespitose species is characterized by

ramicauls longer than acute, narrowly elliptical leaves, and a much longer, many-flowered raceme; broadly ovate, minutely sparsely pubescent sepals; thick, three-veined petals; and an ovoid lip with the dorsum tricallous.

Plant large, epiphytic, densely caespitose; roots slender. Ramicauls erect, stout, 10–20 cm long, enclosed by a tubular sheath from below the middle, and another 1–2 sheaths below and at the base. *Leaf* erect, coriaceous, narrowly elliptical, acute, petiolate, 9–11 cm long including a petiole 1.5–2 cm long, the blade 1–1.8 cm wide in dry state, cuneate below into the petiole. *Inflorescence* 1–2; 30–32 cm tall, the raceme erect, strict, distichous, many-flowered with many flowers open simultaneously; floral bracts oblique, acute, 4 mm long; pedicels 3 mm long; ovary 1.5 mm long; the peduncle stout, 18–20 cm long, from a node near the apex of the ramicaul; *sepals* color notes lost, sparsely minutely pubescent, transversely ovate, obtuse, 3-veined, connate to near the middle, the dorsal sepal 4 mm long, 4.5 mm wide, the lateral sepals 3.75 mm long, 4.23 mm wide; *petals* transversely ovate, 1.5 mm long, 2.3 mm wide, 3-veined, obtuse with a thickened margin, with a sulcate transverse carina; *lip* ovoid, 1.5 mm long, 1.5 mm wide, 1 mm deep, shallowly concave below the bar with a small glenion, the apex obtuse, the dorsum with a transverse, minutely trilobed callus, the base truncate, hinged to the base of the column; *column* clavate, ca. 1.5 mm wide and long, the anther and stigmatic lobes apical.

Etymology: From the Greek *palimmes*, “as long again,” referring to the length of the inflorescence.

This large, caespitose species is distinguished by stout ramicauls to 20 centimeters long; acute, narrowly elliptical leaves; and a stout, strict inflorescence to 30 centimeters tall with the peduncle about half the height. The sepals are broader than wide, three-veined, deeply connate, and with a sparse, short pubescence. The petals are thick with the transverse carina sulcate and bigibbous. The lip is type A with a transverse, minutely trilobed, dorsal callus.

Stelis papposa Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Antioquia: W of Boquerón, W of Medellín, 2180 m, 22 April 1983, C. Luer, J. Luer, R. Escobar *et al.* 8755 (Holotype: SEL). Fig. 36.

This large, caespitose species is characterized by ramicauls much longer than elliptical-oblong leaves; one to three racemes of minute, crowded flowers barely as long as the leaves; ovate, obtuse, minutely pubescent sepals; thin, single-veined petals; and an ovoid lip with the dorsum convex and microscopically short-pubescent.

Plant large, epiphytic, densely caespitose; roots slender. Ramicauls erect, slender, 10–18 cm long, with a short, close tubular sheath on the middle third, and another 1–2 sheaths below and at the base. *Leaf* erect, coriaceous, elliptical-oblong, subacute, petiolate, 7–11 cm long including a petiole 1.5–2 cm long, the blade 1.3–1.6 cm wide in dry state, cuneate below into the petiole. *Inflorescence* 1–3; 3–9 cm tall, the raceme erect, strict, secund, many-flowered with many flowers open simultaneously; floral bracts oblique, obtuse, 1.5 mm long, 1.5 mm wide; pedicels

1 mm long; ovary 1 mm long; the peduncle 1–2.5 cm long, from a node very near the apex of the ramicaul; flowers yellow; *sepals* minutely pubescent, broadly ovate, obtuse, 3-veined, connate in lower fourth, the dorsal sepal 1.8 mm long, 1.6 mm wide, the lateral sepals 1.5 mm long, 1.6 mm wide; *petals* transversely ovate, 0.8 mm long, 0.9 mm wide, 1-veined, broadly obtuse, concave with a thickened, sparsely pubescent margin, without a transverse carina; *lip* ovoid, 0.8 mm long, 0.8 mm wide, 0.5 mm deep, concave below a rounded bar with an indistinct glenion, the apex obtuse, the dorsum convex, microscopically sparsely pubescent, the base truncate, hinged to the base of the column; *column* clavate, ca. 0.8 mm wide and long, the anther and stigmatic lobes apical.

Etymology: From the Latin *pappus*, “down,” referring to the diffuse, minute pubescence of the sepals.

This large, caespitose species is distinguished by slender ramicauls to 18 centimeters long and bearing shorter, elliptical-oblong leaves. One to three crowded, many minutely-flowered racemes are shorter than, or slightly surpass the leaves. The sepals are obtuse, three-veined and minutely pubescent, and the single-veined petals are sparsely pubescent on the margin. The lip is type A with the dorsum convex and microscopically pubescent.

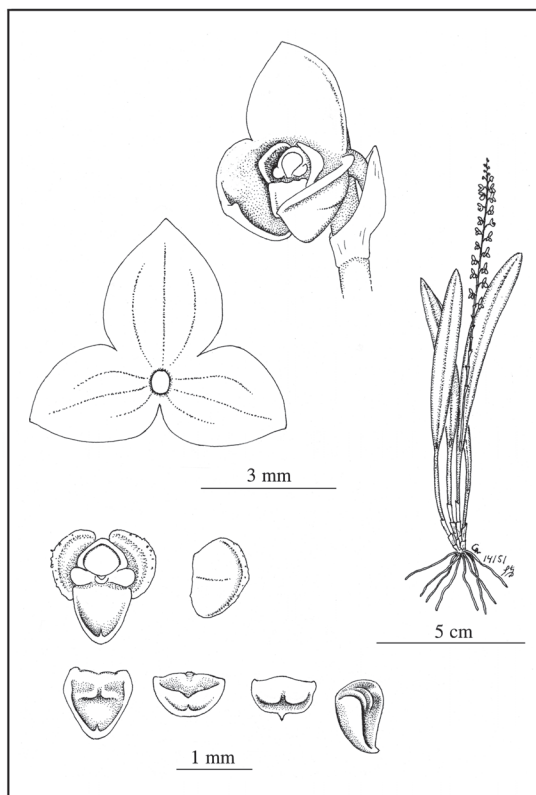
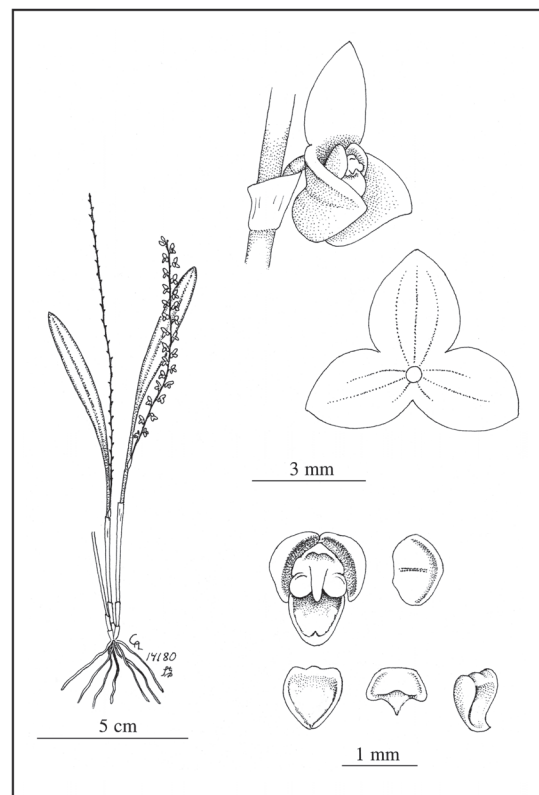
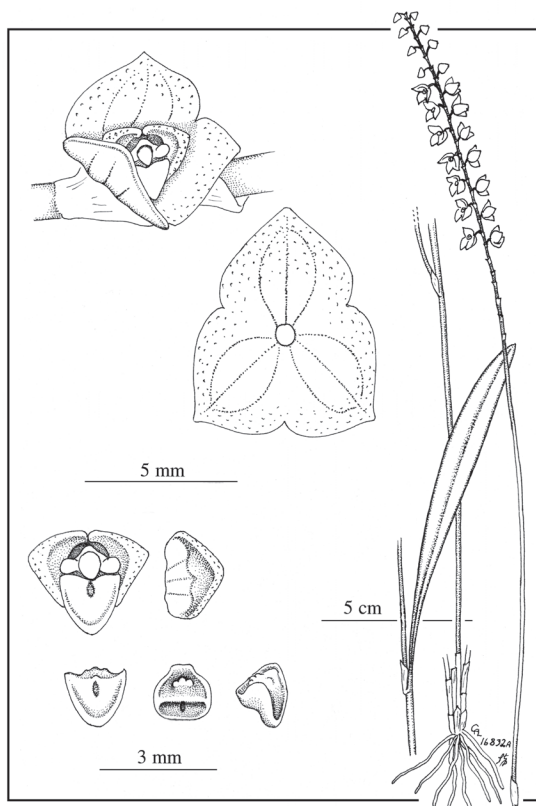
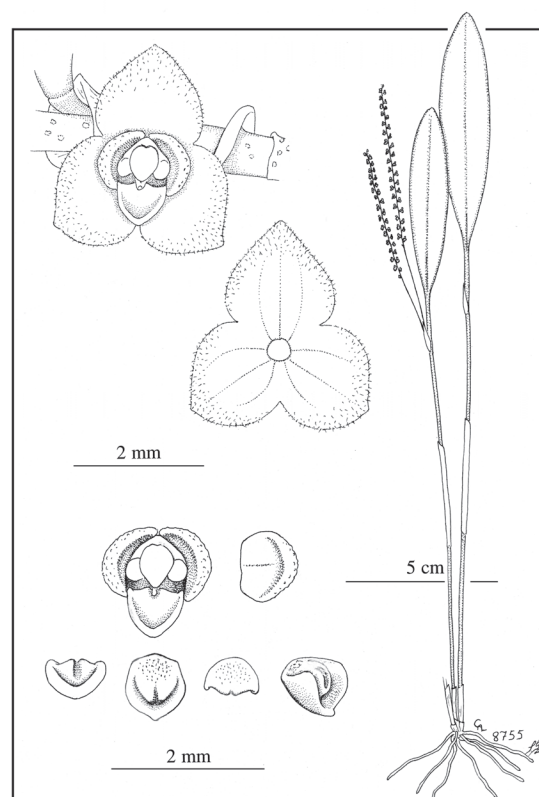
Stelis pauxilla Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Cauca: Páramo de Las Barbillas, 3150 m, 13 November 1982, C. Luer & R. Escobar 8365 (MO). Fig. 37.

This medium-sized, caespitose species is characterized by oblong, obtuse leaves and a few, shorter, many-flowered racemes; ovate, obtuse sepals; thin, single-veined petals; and an obtuse lip concave below a thick, bifid bar that is pubescent at the base.

Plant medium in size, epiphytic, caespitose; roots slender. Ramicauls erect, slender, 4–9 cm long, with a tubular sheath from below the middle, and another 1–2 sheaths at the base. *Leaf* erect, coriaceous, oblong, obtuse, 6–8 cm long, 1–1.8 cm wide in the dry state, cuneate below into a petiole 1–1.5 cm long. *Inflorescence* 2–4; 2–3.5 cm long, the raceme erect, congested, distichous, many-flowered; floral bracts tubular, obtuse, 1.5 mm long and wide; pedicels 1 mm long; ovary 1.25 mm long; the peduncle less than 1 cm long, subtended by a spathe ca. 5 mm long, from a node below the apex of the ramicaul; flowers purple; *sepals* glabrous, ovate, obtuse, connate near the base, 3-veined, the dorsal sepal 2 mm long, 2 mm wide, the lateral sepals more or less antrorse, 2 mm long, 1.75 mm wide; *petals* subcircular, concave, minimally thickened, if at all, at the rounded apex, 1 mm long, 1 mm wide, 1-veined; *lip* subquadrate, type A, 1.75 mm long, 1 mm wide, 0.75 mm deep, concave below a thick, shallowly cleft bar, the apex obtuse, the dorsum densely short-pubescent on the basal half, the base broadly 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 *pauxillus*, “a few,” referring to the few racemes in the inflorescence.

Vegetatively, this species is similar to others with a

Figure 33. *Stelis mystrion* Luer & R.EscobarFigure 34. *Stelis mystrion* Luer & R.EscobarFigure 35. *Stelis palimmeces* Luer & R.EscobarFigure 36. *Stelis papposa* Luer & R.Escobar

fascicle of racemes shorter than an oblong, obtuse leaf. However, *Stelis pauxilla* is distinguished from them by thin, single-veined petals, and a type A lip concave below a bifid bar, and shortly pubescent on the basal half of the dorsum.

Stelis pauxilla is similar to *Stelis tenuilabris* Lindl., but differs with a thick lip with a bifid bar, densely short-pubescent on the dorsum; and a column with large, exposed stigmatic lobes.

Stelis perbona Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Antioquia: Sonsón, Quebrada Oscura, between La Ceja and Sonsón, 2250 m, 29 April 1983, C. Luer, J. Luer, R. Escobar *et al.*, 8901 (Holotype: SEL). Fig. 38.

This small, caespitose species is characterized by acute, narrowly elliptical leaves exceeded by a many-flowered raceme; ovate, obtuse sepals; three-veined petals much wider than long with acuminate corners; and a subacute lip with a suborbicular callus on the anterior surface.

Plant small, epiphytic, densely caespitose. Ramicauls erect, slender, 3–6 cm long, with a close, tubular sheath from below the middle, and 1–2 sheaths below and at the base. *Leaf* erect, coriaceous, narrowly elliptical, acute, 5–8 cm long including a petiole 1–2 cm long, 0.7–1 cm wide in the dry state, narrowly cuneate below to the base. *Inflorescence* single; 5–8 cm long, the raceme erect, strict, distichous, many-flowered; floral bracts tubular, obtuse, 2 mm long; pedicels 1 mm long; ovary 1 mm long; the peduncle ca. 1.5 cm long, subtended by a spathe 5–7 mm long, from a node at the apex of the ramicaul; *sepals* light purple, darker toward the base, glabrous, broadly ovate, obtuse, connate for lower fourth, 3-veined, the dorsal sepal 3 mm long, 2.3 mm wide, the lateral sepals, 2.6 mm long, 2.5 mm wide; *petals* dark purple, transversely semilunate, 1 mm long, 2.25 mm wide, 3-veined, the corner angles acute, acuminate, the apex broadly rounded with the margin thickened and with protruding crystals, concave below in indistinct transverse carina; *lip* dark purple, subquadrate, a modified type A, 0.8 mm long, 1 mm wide, 0.75 mm deep, shallowly concave below an elevated, minutely sulcate bar, with a suborbicular callus between the bar and the subacute tip, the dorsum slightly convex centrally, the base broadly 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 *perbonus*, “very nice,” referring to both floral and vegetative features.

This densely caespitose, little species is distinguished by very slender ramicauls with acute, narrowly elliptical leaves about equally long, and a purple-flowered raceme more or less that exceeds the leaf. The sepals are obtuse and glabrous. The petals are transversely semilunate, more than twice wider than long with the corners acuminate. The broadly rounded apical margin is thick with more or less protruding crystals. The type A lip is subacute with a suborbicular callus on the surface below the bar.

Stelis pertenuis Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Chocó: Baudo, 400 m, collected by Ahrend

de Wilde, flowered in cultivation at his home above Pereira, A. de Wilde *s.n.* (Holotype: MO), C. Luer illustration 16855. Fig. 39.

This small, caespitose species is characterized by narrowly linear-elliptical leaves far surpassed by one or two lax, many-flowered racemes; ovate, obtuse, minutely pusticulate sepals; thick, three-veined petals; and an obtuse lip with a low callus on the dorsum.

Plant small, epiphytic, caespitose. Ramicauls erect, 1.5 cm long, with a loose, tubular sheath from below the middle, and another at the base. *Leaf* erect, coriaceous, narrowly linear-elliptical, acute, 3–3.5 cm long, 0.3 cm wide in the dry state, gradually narrowed below to the base. *Inflorescence* 1–2 erect, loose, distichous, many-flowered racemes with many flowers open simultaneously, 10–11 cm long including the peduncle 3–5 cm long, subtended by a spathe ca. 4 mm long, from a node at the apex of the ramicaul; floral bracts tubular, obtuse, 1 mm long and wide; pedicels 1.5 mm long; ovary 1.25 mm long; flowers light yellow; *sepals* glabrous externally, sparsely pusticular within, broadly ovate, obtuse, connate to near the base, 3-veined, the dorsal sepal 1.6 mm long, 1.5 mm wide, the lateral sepals, 1.5 mm long, 1.6 mm wide; *petals* obcuneate, subtruncate, thickened and minutely roughened externally, concave without a transverse carina, 0.5 mm long, 0.75 mm wide, 3-veined; *lip* subhemispherical, type A, 0.4 mm long, 0.6 mm wide, 0.3 mm deep, concave below a low bar with a glenion, the apex obtuse with a thick margin, the dorsum slightly convex centrally, the base broadly truncate, connate to the base of the column; *column* stout, ca. 0.5 mm long and wide, the anther and the stigmatic lobes apical.

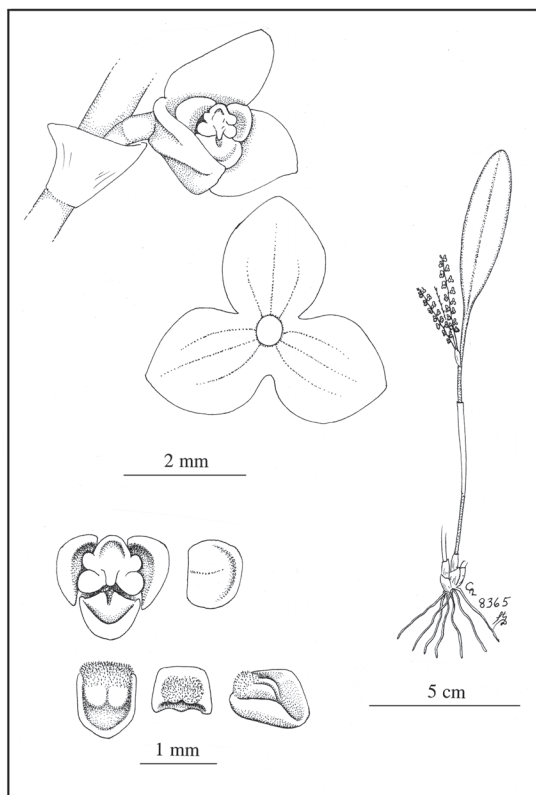
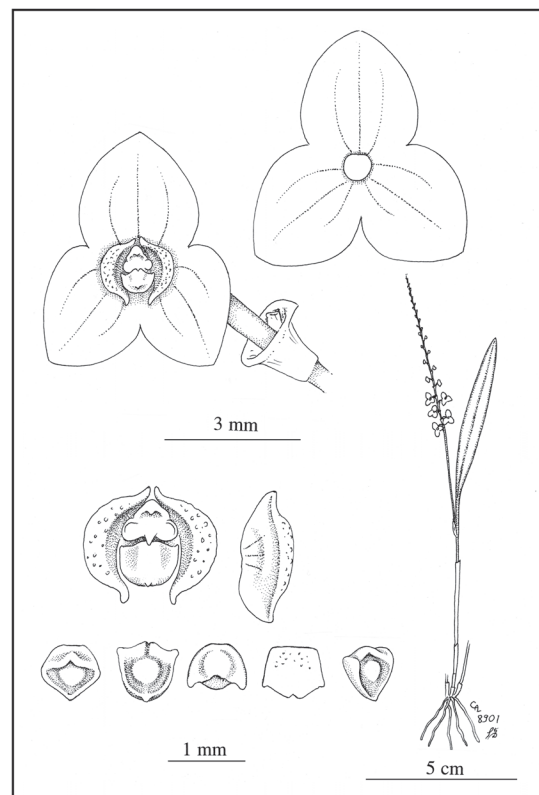
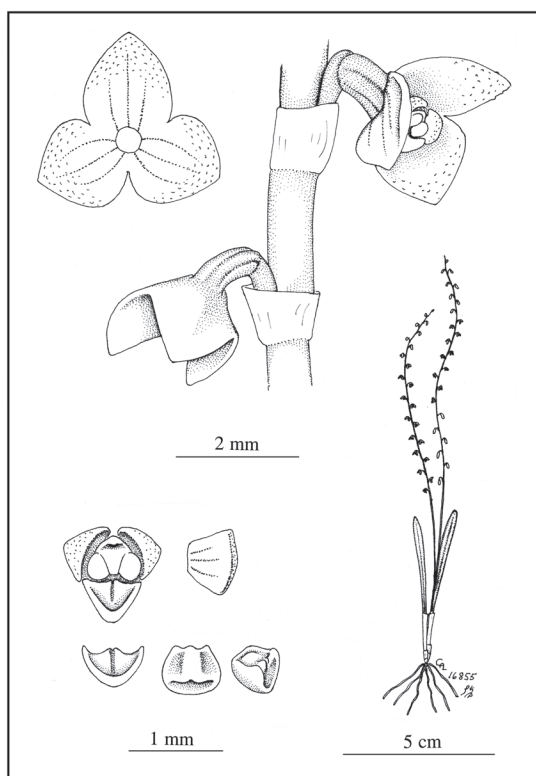
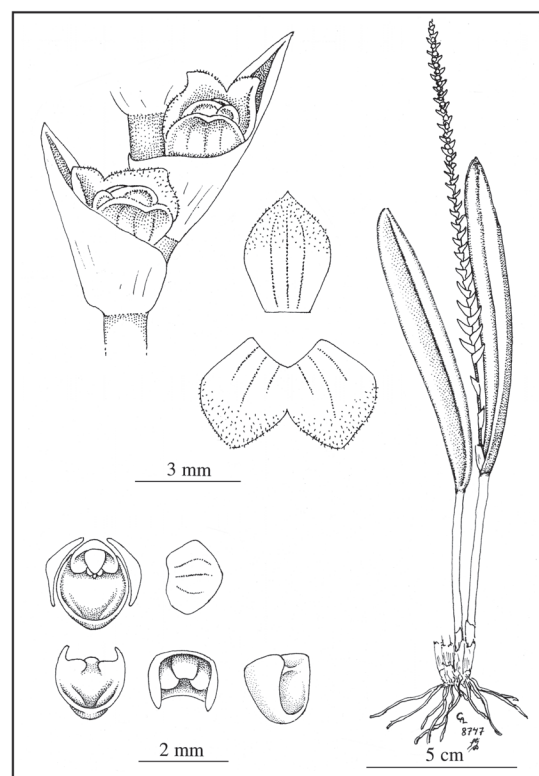
Etymology: From the Latin *pertenuis*, “very slender,” referring to the habit.

This slender, densely caespitose, little species from a low altitude of the Western Cordillera is distinguished by narrow leaves and shorter ramicauls with loose sheaths. One or two loose, weak, many-flowered racemes far exceed the leaves; the obtuse sepals are sparsely pusticular within; the petals are thick and three-veined; and the type A lip is obtuse, the bar with a glenion.

Stelis pinguis Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Antioquia: road to Boquerón NW of Medellín, 2380 m, 22 April 1983, C. Luer, J. Luer, R. Escobar *et al.* 8747 (Holotype: SEL). Fig. 40.

This species is remarkable for thick, linear leaves that are barely surpassed by a many-flowered raceme with large floral bracts that surround a small, subspherical flower with obtuse, three-veined sepals, thin, three-veined petals, and a rounded, concave lip.

Plant medium in size to large, epiphytic, densely caespitose. Ramicauls erect, terete, stout, 4–5 mm thick, 3–6 cm long, with a tubular sheath from below the middle, and 1–2 other sheaths below. *Leaf* erect, thickly coriaceous, linear, subacute to obtuse, sessile, 7–10 cm long, the blade 1.5–1.7 cm wide, 0.5 cm thick, narrowed below into the ramicaul. *Inflorescence* 1–2 erect; 8–15 cm long, the racemes congested, distichous, many-flowered, large-bracted, with

Figure 37. *Stelis pauxilla* Luer & R.EscobarFigure 38. *Stelis perbona* Luer & R.EscobarFigure 39. *Stelis pertenuis* Luer & R.EscobarFigure 40. *Stelis pinguis* Luer & R.Escobar

many flowers open simultaneously; the peduncle ca. 1 cm long, subtended by a spathe 0.8–1 cm long, from a node at the apex of the ramicaul; floral bracts oblique, conduplicate, acute, 8 mm long low in the raceme to 3 mm long above; pedicels 1.5 mm long; ovary 1 mm long; *sepals* dull rose brown, thick, rigid, glabrous externally, pubescent within, concave, connate to near the middle, into a subspherical flower, the dorsal sepal obovate, obtuse, 3.5 mm long, 2.5 mm wide, 3-veined, the lateral sepals ovate, oblique, obtuse, 3.25 mm long, 2.5 mm wide, 3-veined; *petals* thin, transversely ovate, broadly obtuse, slightly thickened on the margin, shallowly concave, without a transverse carina, 1.25 mm long, 1.5 mm wide; *lip* subspherical, 1.5 mm long, 1.5 mm wide, 1 mm deep, concave below a thin bar with a broad cleft to a rounded callus on the dorsum, the apex obtuse, concave, the base broadly truncate, fixed to the base of the column; *column* stout, ca. 1.5 mm long and wide, the anther and the stigmatic lobes apical.

Etymology: From the Latin *pinguis*, “fat, plump,” referring to the leaves.

The very thick, linear leaves and the little suborbicular flowers nestled within large floral bracts are distinctive. The sepals are concave and pubescent within; the petals are membranous and three-veined; and the rounded lip is concave below a thin bar.

Stelis pulchra Luer & R. Escobar, *sp. nov.* COLOMBIA. Tolima: S slope of Mt. Tolima, N of Ibagué, 2930 m, 21 April 1982, C. Luer, J. Luer & R. Escobar 7506 (Holotype: SEL). Fig. 41.

This caespitose species is distinguished by obtuse, elliptical leaves barely exceeded by a red-bracted raceme; semiconnate, five-veined lateral sepals; three-veined petals; and an obtuse lip with three calli on the dorsum.

Plant medium in size, epiphytic, densely caespitose, roots slender. Ramicauls erect, stout, 5–8 cm long, with a loose, tubular sheath from below the middle, another 2 sheaths below and at the base. *Leaf* erect, coriaceous, elliptical, obtuse, 5–10 cm long including a petiole 1.5 cm long, the blade 2–2.3 cm wide in the dry state, broadly cuneate below into the petiole. *Inflorescence* single; 8–9 cm long, the raceme erect, congested, strict, distichous, flowers in 2 opposite-facing ranks, with many flowers open simultaneously; floral bracts red, oblique, acuminate, acute, 8–10 mm long below to 5 mm long toward the tip; pedicels 2–3 mm long; ovary 2 mm long; the peduncle 1–2.5 cm long, from a node near the apex of the ramicaul; *sepals* light yellow-brown, glabrous, ovate, subacute, connate in basal quarter, 5-veined, the dorsal sepal 6 mm long, 5.5 mm wide, the lateral sepals semiconnate, 5 mm long, 4–4.5 mm wide; *petals* yellow-green, transversely semilunate, 1.5 mm long, 2.5 mm wide, 3-veined, concave, the apex broadly rounded, the margin thickened, with a transverse carina; *lip* yellow-green, subquadrate, 1 mm long, 1.3 mm wide, 1 mm deep, shallowly concave below the bar with a narrow glenion, the apex rounded with thickened margin, the dorsum with three, low, parallel calli, 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 *pulcher*, “pretty,” referring to the raceme with red floral bracts.

This caespitose species is distinguished by obtuse, elliptical leaves slightly exceeded by a raceme with two rows of crowded, opposite-facing flowers. Most remarkable are the long, red, acuminate floral bracts. The sepals are yellow-brown and five-veined with the lateral sepals semiconnate into an imperfect synsepal. The petals are three-veined, and the lip is type A with the three veins thickened on the dorsum as low, parallel calli.

Stelis punicea Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Tolima: S slope of Mt. Tolima, N of Ibagué, 2600 m, 21 April 1982, C. Luer, J. Luer & R. Escobar 7500 (Holotype: SEL). Fig. 42.

This large, caespitose species is related to the frequent and variable *Stelis purpurea* (Ruiz & Pav.) Willd., but differs with elliptical leaves obtuse to rounded at the apex leaves; short, acute, diverging floral bracts, instead of long, acuminate, appressed; an obtuse or subacute dorsal sepal instead of acute; and an obtuse lip with the dorsum simply convex.

Plant large, epiphytic, densely caespitose, roots slender. Ramicauls erect, stout, 7–12 cm long, with a tubular sheath from below the middle, another 2 sheaths below and at the base. *Leaf* erect, coriaceous, elliptical, obtuse to rounded at the tip, 8–11 cm long including a petiole 2 cm long, the blade 2.5–3.5 cm wide in the dry state, cuneate below into the petiole. *Inflorescence* single; 25–30 cm long, the raceme erect, subcongested, strict, distichous, with many flowers open simultaneously; floral bracts oblique, acuminate, acute, 5–6 mm long below to 4 mm long toward the tip; pedicels 5 mm long; ovary 4 mm long; the peduncle ca. 15 cm long, from a node below the abscission layer; flowers deep red-purple; *sepals* glabrous, the dorsal sepal ovate, subacute, connate in basal quarter, 7-veined, 10 mm long, 8 mm wide, the lateral sepals connate into a concave synsepal, 8 mm long, 11 mm wide, 12-veined; *petals* transversely semilunate, 1 mm long, 2.3 mm wide, 3-veined, concave below a thick transverse carina, the apex broadly rounded, the margin thickened; *lip* subquadrate, 1 mm long, 1.4 mm wide, 1 mm deep, concave below the bar with a narrow glenion, the apex obtuse, the dorsum 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 *puniceus*, “deep red-purple,” referring to the flowers.

Additional specimens examined: COLOMBIA. Cundinamarca: above Gutierrez, 2700 m, 19 May 1984, C. Luer, J. Luer & R. Escobar 10369 (MO); Antioquia: La Union, El Chuscal, E of La Union, 2650 m, 13 September 1984, C.H. Dodson & R. Escobar 15287 (MO), C. Luer illustration 21945, flowers poor.

Stelis punicea is a large, caespitose species with elliptical leaves that are subacute to rounded at the tip, and many-flowered racemes of dark purple flowers that are similar to those of *Stelis purpurea* (Ruiz & Pav.) Willd. The floral

bracts of the latter are long, acuminate and appressed to the rachis, while those of *S. punicea* are much shorter and diverge from the rachis.

Stelis reptata Luer & R.Escobar. *sp. nov.* TYPE: COLOMBIA. Putumayo: between La Cocha and Sibundoy, 3000 m, 19 January 1979, C. Luer, J. Luer & R. Escobar 3706 (Holotype: SEL). Fig. 43.

This small, long-repent species is similar to *Stelis scansor* Rchb.f., but differs with a proportionately longer Inflorescence; broader, shortly pubescent sepals; and three-veined petals.

Plant small, epiphytic, scandent, long-repent, the rhizome slender, 1–3 cm long between ramicauls; roots slender. Ramicauls ascending, slender, 2–3.5 cm long, enclosed by a 2–3 tubular sheaths. *Leaf* erect, coriaceous, elliptical, subacute to obtuse, 2–3.5 cm long including the petiole 0.5–0.8 cm long, the blade 0.9–1.1 cm wide in the dry state, cuneate below into the petiole. *Inflorescence* single; 3–4 cm long, the raceme erect, congested, distichous, many-flowered, with many flowers open simultaneously; floral bracts oblique, acute, 2.5–3 mm long; pedicels 1 mm long; ovary 1 mm long; the peduncle ca. 1 cm long, from a node below the apex of the ramicaul; flowers red-purple; *sepals* shortly pubescent, broadly ovate, obtuse, connate basally, 3-veined, the dorsal sepal 2 mm long, 2.25 mm wide, the lateral sepals 1.75 mm long, 1.75 mm wide; *petals* transversely ovate, the apex broadly rounded with a narrow, thickened margin, 0.5 mm long, 1 mm wide, 3-veined, with a transverse callus; *lip* thick, subquadrate, 0.8 mm long, 0.8 mm wide, 0.8 mm deep, concave below the bar with a small glenion, the apex broadly rounded, concave within the thickened margin, the dorsum featureless, the base truncate, hinged to the base of the column; *column* stout, 0.8 mm long and wide, the anther and the bilobed stigma apical.

Etymology: From the Latin *reptatus*, “crept,” referring to the creeping habit.

Additional specimens examined: COLOMBIA. Antioquia: Medellín, between San Pedro and Don Matius, 2500–2700 m, C. Dodson & R. Escobar 15307 (MO), C. Luer illustration 21944.

This apparently uncommon little species, similar to the relatively frequent and widely distributed *Stelis scansor* Rchb.f., has been found in two distant localities in the departments of Putumayo and Antioquia. *Stelis reptata* is distinguished by a long, repent rhizome with petiolate, elliptical leaves. An erect, congested raceme with little red-purple flowers surpasses the leaf. The sepals are broadly ovate and pubescent; the petals are transversely semilunate with a thickened, rounded margin, a transverse callus, and three veins; and the lip is a thick, type A. *Stelis reptata* differs with a proportionately longer raceme, glabrous sepals, and thin, single-veined petals.

Stelis rodrigo Luer, *sp. nov.* TYPE: COLOMBIA. without collection data, flowered in cultivation at Colomborquídeas, 27 December 1992, R. Escobar 5141 (Holotype: MO). C. Luer illustration 21937. Fig. 44.

This rather large, caespitose species is distinguished by a large, elliptical leaf borne by an even longer ramicaul; three many-flowered racemes slightly longer than the leaves in the present specimen; transverse, five-veined sepals with acuminate tips; three-veined petals; and a lip concave below a bar with a glenion.

Plant rather large, epiphytic, caespitose; roots slender. Ramicauls erect, slender, 20–25 cm long, partly enclosed by a close, tubular sheath above the middle, another tubular sheath below the middle, and another at the base. *Leaf* erect, coriaceous, elliptical, subacute, 15–17 cm long, 2.5–4 cm wide in the dry state, cuneate below to the a petiole 1.5 cm long. *Inflorescence* 3 from two ramicauls of the present specimen; 16–18 cm long, the ramicauls erect, distichous, densely and simultaneously many-flowered; floral bracts oblique, acute, 3–4 mm long; pedicels 2 mm long; ovary 1.5 mm long; the peduncle 4–5 cm long, with distant bracts, subtended by a spathe 1.2 cm long, from a node below the apex of the ramicaul; *sepals* light yellow-green, suffused with red toward the tips, expanded, glabrous, transversely ovate, broadly obtusely acuminate at the tips, 5-veined, connate to near the middle, the dorsal sepal, 2.5 mm long, 4.2 mm wide, the lateral sepals 3 mm long, 4.2 mm wide; *petals* yellow, transversely oblong, 0.75 mm long, 1 mm wide, 3-veined, broadly rounded at the apex, concave within a thickened margin, and below a transverse carina; *lip* green, type A, subquadrate, 0.75 mm long, 1 mm wide, 0.6 mm deep, concave below the bar with a glenion, the apex rounded with a thickened margin, the dorsum with a low, rounded callus, the base broadly truncate, hinged to the base of the column; *column* stout, ca. 1 mm long and wide, the anther and the stigmatic lobes apical.

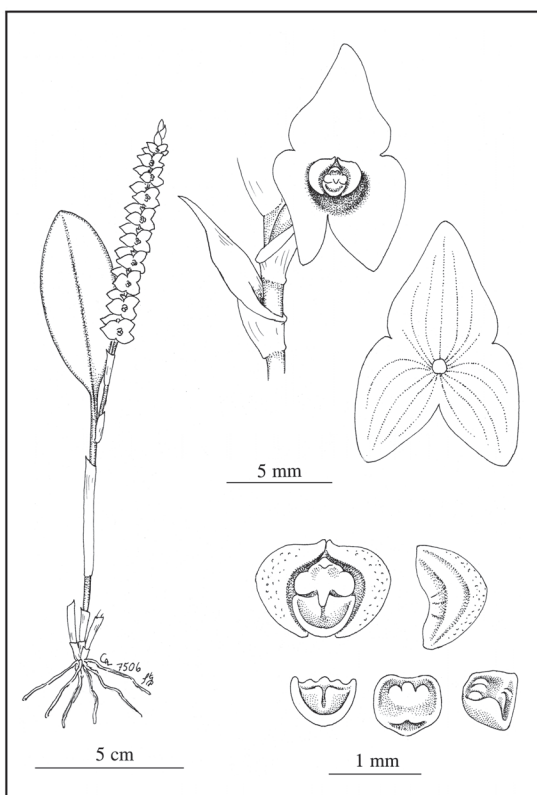
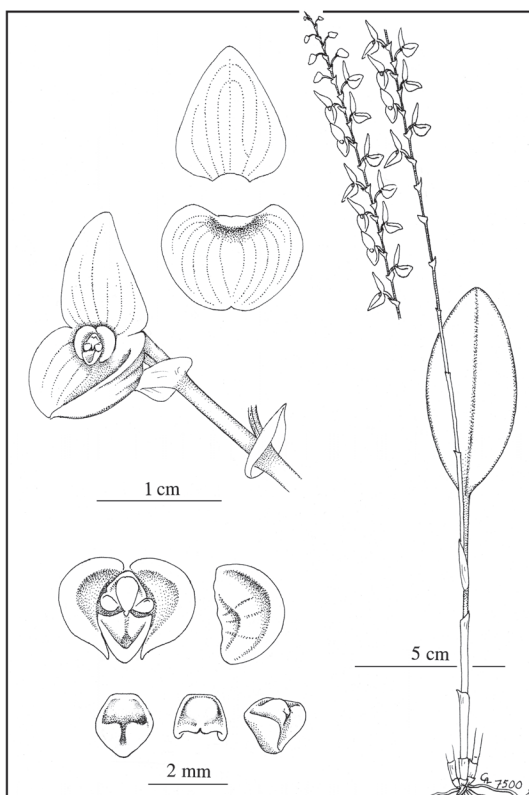
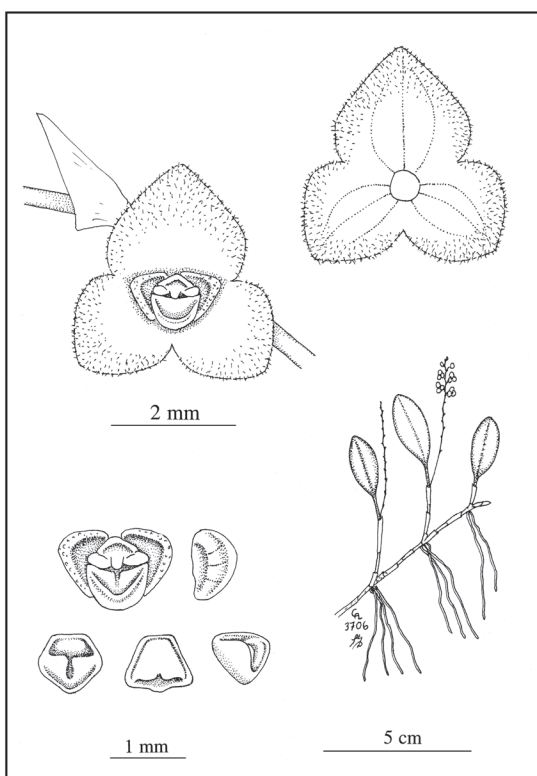
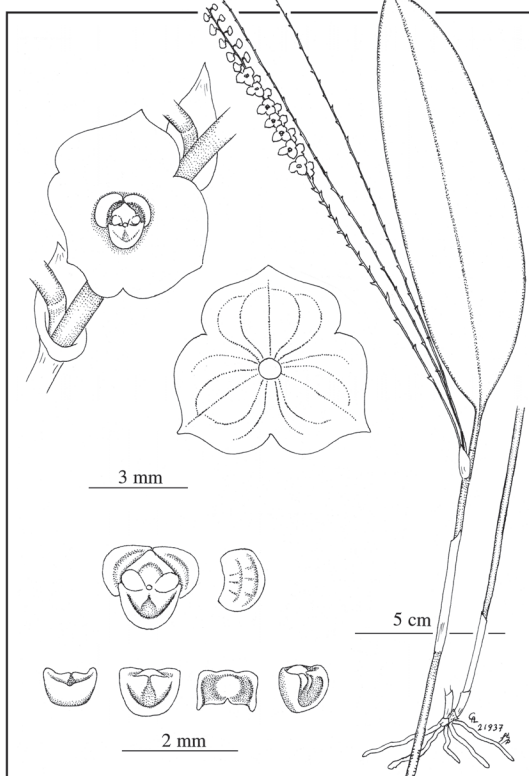
Eponymy: Named for the late Rodrigo Escobar Restrepo who preserved a specimen of this species being cultivated at Colomborquídeas.

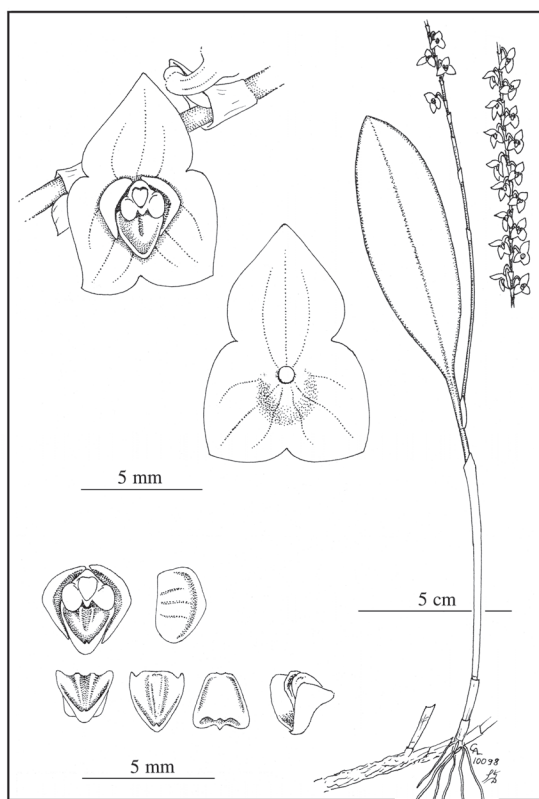
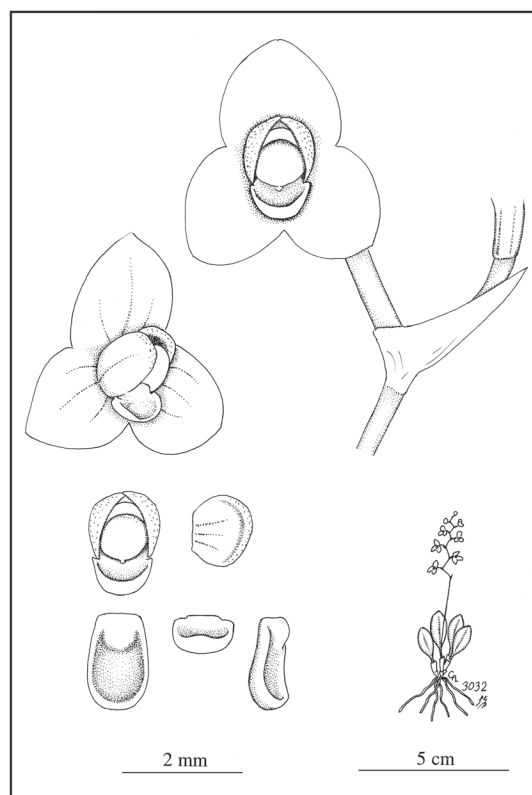
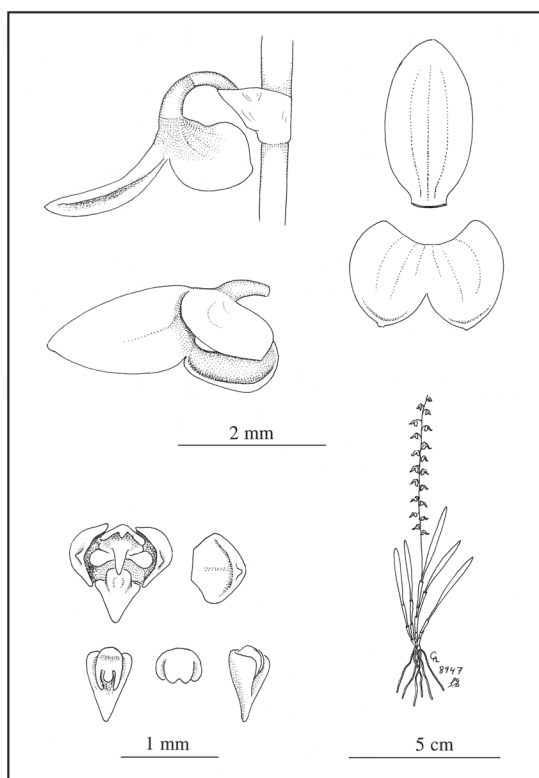
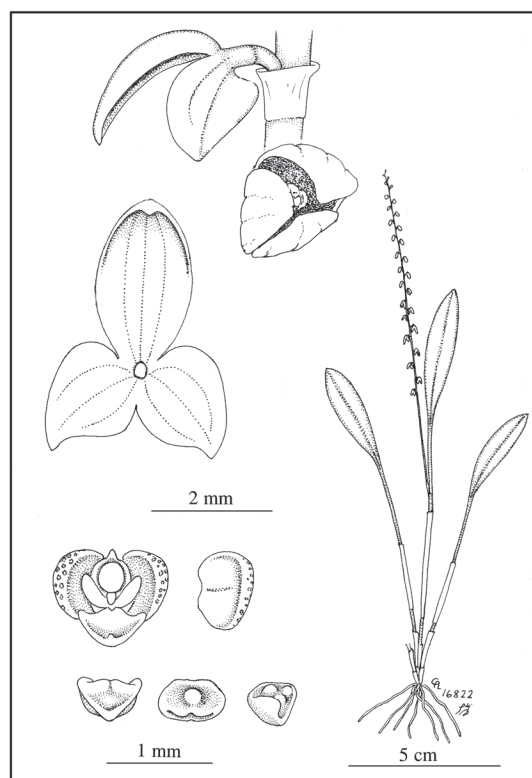
A specimen of this unusually large species was made from a plant without collection data cultivated by Colomborquídeas. It is distinguished by long ramicauls and large, petiolate leaves. Two of the three ramicauls bear three racemes that barely equal or surpass the leaf. Rather small flowers are produced in abundance. The sepals are transversely ovate, much broader than long, with acuminate tips. The petals are three-veined, and the lip is type A.

Stelis samson Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Santander: Landázuri, W of Velez, road to Landázuri, 2500 m, 4 May 1984, C. Luer, J. Luer & R. Escobar 10098 (Holotype: MO). Fig. 45.

This large, robust, repent species is characterized by a thick rhizome; erect ramicauls; large, petiolate leaves exceeded by a much longer raceme with medium-sized flowers with, three-veined, glabrous sepals; three-veined petals; and an ovoid lip with a subacute apex with a minute apiculum.

Plant large, epiphytic, repent, the rhizome stout, 3–5 mm thick, 1–3 cm long between ramicauls. Ramicauls erect, rather stout, 8–12 cm long, with a tubular sheath from below the middle, and another 1–2 sheaths below and at the base.

Figure 41. *Stelis pulchra* Luer & R.EscobarFigure 42. *Stelis punicea* Luer & R.EscobarFigure 43. *Stelis reptata* Luer & R.EscobarFigure 44. *Stelis rodrigo* Luer & R.Escobar

Figure 45. *Stelis samson* Luer & R.EscobarFigure 46. *Stelis trullilabia* Luer & R.EscobarFigure 47. *Stelis tryssa* Luer & R.EscobarFigure 48. *Stelis valvulosa* Luer & R.Escobar

Leaf erect, coriaceous, elliptical, subacute, 11–14 cm long including a petiole 2–4 cm long, the blade 2.5–3 cm wide in the dry state, cuneate below into the petiole. *Inflorescence* single; 18–30 cm tall, the raceme erect, loose, distichous, many-flowered; floral bracts oblique, acute, 4 mm long; pedicels 3 mm long; ovary 2 mm long; the peduncle 6–10 cm long, subtended by a slender spathe 1.2 mm long, from a node below the apex of the ramicaul; flowers light yellow; *sepals* glabrous, ovate, connate below the middle, concave in the basal quarter, 3-veined, the dorsal sepal subacute, 4.5 mm long, 5 mm wide, the lateral sepals obtuse, 4 mm long, 5 mm wide; *petals* transversely oblong, the apex rounded with a narrowly thickened margin, concave, with a minimal transverse carina, 2 mm long, 3 mm wide, 3-veined; *lip* ovoid, 2 mm long, 2 mm wide, 2 mm deep, concave within the subacute apex with a minute apiculum, the disc filled with a thick, glabrous callus, with a central depression limited on either side by a thin callus, the base truncate, hinged to the base of the column; *column* clavate, ca. 2.5 mm long, 2 mm wide, connate to the base of the column, the anther and the stigmatic lobes apical.

Eponymy: Named for Samson, a biblical character noted for his great strength, referring to the robust habit.

Vegetatively, this large, robust, repent species of the Eastern Cordillera is indistinguishable from *Stelis hercules* Luer & R. Escobar, published herein, of the Central Cordillera, but it differs with glabrous, instead of long-pubescent sepals, and a glabrous lip with a minute apiculum at the subacute tip.

Stelis trullilabia Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Cauca: Páramo de Barbillas, SE of Popayan, 3070 m, 27 July 1978, C. Luer, J. Luer & R. Escobar 3032 (Holotype: SEL). Fig. 46.

This very small species is noted for elliptical leaves; a much shorter ramicaul clothed by a loose sheath; a flexuous raceme; ovate, obtuse sepals; round, three-veined petals; and an oblong lip concave below a basal callus.

Plant very small, epiphytic, caespitose, roots slender. Ramicauls erect, slender, 5–6 mm long, with a loose, tubular sheath from near the base. *Leaf* erect, coriaceous, elliptical, obtuse, 15–20 mm long including a petiole 2–4 mm long, the blade 5–6 mm wide in dry state, cuneate below into the petiole. *Inflorescence* single; 3–4 cm long, the raceme erect, flexuous up to 2.5 cm long with up to 10 flowers, many flowers open simultaneously; floral bracts oblique, acute, 3 mm long; pedicels 1.5–2 mm long; ovary 1 mm long; the peduncle 2–2.5 cm long, from a node from the ramicaul within the sheath; flowers brown; *sepals* glabrous, expanded, broadly ovate, obtuse, 3-veined, connate basally, 2.5–3 mm long, 2–2.5 mm wide, the lateral sepals, 2–2.5 mm long, 2 mm wide; *petals* circular, concave, slightly thickened on the rounded apex, 1 mm long, 1.2 mm wide, 3-veined; *lip* oblong, 1.5 mm long, 1 mm wide, 0.4 mm deep, concave below a smooth, basal callus, the apex rounded with thin margins, the base truncate, hinged to the base of the column; *column* clavate, 1.2 mm wide, anther cap proportionately large, the anther and the bilobed stigma apical.

Etymology: From the Latin *trullilabius*, “with little spoon,” referring to the shape of the lip.

This graceful, little species is characterized by tiny ramicauls enclosed by inflated sheaths; a flexuous raceme shorter than the peduncle; brown flowers with obtuse, ovate sepals; round, three-veined petals; and an oblong, concave lip with the tip rounded like a spoon.

Stelis tryssa Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Antioquia: Frontino, Alto de Cuevas, 2050 m, 4 May 1983, C. Luer, J. Luer, R. Escobar *et al.* 8947 (Holotype: SEL). Fig. 47.

This very small species is distinguished by narrow, linear leaves; semiconnate, lateral sepals in apposition; single-veined petals; and an ovoid lip acute at the tip and with a rounded callus filling the basal half that is cleft apically into three parts.

Plant very small, epiphytic, caespitose; roots slender. Ramicauls erect, fasciculate, 10–15 mm long, enclosed by two tubular sheaths. *Leaf* erect, coriaceous, narrowly linear, acute, 20–25 mm long, 1.5–2 mm wide in the dry state. *Inflorescence* single; 6 cm tall, the raceme erect, subax, distichous, simultaneously many-flowered; floral bracts oblique, acute, 1 mm long; pedicels 1 mm long; ovary 0.5 mm long; peduncle ca. 1 cm long from near the apex of the ramicaul; flowers light purple; *sepals* glabrous, the dorsal sepal erect, elliptical, obtuse to rounded at the apex, 2.25 mm long, 1.25 mm wide, 3-veined, connate basally 0.5 mm, the lateral sepals antrorse, broadly ovate, oblique, obtuse to rounded at the apex, connate to about the middle, 1.25 mm wide and long, each 3-veined; *petals* broadly ovate, 0.3 mm long and wide, 1-veined, concave, broadly obtuse with the margin narrowly thickened, with a microscopic, acute, central apiculum, without a transverse carina; *lip* narrowly ovoid-triangular, acute at the tip, 0.6 mm long, 0.3 mm wide and deep, filled with a rounded callus that is cleft into three microscopic parts at the apical margin, the base truncate, hinged to the base of the column; *column* semiterete, ca. 0.5 mm long and wide, the anther with elongated stigmatic lobes apical.

Etymology: From the Greek *tryssos*, “dainty, delicate,” referring to the habit.

This minute, caespitose species is characterized by narrowly linear leaves exceeded by an erect raceme of tiny, nutant flowers along a thread-like rachis. The sepals are broadly ovate, obtuse and three-veined; the lateral sepals are connate to the middle and more or less in apposition, more or less forming a concave synsepal. The single-veined petals are minutely apiculate. The lip is triangular with a rounded callus that is trifid at the tip.

Stelis valvulosa Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Risaralda: road to TV antenna S of Pueblo Rico, 2400 m, 14 May 1993, C. Luer, J. Luer, R. Escobar *et al.* 16822 (Holotype: MO). Fig. 48.

This medium-sized, caespitose species is characterized by a many-flowered raceme about twice longer than narrowly elliptical leaves with petioles nearly as long as

the blades; a concave, antrorse dorsal sepal above smaller, connivent, valve-like lateral sepals; single-veined petals; and a short lip with a dorsal callus.

Plant small, epiphytic, densely caespitose. Ramicauls erect, slender, 4–5 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 linear-elliptical, acute, 6–7 cm long including a petiole 2–3 cm long, the blade 1–1.3 cm wide in the dry state, cuneate below to the petiole. *Inflorescence* single; 9–11 cm tall, the raceme erect, strict, distichous, many-flowered, with many flowers open simultaneously; floral bracts tubular, obtuse, 1 mm long and wide; pedicels 1 mm long; ovary 0.5 mm long; the peduncle 2–3 cm long, subtended by a spathe ca. 5 mm long, from a node at the apex of the ramicaul; *sepals* glabrous, connate basally, 3-veined, the dorsal sepal red-purple, antrorse, elliptical, obtuse, concave, 2.5 mm long, 1.8 mm wide, the lateral sepals green, ovate, oblique, subacute, concave, connivent, 1.75 mm long, 1.75 mm wide; *petals* green, elliptical, concave, the apical margin rounded, thickened with numerous, minute crystals, 0.5 mm long, 0.75 mm wide, 1-veined; *lip* subquadrate, type A, 0.4 mm long, 0.6 mm wide, 0.4 mm deep, concave below a bar with a shallowly incised glenion, the apex obtuse with a narrow margin, the dorsum with a central, subspherical callus, the base truncate, connate to the base of the column; *column* stout, ca. 0.5 mm long and wide, the anther and oblique stigmatic lobes apical.

Etymology: From the Latin *valvulosus*, “with markedly developed valve,” referring to the converging valve-like sepals.

This slender species is distinguished by narrowly elliptical leaves with petioles nearly as long as the blade. A single, much longer raceme bears small, nutant flowers with an elliptical, red-purple dorsal sepal overlying a pair of smaller, green, connivent lateral sepals. The petals are single-veined, and the lip is type A with an obtuse apex and a round callus in the center of the dorsum.

Stelis vigax Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Antioquia: Sonsón, between Sonsón and La Ceja, 2400 m, 19 April 1983, C. Luer, J. Luer, R. Escobar et al. 8884 (Holotype: SEL). Fig. 49.

This large, vigorous, caespitose species is distinguished by stout ramicauls with elliptical leaves surpassed by a single, many-flowered raceme of medium-sized, glabrous flowers with a seven-veined sepals, three-veined petals, and a subquadrate lip with minute apiculus on a subtruncate apex.

Plant large, epiphytic, densely caespitose; roots slender. Ramicauls erect, stout, 8–10 cm long, with a loose, tubular sheath from below the middle and 2 tubular sheaths below and at the base. *Leaf* erect, thickly coriaceous, elliptical, subacute, 10–18 cm long, 2–2.8 cm wide in dry state, narrowly cuneate below into a subpetiolate base.

Inflorescence single; 10–25 cm tall, the raceme erect, strict, many-flowered, loose below to congested above, distichous; floral bracts oblique, acute, 5 mm long below to 3 mm long toward the apex; pedicels 3 mm long; ovary 3 mm long; the peduncle ca. 10 cm long, with a spathe 1.5 cm long, from a node below the apex of the ramicaul; *sepals* green, suffused with purple, glabrous, ovate, connate in lower quarter, the dorsal sepal acute, 7-veined, 4 mm long, 3.5 mm wide, the lateral sepals obtuse, 7-veined 3.5 mm long, 3 mm wide; *petals* light purple, transversely obovate, fleshy, 1.3 mm long, 2 mm wide, 3-veined, the apex broadly obtuse, concave below a broad, thick margin continuous with the transverse carina; *lip* subquadrate, 1 mm long, 1.3 mm wide, 0.6 mm deep, shallowly concave below a broad, rounded bar with a narrow glenion, from near the base, concave at the subtruncate apex, minutely apiculate, the dorsum shallow, featureless except for the glenion, the base truncate, hinged to the base of the column; *column* stout, ca. 1.5 mm wide and long, with the anther and the bilobed stigma apical.

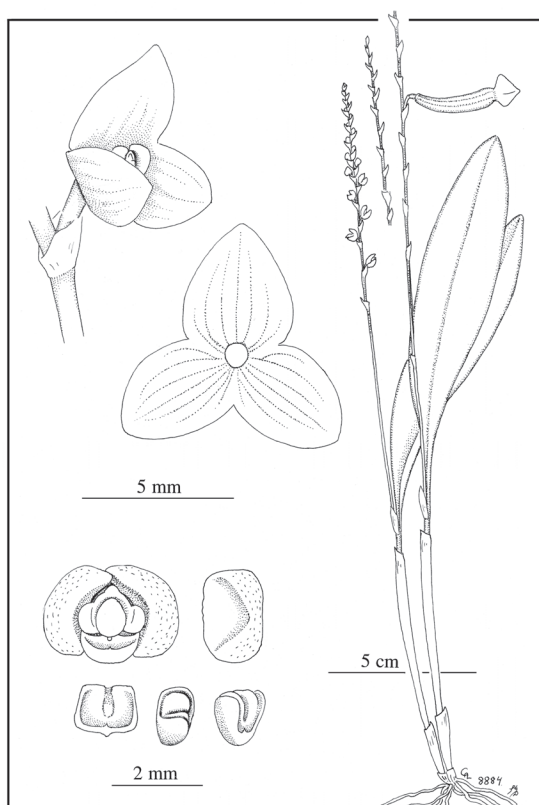
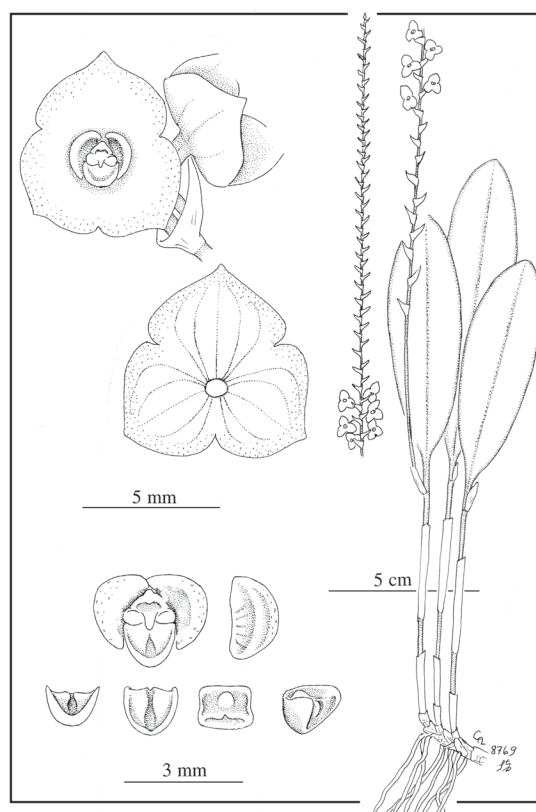
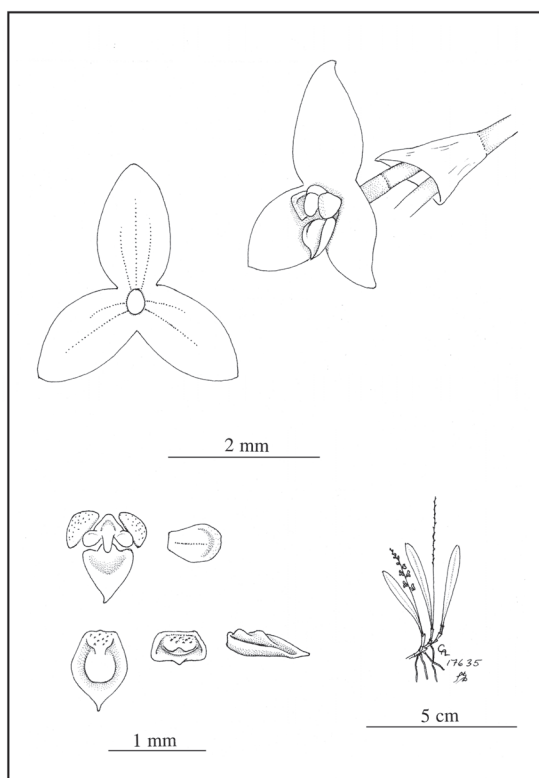
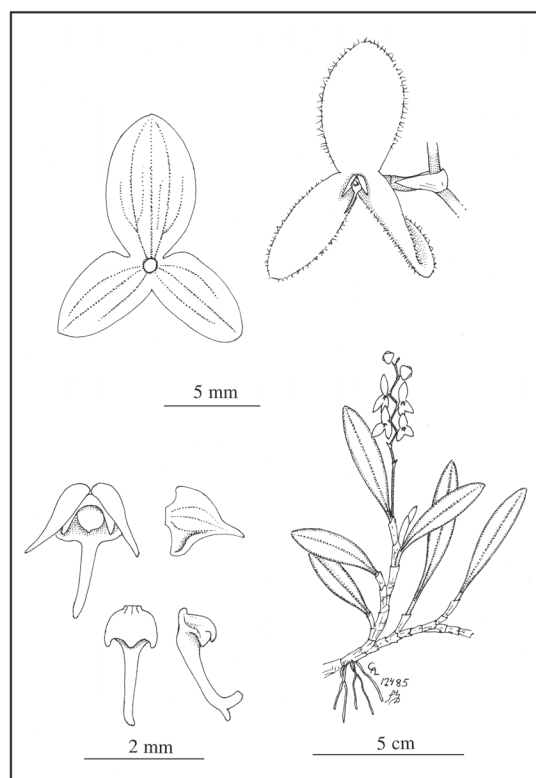
Etymology: From the Latin *vigax*, “tending to be vigorous,” alluding to the strong habit.

Stelis vigax is a large, densely caespitose species with stout ramicauls and large, acute, elliptical, subpetiolate leaves and a long raceme that is loosely flowered below. A flower remaining at the apex of a maturing ovary, gradually doubles in size. The sepals are ovate and seven-veined, the petals are thick and three-veined. The lip is a shallow type C with a narrow glenion extending from near the base over the rounded bar. The apex is subtruncate with a minute apiculus.

Stelis voluptuosa Luer & R. Escobar, *sp. nov.* TYPE: COLOMBIA. Antioquia: Cerro Padre Amaya, 2800 m, 22 April 1983, C. Luer, J. Luer, R. Escobar et al. 8769 (Holotype: SEL). Fig. 50.

This large, shortly repent species is distinguished by a thick rhizome; stout ramicauls; oblong, obtuse leaves; a long raceme with prominent floral bracts; five-veined sepals and petals; and a subquadrate lip with rounded apex and hemispherical callus on the dorsum.

Plant large, epiphytic, shortly repent, the rhizome 5–6 mm thick, ca. 5 mm between ramicauls; roots coarse. Ramicauls erect, stout, 8–9 cm long, with a loose, tubular sheath from below the middle and 2 tubular sheaths below and at the base. *Leaf* erect, thickly coriaceous, elliptical-oblong, obtuse, 11–13 cm long including a petiole 1–1.5 cm long, the blade 2–2.5 cm wide in dry state, cuneate below into the petiole. *Inflorescence* single; 25–32 cm tall, the raceme erect, strict, congested, distichous, many-flowered, with many flowers open simultaneously; floral bracts oblique, acute, 6 mm long below to 3 mm long toward the apex; pedicels 2 mm long; ovary 2 mm long; the peduncle 6–8 cm long, with a thin spathe 1 cm long, from a node below the apex of the ramicaul; *sepals* brown externally, green within, glabrous or microscopically (pubescent-

Figure 49. *Stelis vigax* Luer & R.EscobarFigure 50. *Stelis voluptuosa* Luer & R.EscobarFigure 51. *Stelis vulpecula* Luer & R.EscobarFigure 52. *Stelis xenica* Luer & R.Escobar

cellular), expanded, transversely ovate, obtuse, 5-veined, connate to near the middle, the dorsal sepal 4 mm long, 5 mm wide, the lateral sepals 3 mm long, 5 mm wide; *petals* transversely semilunate, fleshy, 1.3 mm long, 1.6 mm wide, 5-veined, the apex rounded, shallowly concave below the broad, thick margin continuous with the transverse carina; *lip* subquadrate, 1.3 mm long, 1.3 mm wide, 1 mm deep, concave below the bar with a glenion, the apex rounded, minutely apiculate, the dorsum with a central, hemispherical callus, the base truncate, hinged to the base of the column; *column* clavate, 1.3 mm wide and long, with the anther and the bilobed stigma apical.

Etymology: From the Latin *voluptuosus*, “voluptuous,” alluding to the delightful appearance of the plant.

Stelis voluptuosa is a large, shortly repent species with the rhizome five or six millimeters thick bearing stout ramicauls about five millimeters apart. The leaves are thickly coriaceous, elliptical-oblong and obtuse, and far surpassed by a many-flowered raceme with prominent floral bracts and large, five-veined sepals. The petals are proportionately large with a thick, rounded apex and five-veined. The lip is type A with round apex, a glenion, and a rounded callus on the dorsum.

Stelis vulpecula Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Antioquia: at the pass between Urrao and Carmen de Atrato, 2700 m, 30 May 1995, C. Luer, J. Luer & R.Escobar 17635 (Holotype: MO). Fig. 51.

This small, shortly repent, ascending species is characterized by a strict, many-flowered raceme that exceeds narrowly elliptical leaves with short ramicauls; nearly free, elliptical sepals; single-veined petals longer than wide; and an ovate, flattened lip with an acuminate tip.

Plant small, epiphytic, shortly repent-ascending, roots slender. Ramicauls erect, slender, 3–10 mm long, with 1–2 close, tubular sheaths. *Leaf* erect, coriaceous, narrowly elliptical, acute, 2–3.5 cm long, 3–4 mm wide, narrowed below the base. *Inflorescence* single; 2–4 cm long, erect, strict, many-flowered with several flowers open simultaneously; floral bracts oblique, acute, 1.5 mm long; pedicels 1 mm long; ovary 1 mm long; the peduncle ca. 1.5 cm long, from the apex of the ramicaul; *sepals* rosy white, glabrous, elliptical, subacute, connate basally, 1.5 mm long, 1 mm wide, 3-veined; *petals* rose, obovate, concave, slightly thickened on the rounded apex, 0.5 mm long, 0.4 mm wide, 1-veined; *lip* rose, shallowly ovate with thin margins, 0.75 mm long, 0.5 mm wide, 0.3 mm deep, shallowly concave surrounding a low, rounded callus, the apex obtusely acuminate, acute, the base thickened, microscopically pubescent, truncate, hinged to the base of the column; *column* clavate, 0.5 mm wide, with the anther and the bilobed stigma apical.

Etymology: From the Latin *vulpecula*, “a little fox,” referring to features of the flower.

This little species is distinguished by narrowly elliptical

leaves borne by much shorter ramicauls that become surpassed by a delicate raceme of tiny flowers. The elliptical sepals, about one millimeter long, are nearly free; the petals are concave and longer than broad; the acuminate tip of the lip is reminiscent of the pointed nose of a fox.

Stelis xenica Luer & R.Escobar, *sp. nov.* TYPE: COLOMBIA. Nariño: near La Planada, above Ricaurte, collector unknown, 1600 m, flowered in cultivation at La Planada Orquideario, 25 January 1987, C. Luer 12485 (Holotype: MO). Fig. 52.

This small, repent species is characterized by a flexuous, several-flowered inflorescence with ciliate sepals rounded at the tips; sagittate petals acuminate at the tip; and a lip that is terete above a broad, basal third with a pair of marginal lobes.

Plant small, epiphytic, repent, the rhizome stout, branching, ca. 1 cm long between ramicauls; roots slender. Ramicauls ascending, erect, stout, 0.5–1.5 cm long, enclosed by a loose, tubular sheath above the middle, another sheath below at the base. *Leaf* erect, coriaceous, elliptical, acute, 3–5 cm long, 0.7–1 cm wide in the dry state, narrowed below into an ill-defined petiole ca. 0.5 mm long. *Inflorescence* single; 8 cm long, the raceme erect, lax, flexuous, several-flowered with most flowers open simultaneously; floral bracts oblique, acute, 2.5–3 mm long; pedicels 2–2.5 mm long; ovary 1.5 mm long; the peduncle ca. 2 cm long, subtended by an inconspicuous spathe within the sheath, from a node below the apex of the ramicaul; flowers dark purple; *sepals* expanded, minutely ciliate, the dorsal sepal elliptical, rounded at the apex, 7 mm long, 4.5 mm wide, with 3 primary veins, and a pair of incomplete accessory veins rising from below the middle of both lateral veins, for a total of 7 incomplete veins, the lateral sepals elliptical, obtuse to rounded at the tip, 5.5 mm long, 3 mm wide; *petals* sagittate-triangular, 1.5 mm long, 1.25 mm wide, 3-veined, the apex acute, acuminate; *lip* thick, tomahawk-shaped, 4 mm long, 0.8 mm wide in the subquadrate, basal third, with a pair of antrorse, marginal lobes, terete below the basal third with the tip incurved and with a small, posterior lobule, the base truncate, connate to the base of the column; *column* ca. 1 mm long and wide, the anther and stigmatic lobes apical.

Etymology: From the Greek *xenikos*, “foreign,” referring to the strange and curious morphological features.

This small species is characterized by a stout, creeping and branching rhizome and elliptical leaves borne by shorter ramicauls. A several-flowered raceme of relatively large, dark purple flowers with finely ciliated sepals passes the tip of the leaf. The dorsal sepal is proportionately large, elliptical and more or less seven-veined, while the three-veined lateral sepals are nearly free and widely spread. The petals are long-acuminate at the tip. The basal part of the lip is broad with a pair of antrorse lobules; the thrice longer, terminal part of the lip is terete with the tip incurved beyond a minute lobule beneath.

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