

## NOVELTIES IN THE ORCHID FLORA OF VENEZUELA II — CRANICHIDEAE\*

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**ABSTRACT.** Two new orchid species in tribe Cranichideae, collected in the context of the project “Flora de Orquídeas de los Estados Amazonas y Bolívar, Venezuela” (Orchid Flora of Amazonas and Bolívar states, Venezuela) are described and illustrated. *Ligeophila gavilanensis* (subtribe Goodyerinae) is similar to *L. unicornis* but differs in having broader (1.75—2.90 versus 0.93—1.50 cm) narrowly elliptic to oblong-lanceolate (not lanceolate) leaves, flowers with oblong-lanceolate, obtuse (not broadly lanceolate, acute) epichile lobules, and an unappendaged (i.e., lacking an oblong, compressed projection) epichile. *Sarcoglottis maroaënsis* (subtribe Spiranthinae) is similar to *S. metallica* but the new species differs in the cream flowers with dark reddish veins in the sepals, petals, and labellum, and the leaves of different color. In flower color it is similar to *S. ventricosa* but the inflorescence of *Sarcoglottis maroaënsis* is more lax and not lanate, the flowers are smaller, and the lateral sepals and labellum are different. We report an isotype of *Sarcoglottis stergiosii* not cited in the protologue and a specimen collected in the Colombian Amazon.

**RESUMEN.** Se describen e ilustran dos nuevas orquídeas en la tribu Cranichideae colectadas en el contexto del proyecto “Flora de orquídeas de los estados Amazonas y Bolívar, Venezuela”. *Ligeophila gavilanensis* (subtribu Goodyerinae) es similar a *L. unicornis* pero difiere por sus hojas más anchas (1.75—2.90 versus 0.93—1.50 cm), angostamente elípticas hasta oblongo lanceoladas (no lanceoladas) y flores con los lóbulos del epiquilo oblongo-lanceolados, obtusos (no anchamente lanceolados, agudos) y un epiquilo sin apéndice (careciendo de una proyección oblonga, comprimida). *Sarcoglottis maroaënsis* (subtribu Spiranthinae) es similar a *S. metallica* pero la nueva especie difiere por las flores color crema con venas rojizo oscuro en los sépalos, pétalos y labelo y por las hojas de color diferente. En color floral es similar a *S. ventricosa* pero las inflorescencias de *Sarcoglottis maroaënsis* son más laxas y no lanadas, las flores son menores y los sépalos laterales y el labelo son diferentes. Reportamos un isotipo de *Sarcoglottis stergiosii* no citado en el protólogo, así como un espécimen colectado en la Amazonía colombiana. También se incluye una clave para identificar las especies de *Sarcoglottis* reportadas para la Guayana venezolana.

**KEY WORD / PALABRAS CLAVE:** Amazonas, Bolívar, Guayana, *Ligeophila*, *Sarcoglottis*, Venezuela

The following two new species of Orchidaceae (Cranichideae) were collected in the context of the project “Flora de orquídeas de los estados Amazonas y Bolívar, Venezuela” (Orchid flora of Amazonas and Bolívar state, Venezuela”).

Subtribe Goodyerinae Kl. (Garay, 1977, *pro parte*; Ormerod & Cribb, 2003: 64).

*Ligeophila* Garay (Garay, 1977; Ormerod & Cribb, 2003: 114; Ormerod, 2009).

*Ligeophila gavilanensis* Ormerod & G. A. Romero,  
*sp. nov.*

TYPE: VENEZUELA. Amazonas: Municipio Autónomo

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Atures, río Gavilán, margen derecha (oeste) del río en las cercanías del raudal Gavilán,” 120 m, 8 November 1996, “hierba terrestre, hojas verde-marrón con vetas longitudinales verdes, flores blancas, localmente frecuente pero pocos individuos en flor,” G. A. Romero. *L. M. Campbell & C. Gómez 3066* (holotype: VEN; isotypes: TFAV, fragment AMES). FIG. 1A—B, 2.

Affinis *Ligeophilae unicorni* Ormerod, sed folia latiora ex anguste elliptico oblongo-lanceolata (non lanceolata), flores epichili lobulis oblongo-lanceolatis, obtusis (non late lanceolatis, acutis).

Terrestrial, erects *herbs*. *Rhizome* terete, rooting at nodes, lower half creeping, upper half erect, ca. 10.5 cm long; internodes 0.5—1.6 x 0.15—0.30 cm. *Stem* erect, laxly 4—5-leaved, ca. 10 cm long; internodes 1.35—3.20 x 0.2—0.3 cm. *Leaves* obliquely narrowly elliptic to oblong-lanceolate, subacuminate, margins undulate, green-maroon, 5.3—9.2 x 1.75—2.90 cm; petiole and sheath 0.9—2.6 cm long. *Inflorescence* terminal, pubescent, ca. 6.1 cm long; peduncle ca. 3.1 cm long; sheathing bracts 3, overlapping, 1.5—1.8 cm long; rachis subdensely-flowered, ca. 3 cm long; *floral bracts* ovate-lanceolate, acute, to 13 x 5 mm. *Pedicellate ovary* cylindrical, pubescent, ca. 10 mm long. *Flowers* resupinate, externally pubescent. *Dorsal sepal* reddish-brown, ovate-lanceolate, truncate, shallowly concave, 7.6 x 3.2 mm. *Lateral sepals* green toward the base, reddish apically, obliquely oblong-lanceolate, obtuse, 8 x 2.5 mm. *Petals* white, with a medial reddish-black oblanceolate stripe, obliquely obovate-oblanceolate, acute, forming a hood with the dorsal sepals, 6.75 x 2.8 mm. *Labellum* white, spurred, trilobed, joined to the ovary and to the column for ca. 2.0 mm; spur clavate, apex shortly obtusely bilobed, 6.5 mm long; hypochile in total ca. 3.8 mm long, ca. 4.2 mm wide, each side with a semiorbicular lobe 2.1 mm wide, terminating in an obliquely triangular extension directed forward and outward, outside each side with a fleshy patch upon a convexity (mirrored by an internal concavity); mesochile obtuse, ca. 1.75 mm long, basally ca. 1 mm wide, apex ca. 1.5 mm

wide; epichile hippocrepiform, reflexed, with lobules pointing forward, medially 2.8 mm long, 6 mm wide, lobules oblong-lanceolate, obtuse, falcate, ca. 7.75 mm long from epichile tip to apex. *Column* with an elongate basally flexible rostellum, in total 5 mm long (description based on a dry specimen and flowers preserved in alcohol).

ETYMOLOGY: Named after the type locality, Caño Gavilán, a small clear-water river that joins the Cataniapo river just west of the Huottuja (Piaroa) community of Gavilán.

DISTRIBUTION: So far known only from the type locality.

*Ligeophila gavilanensis* appears to be most closely related to *L. unicornis* Ormerod, also from Venezuela, both species having a labellum hypochile with similar sidelobes. From the latter, however, the new species differs in having broader (1.75—2.90 versus 0.93—1.50 cm) narrowly elliptic to oblong-lanceolate (not lanceolate) leaves, and flowers with oblong-lanceolate, obtuse (not broadly lanceolate, acute) epichile lobules, and an unappendaged (i.e., lacking an oblong, compressed projection) epichile. Another species with a similarly shaped labellum hypochile is *L. jamesonii* Garay, from Colombia and Ecuador. The latter has a much larger inflorescence (rachis > 11 cm long) of many more flowers and somewhat obliquely rhombic (not obliquely obovate-oblanceolate), narrower (1.5 versus 2.8 mm) petals.

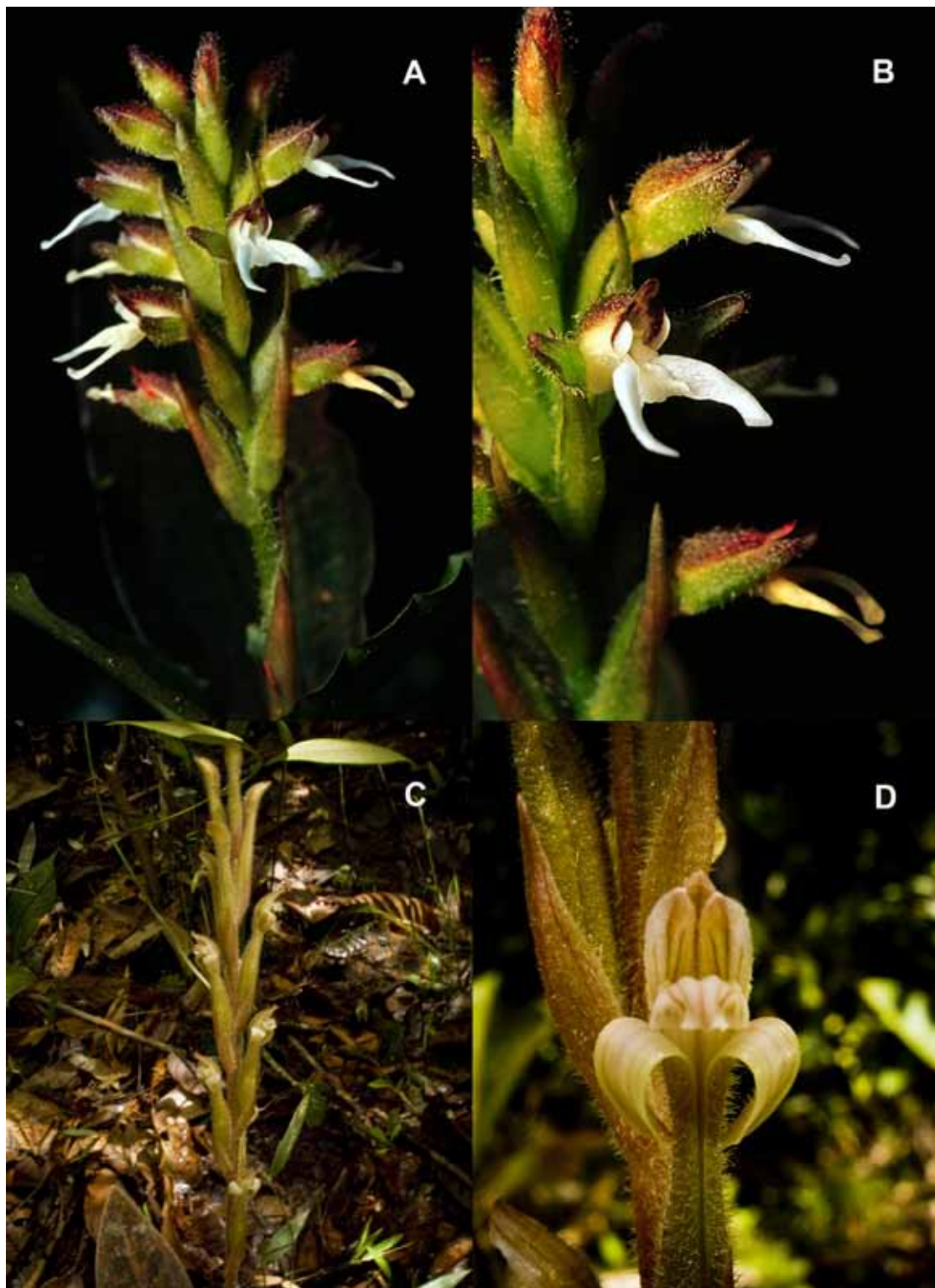
Subtribe Spiranthinae Lindl. (Garay, 1982; Salazar, 2003: 164; Salazar *et al.*, 2003).

*Sarcoglottis* Presl, Rel. Haenk. 1: 95, t. 15. 1827 (Garay, 1982; Salazar, 2003: 246).

*Sarcoglottis maroaënsis* G. A. Romero & Carnevali, *sp. nov.*

TYPE: VENEZUELA. Amazonas: Municipio Autónomo Maroa, carretera Yavita-Maroa, cerca del aeropuerto, 100 m, “hierba terrestre, raíces carnosas, hojas en el lado superior rojizas con manchas verde oscuro, en el lado inferior rojo-moradas con la nervadura principal

Right: FIGURE 1. A—B *Ligeophila gavilanensis* Ormerod & G. A. Romero. A. Inflorescence. B. Closeup of flowers. C—D. *Sarcoglottis maroaënsis* G. A. Romero & Carnevali. C. Inflorescence. D. Closeup of flowers. Photographs *in situ* by G. A. Romero-González. A—B based on Romero *et al.* 3066; C—D based on Romero *et al.* 3620.



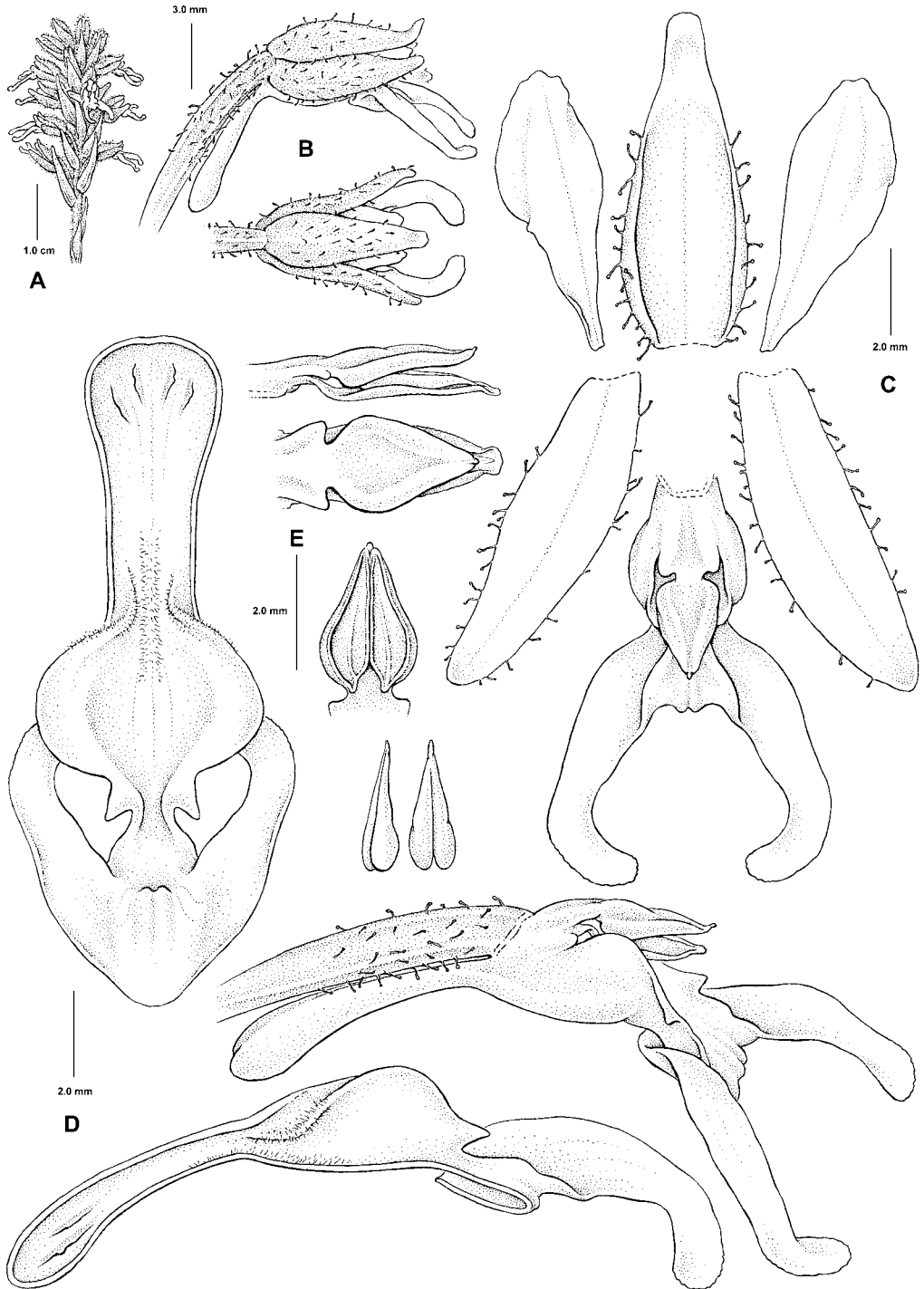


FIGURE 2. *Ligeophila gavilanensis* Ormerod & G. A. Romero. A. Inflorescence. B. Two views of the flower. C. Floral diagram. D. Three views of the labellum. E. Three views of the column and two views of the pollinarium. Drawn by Bobbi Angell based on the holotype.

roja, pedúnculo rosado, obscuro en la base, más pálido hacia el ápice, brácteas rojizas, sepalos verde pálido con nervios rojo pálido, pétalos y labelo crema con nervios rojo pálido”, 29 July 2006, *G. A. Romero, C. Gómez & G. Gerlach 3620* (Holotype: TFAV; Isotype: AMES). FIG. 1B–C, 3.

A *Sarcoglottis metallica* (Rolfe) Schltr. floribus rubentibus ac foliis item rubentibus et maioribus, a *Sarcoglottis ventricosa* (Vell.) Hoehne inflorescentia laxiore non lanuginosa, floribus minoribus necnon forma segmentorum floralium diversa.

Terrestrial *herbs*. *Roots* clustered, fleshy. *Leaves* 3–6, in a basal rosette, petiolate, dark brown above with dark green and lighter red spots, light reddish brown throughout below, with a prominent, reddish central nerve and two additional flat, reddish nerves on each side; petiole reddish, lighter toward the base, 3.0–5.0 cm, narrow, decurrent; blade up to 18.0 x 4.50 cm, elliptic lanceolate to oblanceolate, acute, attenuate. *Inflorescence* a 10-flowered raceme, multilateral. Peduncle 7.0 mm in diameter at the base and 5.0 mm in diameter below the rachis, erect, glandular; *bracts* reddish, 4, shorter than the internodes, acute, herbaceous, glandular. *Rachis* 14.0–15.0 cm, reddish, densely glandular. *Floral bracts* reddish, lighter toward the base, 15–18 mm long, lanceolate, acute, herbaceous, glandular throughout. *Flowers* erect. Pedicel 5.0 mm long, twisted. *Ovary* yellowish green, 25.0–39.0 mm long, glandular-pubescent throughout. *Dorsal sepal* 11.0–12.0 x 3.0–3.2 mm, oblong-lanceolate, acute, sparsely glandular-pubescent outside, 3-nerved. *Lateral sepals* yellowish green dorsally, light cream ventrally, fused with the ovary for 5.0–6.0 mm, free parts reflexed, 9.0–10.0 x 3.5–4.0 mm, oblanceolate-falcate, acute, sparsely glandular-pubescent outside, 5-nerved, the nerves dark brownish-red. *Petals* light cream, 10.0–11.0 x 2.5 mm, oblanceolate, acute, asymmetric, glandular along the outer margins, 3-nerved, the nerves dark brownish red. *Labellum* subsessile, thin, constricted near the apex (the constriction marking the separation between hypochile and epichile), light cream with dark brownish markings; hypochile 16.0–18.0 x 4.5–5.0 mm, cuneate in the densely glandular basal half, obovate above, with two fleshy, digitate retrorse

auricles at the base; epichile 3.0 x 5.0 mm, more or less transversely elliptic, crenate and plicate along the margins. A roughly V-shaped, rugose thickening starts near the apex of the epichile and extends into the distal part of the hypochile. *Column* cream, 6.0–7.0 mm long, erect; column foot adnate to the ovary. *Anther* 4.5–5.0 mm long and 3.0 mm wide. *Rostellum* remnant thickened at the margins, truncate. *Pollinarium* yellow, 4.5 mm long, viscidium whitish, 1.5 mm wide (description based on a fresh specimen and on flowers preserved in alcohol).

ETYMOLOGY: Named after the type locality, Maroa, the capital of the municipality.

ADDITIONAL SPECIMEN EXAMINED: VENEZUELA. Amazonas: municipio Autónomo Maroa, alrededores de Boca Chico, 100 m, 23 January 1998, “hierba terrestre, entre la hojarasca, hojas rojizas con manchas rojas más claras, sin flores, único individuo visto”, *G. A. Romero, C. Gómez & L. M. Campbell 3177* (TFAV); municipio Autónomo Atabapo, Cerro Yapacana, 1200 m, “flowers brown-green, leaves spotted with purple brown”, 3 January 1953, *B. Maguire, R. S. Cowan & J. J. Wurdack 30686* (NY).

DISTRIBUTION: Venezuela, Amazonas (endemic).

This plant previously had been detected along the Yavita-Maroa road several times but never with flowers. As such, it had been preliminarily identified as *Pelexia callifera* (C.Schweinf.) Garay, a species with which it shares many vegetative characters. However, an examination of the flowers of the type showed that the plant clearly was not referable to *Pelexia* Poit. ex Lindl. but to *Sarcoglottis* Presl (see keys and generic descriptions in Garay, 1980 and Salazar, 2003: 166–168, 232, 234, 247). Further comparison to the known species of *Sarcoglottis* showed that it was an undescribed species. In shape and size of labellum it is similar to *S. metallica* but the new species differs in the cream flowers with dark reddish veins in the sepals, petals, and labellum, and the leaves of different color. In flower color it is similar to *S. ventricosa* (Vell.) Hoehne (synonym: *S. rufescens* Klotzsch) but the inflorescence of *S. maroaënsis* is more lax and not lanate, the flowers are smaller, and lateral sepals and labellum are different.

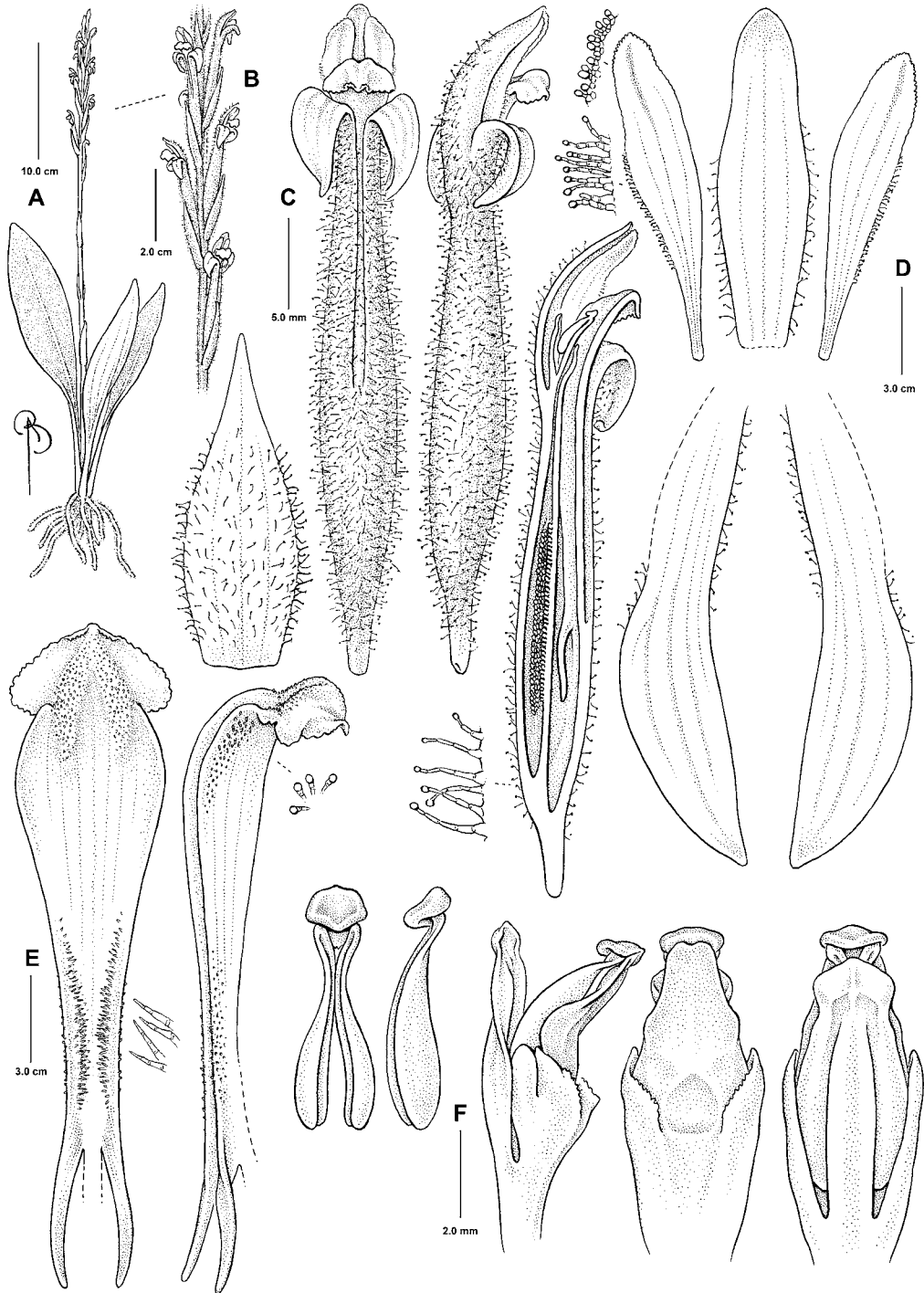


FIGURE 3. *Sarcoglottis maroaënsis* G. A. Romero & Carnevali. A. Plant. B. Inflorescence. C. Three views of the flower. D. Floral diagram. E. Two views of the labellum. F. Three views of the column and two views of the pollinarium. Drawn by Bobbi Angell based on the holotype.

*Sarcoglottis stergiosii* Carnevali & I. Ramírez, 3: 124, fig. 12. 1993 3: 124, fig. 12. 1993.

TYPE: VENEZUELA. Amazonas: municipio Autónomo Río Negro, selva pluvial, alrededores de San Carlos de Río Negro y camino que conduce a Solano, 23—29 July 1982, “hierba, flores blancas”, B. *Stergios* & G. *Aymard 4400* (holotype: VEN; isotypes: NY, PORT, TFAV).

ADDITIONAL SPECIMEN EXAMINED: COLOMBIA. Amazonas: Río Apaporis, Cachivera de Jirijirimo y alrededores, 250 m, “Terrestrial, flowers white, leaves mottled grey-purple”, 16 September 1951, R. E. *Schultes* & I. *Cabrera 14031* (AMES).

Here we report the isotype at NY that was not cited in the protologue, and extend the distribution of this species, previously thought to be endemic to Venezuela (Carnevali & Ramírez 2003), to the Colombian Amazon.

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