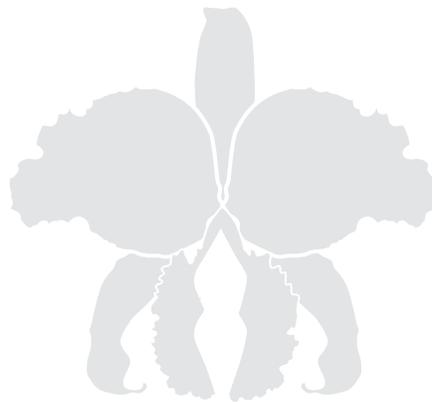


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SPECIES ORCHIDACEARUM ICONES COLOMBIANAE

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FOREWORD

Monographic works, be it of species groups delimited by relatedness or restricted to a certain geographical distribution, have traditionally been the basis for the study and understanding of local orchid floras. Nevertheless, in large countries, especially if they are also highly diverse and relatively poorly explored, it may be quite challenging to assess how many and which species should be included in such a systematically structured study *a priori*. In a similar fashion, country level floras are normally not published unless they represent either a complete set of related species of a particular group or a [relatively] complete set of all the species present. The limitation that arises from this *completeness* factor results in a lot of good and valuable data not being published because of its partiality.

A viable alternative to this was the creation of the Icones Plantarum Tropicarum (IPT) and Icones Orchidacearum (IO) series in which orchids have been monographed by depicting and discussing individual species rather than complete monographs of species' sets. These series opened the door to the publication of detailed knowledge on particular species, which would be far too partial to include in a monographic work, as was well pointed out by Eric Hágsater when proposing the IO. These series set the basis for the study of orchids in many regions, where it was previously impossible, by depicting an individual to which each name has been applied to in different countries. About the IPT, Calaway H. Dodson stressed that many floras of Tropical countries had much more text than illustrations, that much confusion in botanical taxonomy resulted from inaccurate impressions due to confusing terminology, and that a picture is worth a thousand words. Species Orchidacearum (SO) proposed here, builds on those principles and includes a few additional dimensions:

1. *Infra-specific variation*. When showing an illustration of a species we are actually showing a single individual of that species, in a particular timeframe and under particular ecological conditions. It is difficult to assess if what we have illustrated is an average individual that is representative for the species. There is always a risk of depicting an unusual or aberrant form of it. This is addressed in Species Orchidacearum by allowing for the publication of an unlimited number of plates and descriptions of the same species. In this manner it will be possible to assess morphological variation of species more easily, and diverse forms of a single species may be documented.

2. *What you see is what you get*. Students are frequently challenged with the question of what is included in the published descriptions of individual species. When preparing a protologue it is commonplace to use one or a few known specimens, making it fairly easy to address what material was in the author's mind when preparing the description. But when preparing monographs lots of material is normally cited, usually from diverse origins, dates and herbaria. Did the author include the features of all the cited specimens or only of those at hand? Is the description based on the original protologue or an amendment that includes additional material? Is the author's concept of this particular species very inclusive or very exclusive, is it similar to my own? In Species Orchidacearum descriptions are restricted to the morphological variation found in the specimen that has been illustrated, nothing more and nothing less. This may mean that less variation is described in each plate, it may also mean that it does not overlap well with the original protologue. However, whatever is described is exactly what was found in that particular individual and students are free to combine the descriptions of all individuals of the same species included in the series for their own concept of the species.

3. *Lankester Composite Dissection Plates*. The LCDP's, as they will be referred to from here on, are another key features of the Species Orchidacearum. A combination of more accurate, detailed and less expensive photography, with the lower costs of color printing, and the generalization of digital publication, allows for the possibility of substituting the traditional black and white ink illustrations used in botanical literature for the composite dissection plates in full color published digitally. The LCDP illustration has a few advantages over the drawings. In the first place, shapes, sizes, borders and ornaments are more accurately shown; it includes a very rich color palette, conveying more information; it makes the understanding of depth easier; and finally, it is much more objective and far less hand-dependent.



4. *Systematic order.* A major challenge in non-monographic treatments is the loss of systematic order. In such large and diverse groups as Orchidaceae, not knowing where to look for a particular species' closest relatives can make determination hazardous. Publishing groups of unrelated species belonging to any genus in each volume creates the issue of requiring the user to flip through all the indexes to find all of the species belonging to a particular genus, and then having to go to each of those publications separately, rather than to be able to find all species of a single genus together. This is addressed in Species Orchidacearum by allowing users to access published material either by volume and issue, or alphabetically by genus or individual species.

5. *Accessibility.* One of the biggest limiting factors for students of Tropical countries to study their own flora is the availability of relevant literature. Type specimens, original descriptions and important monographic works on Tropical plants are mostly deposited or published in North American or European institutes. Inexplicably, and probably unethically, the countries of origin and their students are still restricted access to many of these resources. SO is initially intended to be published electronically, lowering the costs of production dramatically. Therefore, and considering that it is to be used by the students of the orchid-rich countries to be able to study their floras, Species Orchidacearum will be completely available online, widely accessible, and free of charge.

For the name of this series I am indebted to Franco Pupulin. With him, and Diego Bogarín, we spent many a long night talking about conceiving a series that would contain a so called last word on each species of orchid in the world. It would have “everything”, including a fine taxonomical discussion, showing the extant type elements, broad specimen citation, a detailed description, be richly illustrated to show variation along its distribution, include existing DNA data, have a complete set of references, and a modern discussion of the recognition and status of the species. Overtime, realizing the difficulties behind such a task, we desisted, but many of those elements have gone into the creation of Epidendra (www.epidendra.org).

What is proposed here under that name is conceptually quite different. The main goal being to make available the illustrations of as many individuals of diverse species as possible to students of the Tropical orchid floras. Species Orchidacearum follows Icones Orchidacearum in that each icon has its own authors and can be cited individually so that the individual efforts are recognized. However, it falls closer to the idea of Icones Plantarum Tropicarum in that it sticks to a two page

format for each icon, giving more relevance to the illustrations, with less emphasis made in a very detailed description and citation of vouchers of multiple specimens of the same species. Contrary to controversy that may arise about the adequate name of a specimen, of any faithful illustration, of a field collected individual, you may always say...

“crece ahí, se ve así, y algo es”

Adam Philip Karremans



ICONES COLOMBIANAE

The necessity for a serial publication illustrating the diversity of Colombian orchids, perhaps the richest orchid flora in the world, emerged from an informal meeting during the VIII Congreso Nacional de Botánica in Manizales, Colombia in 2015. A large part of the current editorial team of *Icones Colombianae* was present during that meeting. After the successful publication of the first three volumes of the series in 2017, 2018 and 2019, attention towards the orchid flora of Colombia has grown.

The volumes, published as part of the broader *Species Orchidacearum* serial, have proven to be a useful tool not only for students and researchers, but also for more general audiences, including local communities and decision makers. Careful taxonomic work, enriched by detailed photographic documentation on the local orchid floras, slowly but surely set the basis for a multitude of biodiversity related studies and may be crucial to tackle large and highly diverse countries such as Colombia.

Icones Colombianae aims to promote broad and unrestricted public access to the scientific knowledge on biodiversity. Through this initiative, the work of different local researchers and orchid enthusiasts is made freely available and easily accessible online to the whole community. The interest that people from the communities where the orchids grow have shown in these publications speaks of the important role that such initiatives play in biodiversity education and conservation efforts.

In this volume we present for the first time in this serial publication, twelve Colombian species belonging to twelve orchid genera: *Acineta*, *Bifrenaria*, *Cyrtochilum*, *Encyclia*, *Epidendrum*, *Houlletia*, *Masdevallia*, *Odontoglossum*, *Oncidium*, *Phragmipedium*, *Sauvetea* and *Xylobium*.

Several of the species documented here are very popular among enthusiasts, like *Acineta superba*, *Encyclia stellata*, *Masdevallia stenorrhynchos*, *Odontoglossum lindleyanum*, *Oncidium fuscatum*, and *Xylobium elongatum*, while others are very rare in the wild and collections such as *Bifrenaria longicornis* and *Sauvetea sessilis*, here reported for the departments of Vaupes and Santander, respectively. The latter is a poorly known species, here recorded for Colombia for the first time, which belongs to an obscure and poorly illustrated genus. Moreover, *Bifrenaria longicornis* represents the first Amazonic species documented in this serial publication.

We document three species endemic to Colombia: *Epidendrum pazii*, *Masdevallia stenorrhynchos* and *Phragmipedium schlimii*, the two latter were categorized following IUCN criteria as Endangered (EN) due to the loss of their natural habitat and illegal extraction.

The editors



SPECIES ORCHIDACEARUM ICONES COLOMBIANAE

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Acineta superba

(KUNTH) RCHB.F.

ANN. BOT. SYST. 6: 609. 1863

Synonyms: *Anguloa superba* Kunth in F.W.H. von Humboldt, A.J.A. Bonpland & C.S. Kunth, Nov. Gen. Sp. 1: 343. 1816.

Type: Ecuador. Province of Loja: "Loxa", F.W.H. von Humboldt & A.J.A. Bonpland 3385 (holotype: P).

Illustrated specimen: Colombia. Tolima: Municipality of Villahermosa. 1979 m. 24 June 2017. M. Sierra-Ariza 01 (TOLI; LCDP voucher).

Epiphytic caespitose *herb*, up to 70-118 cm tall without inflorescence. *Roots* glabrous, thick. *Pseudobulbs* ovoid, lightly compressed, sulcate, 14-15 × 5.0-6.0 cm. *Leaves* 2-4, elliptic to lanceolate, plicate, acuminate, subpetiolate, 50-90 × 5.0-6.0 cm. *Inflorescence*, thick racemose, pendulous, lax 25-30 cm long, multiflowered; *peduncle* terete, green, bracts oblong, obtuse, concave. *Ovary* subterete, sulcate, with dark brown scales, 3.5-3.8 cm long. *Flowers* resupinate, subglobose, fleshy, dotted wine red on a cream-colored background; with intense and pleasant fragrance. *Dorsal sepal* elliptic-ovate, concave, obtuse, spotted with purplish red dots, 4.2 × 2.5 cm. *Lateral sepals* connate at the base, elliptic-ovate, concave, obtuse, spotted with purplish red dots, these bigger and denser at the base, 4.6-4.8 cm × 3.2-3.3 cm. *Petals* elliptic-ovate, slightly concave, obtuse, also purplish red spotted, 3.7-3.9 × 2.0-2.2 cm. *Lip* fleshy, concave, hypochile yellowish brown internally, with purple-red dots, the side lobes of the mesochile purplish red spotted, the epichile yellow; hypochile entire, canaliculate, pubescent on the abaxial surface, velutinous on the adaxial surface with a very pronounced osmophore, in the form of a thick curved horn, brownish, spotted with purplish red dots, 0.8-0.9 cm long; mesochile with two carinae, erect, dolabriliform, transversely sub-reniform lateral lobes, and a saddle shaped central callus with rectangular surface; callus in dorsal view with two emergences forward and two backward, surface with the apical and distal parts elevated, with intense wine red color, 1.0-1.3 × 0.6-0.7 cm; the epichile oblong spatulate, concave, acute, with a basal hump, 1.6-2.0 × 0.5-0.6 cm. *Column* thick, clavate, lightly compressed, apically winged, slightly hairy, stigma in the form of a transverse cleft, rostellum linguiform, 1.7-2.0 × 0.5-1.1 cm. *Anther cap* white, dorsoventrally compressed, 0.6-0.7 cm long.

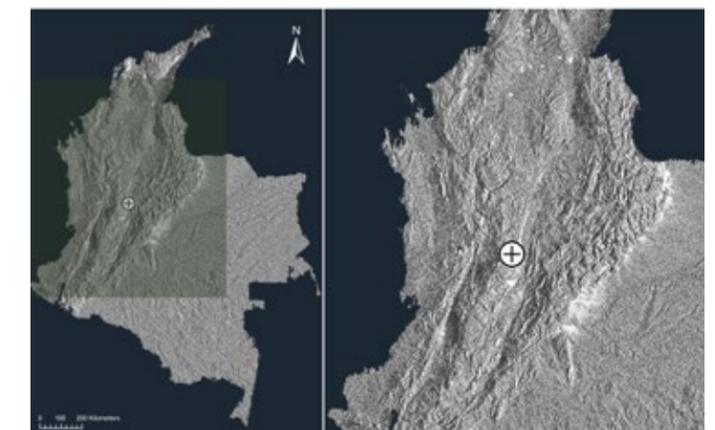
Pollinarium with a semilunar viscidium, a ligulate stipe and two yellow, flattened pollinia.

Etymology: From the Latin *superbus*, meaning "magnificent" or "splendid", probably referring to the large size of the plants and the descending inflorescences with very fragrant flowers.

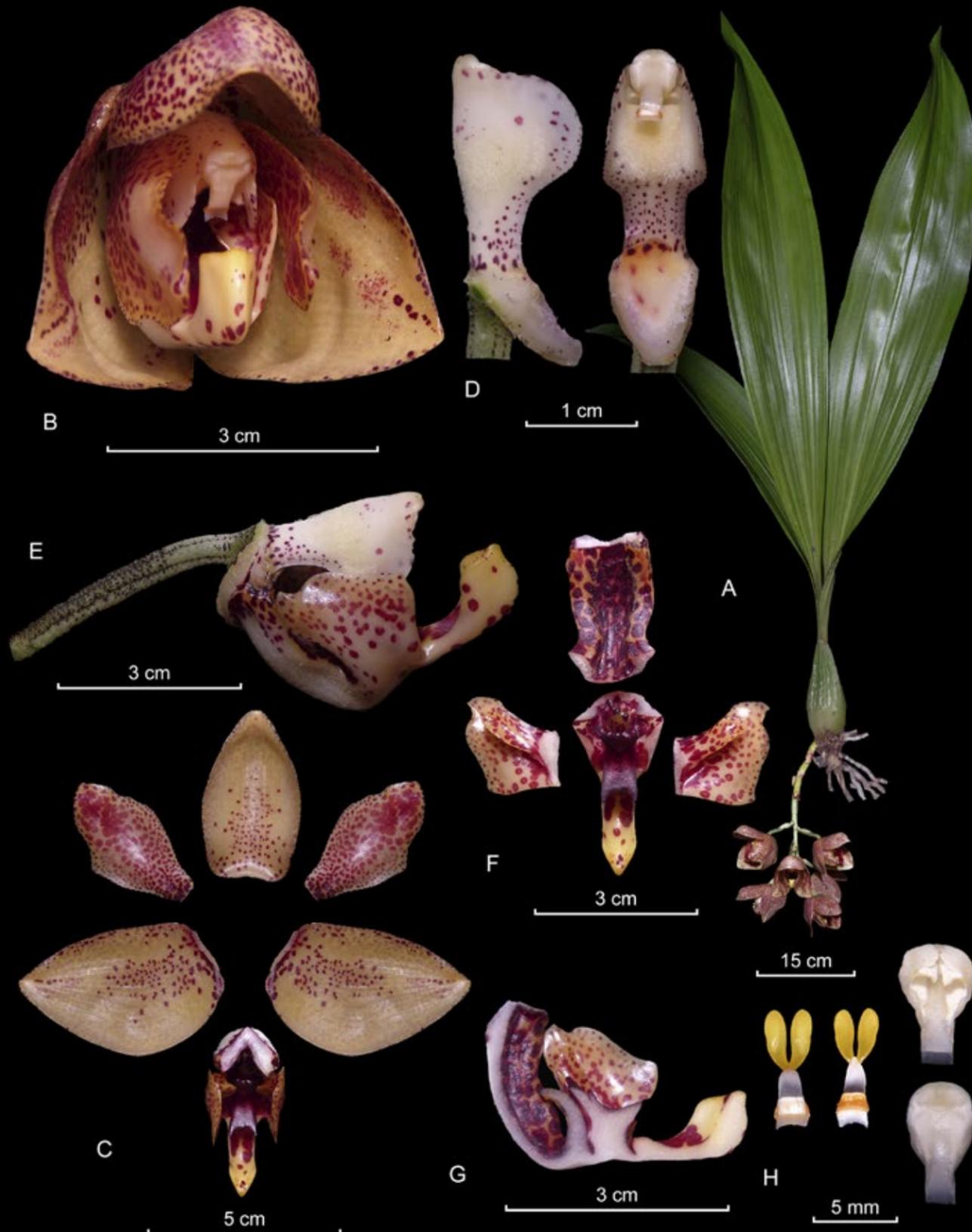
Acineta superba is recognized by the saddle shaped central callus with the basal and distal parts elevated, of intense vinaceous color. The lip has dolabriliform (axe shaped) lateral lobes and near the apex of hypochile, the osmophore, a very pronounced structure in the form of a thick curved horn. The pollinarium is characterized by a bi-pointed or semilunar viscidium and a ligulate stipe. This species is variable in its morphology and coloration and has the widest distribution in the genus, ranging from Colombia to Peru. *Acineta superba* has a very strong pleasant fragrance of cinnamon, dominated by methyl cinnamate and has been observed to attract male bees of the genus *Eufriesea* (tribe Euglossini).

References:

Gerlach, G. 2020. Notes on the genus *Acineta* in the Andes (Colombia, Venezuela, Ecuador and Peru) and a list including its species. *Orquideologia* 37(1): 85-95.



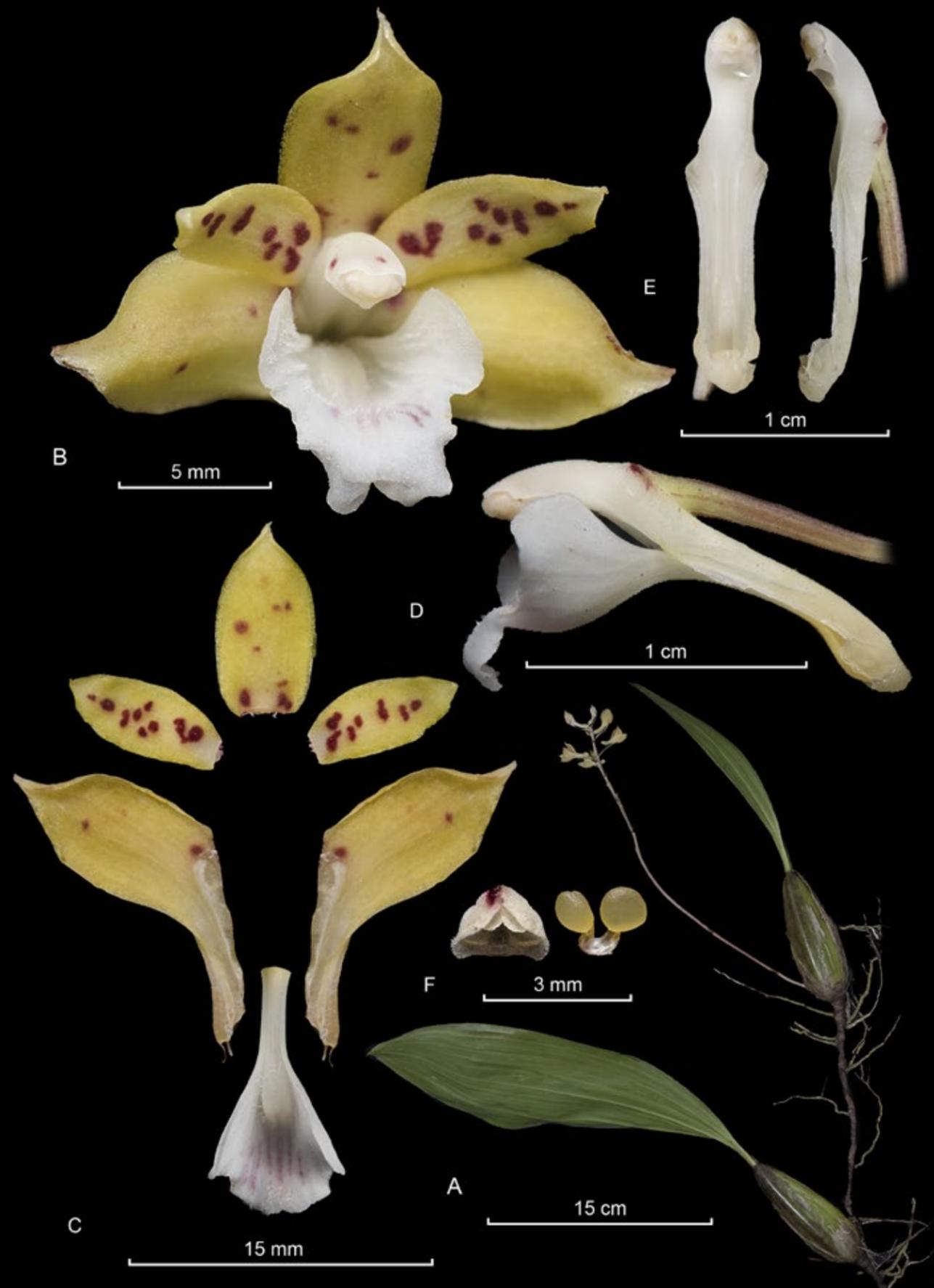
LCDP: *Acineta superba* (Kunth) Rchb.f. A. Habit. B. Flower. C. Dissected perianth. D. Column, side and ventral view. E. Ovary, column and lip, lateral view. F. Dissected lip, hypochile and epichile. G. Lip, transversal cut. H. Anther cap and pollinarium.



Bifrenaria longicornis

LINDL.

EDWARDS'S BOT. REG. 24: PL. 93. 1838



Synonyms: *Stenocoryne longicornis* (Lindl.) Lindl., Edwards's Bot. Reg. 29(Misc.): 53. 1843.
Adipe longicornis (Lindl.) M. Wolff, Orchidee (Hamburg) 41: 36. 1990.

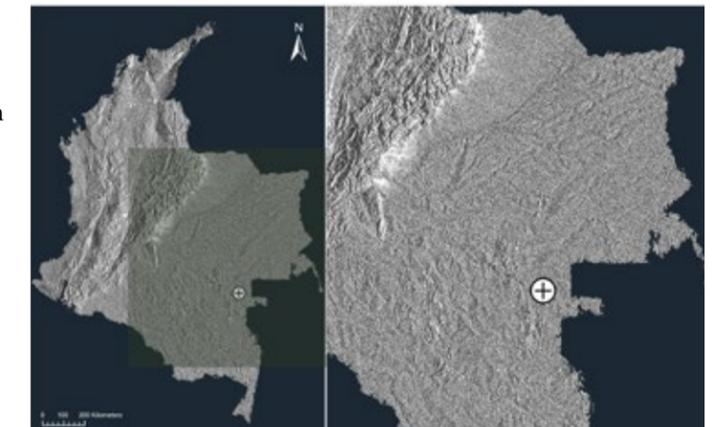
Lectotype: Without locality (Tabula 93 in Lindley 1838, designated by Koehler & do Amaral 2004).

Illustrated specimen: Colombia. Vaupés: Municipality of Mitú, Urania. 175 m. 11 November 2019. J.S. Moreno 526 (LCDP voucher).

Epiphyte *herb*, sympodial, scandent, 30–40 cm tall, *roots* thin, up to 20 cm long. *Pseudobulbs* distant, heteroblastic, oblong-elliptic, sub-tetragonal, 8–10 × 3–4 cm. *Leaves* pseudopetiolate, apical, erect, plicate, elliptic, coriaceous, acute, 20–28 × 5–7 cm, *sheaths* triangular, lateral, basal. *Inflorescence* racemose, lax, basal, erect, 25 cm long. *Floral bracts*, triangular. *Ovary* slightly striate, 1.5 cm long. *Sepals* and petals primrose with maroon spots, membranaceous, smooth. *Dorsal sepal* ovate, acute, 10 × 6 mm. *Lateral sepals*, ovate, connate, acute, 15 × 7 mm. Petals elliptic, acute, 8 × 4 mm. *Lip* white with terracotta stripes, membranaceous, pubescent towards the callus, unguiculate to spatulate, sinuate, base cuneate, apex trilobate; callus laminar, elongate from the base to the middle area. *Column* white, slightly curved, 15 mm long including the foot. *Anther* ovate, papillose, white maroon spots. *Pollinia* 4, pale yellow, rounded, with a bifurcate viscidium.

Etymology: From the Latin *longicornis* meaning “long horn”, referring to the long spatulate base of the lip.

Bifrenaria longicornis Lindl. is restricted to the Amazon ecosystem where it is a widely distributed epiphyte that grows at elevations below 600 m. The species can be recognized by long, scandent rhizomes, a feature shared only with *Bifrenaria venezuelana* C.Schweinf. From the latter it can be distinguished by the several-flowered inflorescence that is longer than the pseudobulbs (vs. 1-2 flowers, shorter than the pseudobulbs), the prominent spur (vs. inconspicuous), the white-yellow flowers with brown-red spots (vs. flowers purple to pale brown).



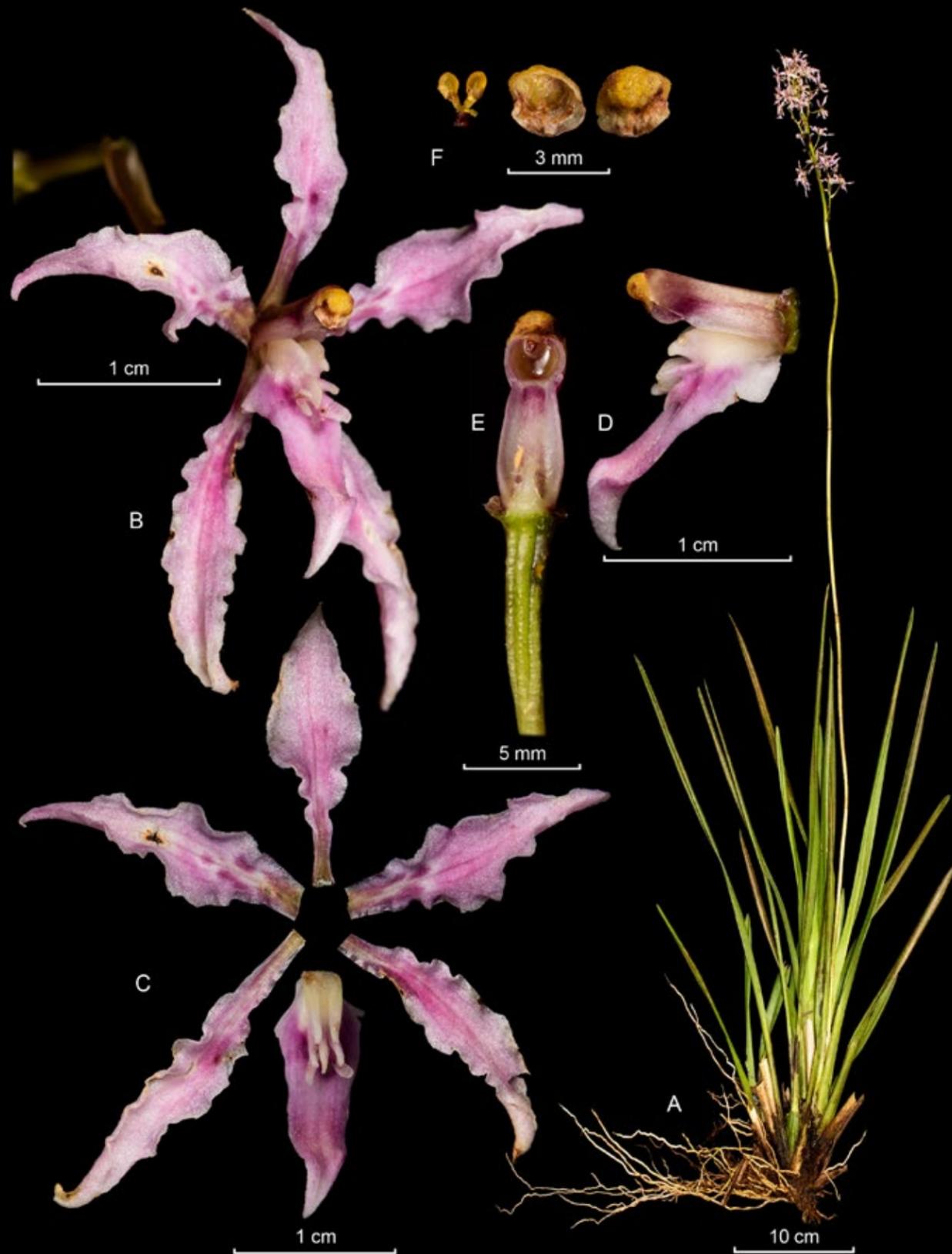
LCDP: *Bifrenaria longicornis* Lindl. A. Habit. B. Flower. C. Dissected perianth. D. Column and lip, side view. E. Column, ventral and side view. F. Anther cap and pollinia.



Cyrtochilum amphiglottis

(RCHB.F.) DALSTRÖM

LANKESTERIANA 20(1): 26. 2020



Synonym: *Odontoglossum amphiglottis* Rchb.f., Linnaea: 41. 1877.

Type: Colombia, Medellín. B. Rözl s.n. (holotype: W).

Illustrated specimen: Colombia. Antioquia: Municipality of Yarumal, Llanos de Cuivá, 2740 m. 28 May 2019. S. Vieira 045 (JAUM; LCDP voucher).

Terrestrial herb, caespitose, up to 50 cm tall without the inflorescence. *Pseudobulbs* ovoid, bifoliate, 3.5–5.0 × 2.0–3.0 cm, mostly hidden by foliaceous bracts. *Leaves* conduplicate, linear to narrowly lanceolate 25–45 × 2.3–3.5 cm. *Inflorescence* axillary, from the base of the uppermost bract, an erect, stiff up to 95 cm long panicle with a dense cluster of flowers on very short, sub-erect branches near the apex. *Bract* tubular and appressed, acute, ca. 5–10 mm long. *Pedicel* with *ovary* 10–30 mm long. *Flower* showy, flushed with lavender pink throughout, with short darker bands and spots near the base, more or less stellate with irregularly spreading segments. *Dorsal sepal* basally canaliculate, spatulate, then distinctly elliptic, undulate, obliquely acuminate, ca. 9.5–17 × 4.5–6 mm; *lateral sepals* basally canaliculate, elongate spatulate, then distinctly elliptic, undulate, obliquely acuminate, ca. 16–23 × 5–6 mm. *Petals* basally flat and broadly linear, then slightly obliquely ovate to elliptic, undulate and obliquely acuminate, ca. 14–18 × 5–6 mm. *Lip* rigidly attached at the base of the column through a longitudinal ridge for ca. 2.5 mm, cuneate, indistinctly trilobate with rounded lateral lobes and triangular acute frontal-lobe with a slightly canaliculate, obliquely acuminate apex; *callus* of a pair of fleshy ridges with an intermediate channel emerging from the base of the lip for ca. 6.5 mm, ending bluntly by rounded lobes, with two or three subsequent pairs of digitate, fleshy denticles, with a median nasicular lobe, ca. 13–15 × 6–7 mm. *Column* straight, fleshy with slightly curved lobes embracing the base of the callus, ca. 7–9 mm long. *Anther cap* yellowish, campanulate with an indistinct dorsal lobule. *Pollinarium* of a pair of folded/cleft pyriform pollinia on a ca. 0.8 mm long strap-like stipe on a pulvinate viscidium.

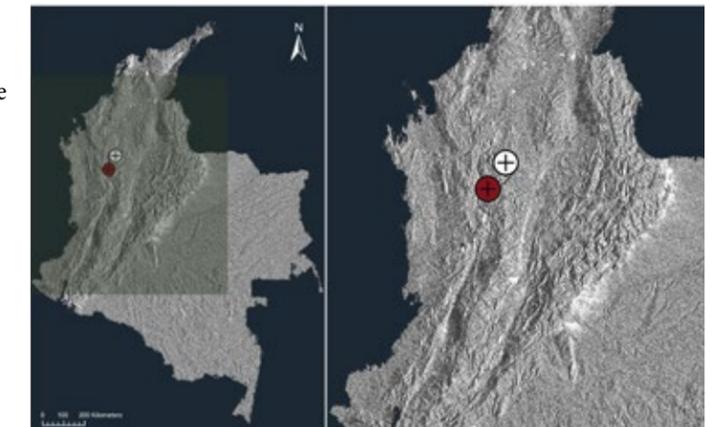
Etymology: The specific epithet refers to “two kinds of, or double tongues”, most probably due to the shape of the callus on the lip.

Cyrtochilum amphiglottis is an obscure species based on a specimen collected by Benedict Rözl somewhere near “Medellín”, Antioquia. The type specimen (sheet 48735, W) consists of two ca. 18 cm long few-flowered racemes. A rough drawing is made of the flower, presumably by H.G. Reichenbach. It is closely related and confusingly similar to the Venezuelan *C. ramosissimum* (Lindl.) Dalström, and to the widespread *C. sodiroi* (Schltr.) Dalström, of which it has been considered a synonym by several authors (Bockemühl 1989, Dalström 2001). The most distinctive features of *C. amphiglottis* are the plant habit and the erect, stiff panicle carrying a very dense corymbose cluster of attractive lavender-pink flowers at the very top, as opposed to the generally widely spaced elongate branches on more arching panicles of the closely related species.

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Bockemühl, L. 1989. *Odontoglossum, Monographie und Ikonographie - a Monograph and Iconograph*. Brücke-Verlag Kurt Schmiersow, D-3200 Hildesheim, Germany.

Dalström, S. 2020. New combinations in *Cyrtochilum* (Orchidaceae: Oncidiinae). *Lankesteriana* 20(1): 21–29.



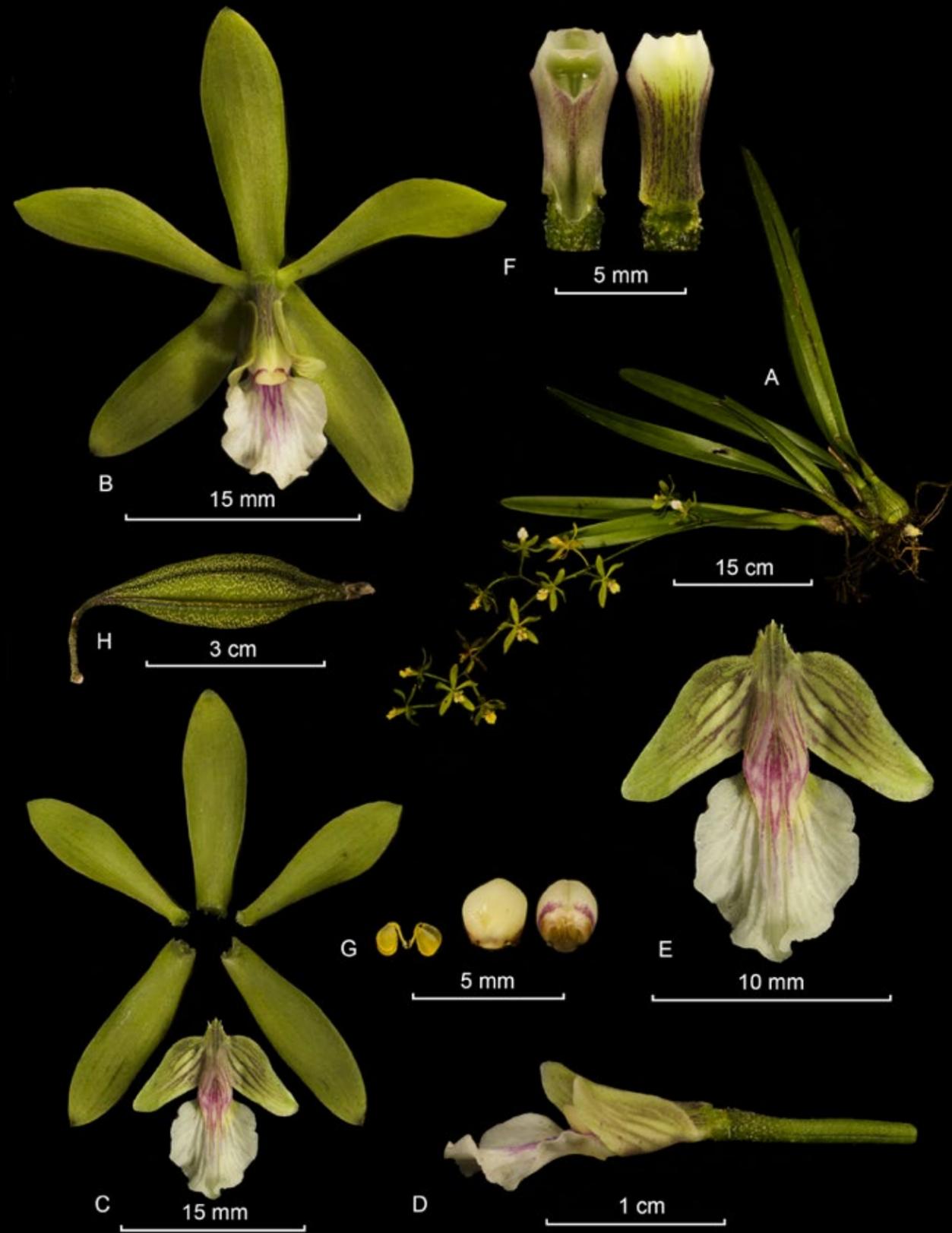
LCDP: *Cyrtochilum amphiglottis* (Rchb.f.) Dalström. A. Habit. B. Flower. C. Dissected perianth. D. Lip and column, side view. E. Column and ovary, ventral view. F. Anther cap and pollinarium.



Encyclia stellata

(LINDL.) SCHLTR.

ORCHIDEEN BESCHREIB. KULT. ZÜCHT.: 2 I I. 1914



Synonyms: *Epidendrum stellatum* Lindl., Fol. Orchid. 3: 21. 1853.

Type: Venezuela. Caracas, Purdie s.n. (holotype: K).

Illustrated specimen: Colombia. Antioquia: Municipality of Sabanalarga, tropical dry forest, 560 m. 10 Apr 2019. M. Rincón-González s.n. (LCDP voucher).

Plant epiphytic, caespitose, to 45–50 cm tall. **Roots** fibrous, thick. **Pseudobulbs** ovate, bifoliate, striate, 5.0 × 3.5 cm. **Leaves** oblong-elliptic, sessile, conduplicate in the base, coriaceous, entire, acute, 30–40 × 2.5 cm. **Inflorescence** racemose, surpassing the leaves, suberect, produced from the apex of pseudobulb, up to 46 cm, rachis semiterete, green. **Floral bracts** short, 3 mm long. **Ovary** pedicellate, semiterete, canalate, granulous, dark-green, ca 18.5 mm. **Flowers** 10–15, simultaneous, resupinate, with a soft fragrance, sepals and petals yellowish-green, midlobe of the lip white, lateral lobes greenish, with the veins and callus purple, column green, ventrally with purple stains, ventrally with purple dots. **Sepals** free, elliptical-lanceolate, acute. **Dorsal sepal** 18.0 × 5.2 mm. **Lateral sepals** slightly asymmetrical, oblique, 18 × 5 mm. **Petals** oblanceolate, subacute, 16 × 5 mm. **Lip** trilobed, cuneate at base, rounded at apex, 13.5 × 13.0 mm, the lateral lobes widely ovate, erect, entire, surrounding the column, curved at the apex, 7.5 × 4 mm, callus fleshy, oblong, sulcate, ending in three central longitudinal keels, that disappear at the apex of the midlobe, the midlobe separate from the lateral lobes by a short and distinct isthmus, semi-circular, undulate margins, with three keels on each side of the central keels, 8.0 × 6.9 mm. **Column** 6.8 × 3.5 mm, straight, expanded to the apex, with a pair of short apical wings, the clinandrium denticulate, cordiform. **Anther cap** ovoid, with 4-cells, yellowish-white with the margin purple. **Pollinia** two pairs, subequal, laterally compressed, attached to a thin stipe. **Capsule** 3.2 cm, ellipsoid, canalate, green densely granulous.

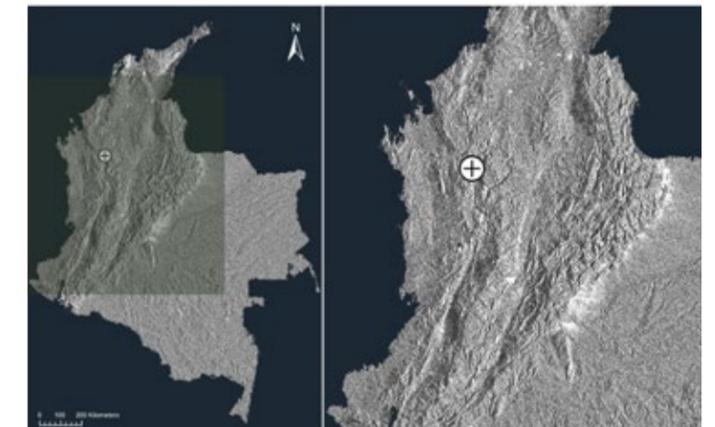
Etymology: Derived from the Latin *stella*, “star” because of the shape the flowers take when dried.

Encyclia stellata is morphologically similar to *Encyclia oncioides*

(Lindl.) Schltr., it differs in the symmetrical lateral lobes of the lip (vs. asymmetrical), longer midlobe 8.0 mm (vs. 6.0–7.3 mm), shorter column 6.8 mm long (vs. 7.2–8.5 mm), with a pair of short apical wings (vs. prominent incurved rounded auricles). The species of the *Encyclia oncioides* complex are morphologically similar and their taxonomic delimitation requires further revision (Ames et al. 1935). According to Pupulin & Bogarin (2012) the species is easily distinguished by the verrucose ovary, the midlobe of the lip with three narrow, conspicuous, warty keels running from the base toward the apex with several lower keels radiating from the center to the sides the lateral lobes of the lip narrowing toward the tips, and a short, basally branching inflorescence.

References:

- Ames, O., Hubbard, F. T., & Schweinfurth, C. 1935. A fourth polymorphic alliance in *Epidendrum*. *Botanical Museum Leaflets, Harvard University* 3: 93-110.
- Lindley, J. 1853. *Epidendrum stellatum*. *Folia Orchidaceae* 3: 21.
- Pupulin, F., & Bogarin, D. 2012. A taxonomic revision of *Encyclia* (Orchidaceae: Laeliinae) in Costa Rica. *Botanical Journal of the Linnean Society* 168(4), 395-448.



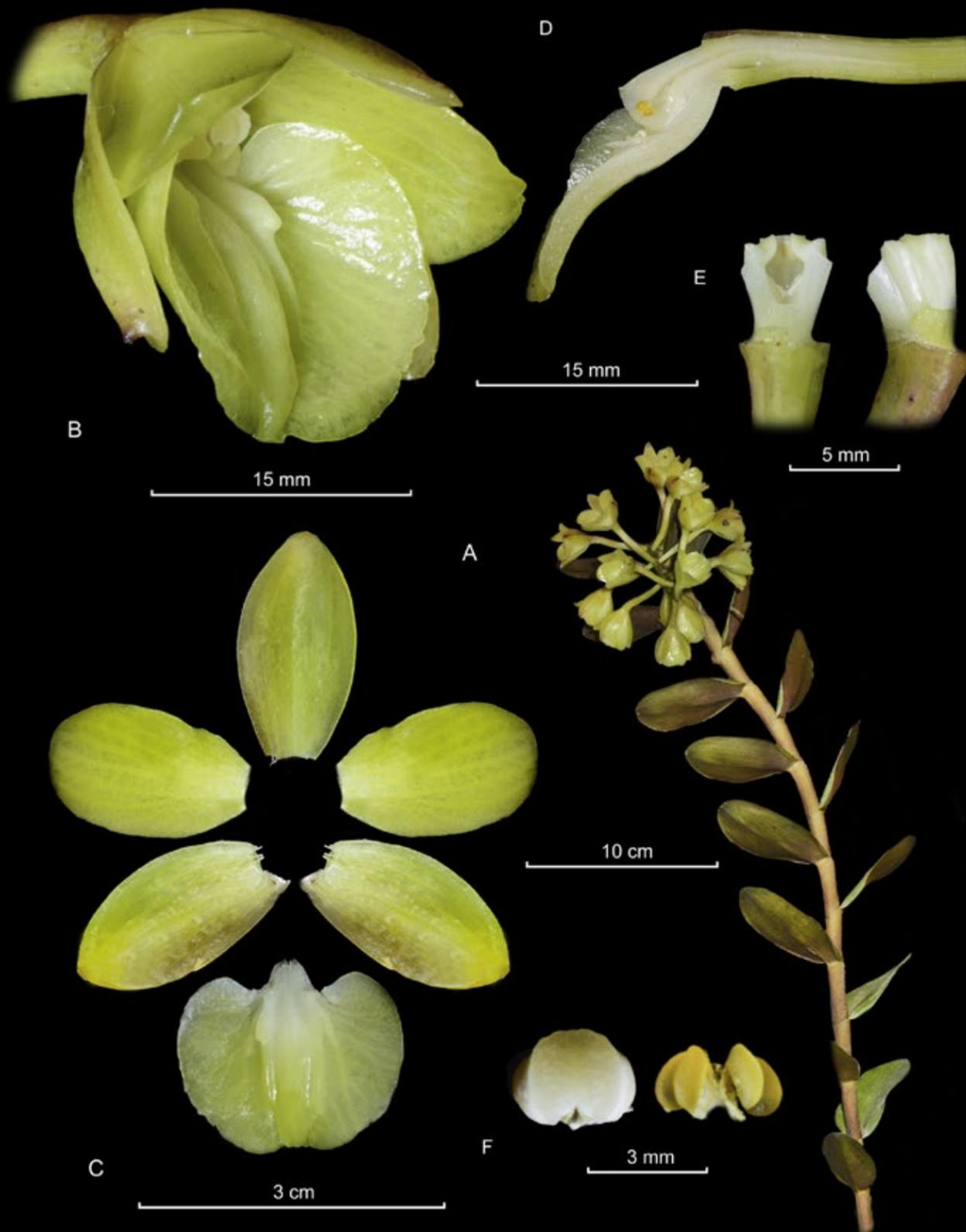
LCDP: *Encyclia stellata* (Lindl.) Schltr. A. Habit. B. Flower. C. Dissected perianth. D. Column and lip, side view. E. Lip. F. Column, ventral and side view. G. Anther cap and pollinarium. H. Capsule.



Epidendrum pazii

HÁGSATER

ICONES ORCHIDACEARUM 4: T. 469. 2001



Type: Colombia. Chocó: San José del Palmar, Las Amarillas, Carretera Boqueron-Río Blanco, 2300 m. 2 April 1996. *N. Paz, F. Castro, A. Fajardo & P. Grant 493* (holotype: CUV; isotypes AMO; COL; CUV).

Illustrated specimen: Colombia. Valle del Cauca: Road from Albán to Anserma Nuevo, 1500 m. 5 November 2015, *E. Domínguez 0298, Calderón-Sáenz, C. Skotak & E. Beach* (JAUM; LCDP voucher).

Epiphytic herb, 1.5–2.3 m tall. *Roots* 5 mm in diameter. *Leaves* elliptical, alternate, distichous along the stem, persistent, rigid; sheaths tubular, laterally compressed, rugose, 2.8–3.3 × 2.0 cm. *Inflorescence* apical raceme, arching, 7 cm long. *Peduncle* short, laterally compressed, 1 mm long. *Floral bracts* short, triangular, attenuate, concave, 4–6 mm long. *Flowers* successive, opening simultaneously from the base, resupinate, yellowish green. *Ovary* terete, 3 cm long. *Sepals* elliptic, succulent, lustrous, rounded at the apex. *Dorsal sepal* 5-veined, 2.3 × 1.0 cm. *Lateral sepals* 7-veined, 2.3 × 1.2 cm. *Petals* elliptic, oblong, lustrous, rounded at the apex, 7-veined, reticulated, 2.1 × 1.2 cm. *Lip* united to the column, sub-orbicular, reniform, succulent, lustrous, with forked and reticulated nerves, prominent over the adaxial area; low central carina with a thick conical apiculum 1.7 × 2.4 cm; 2 laminar, parallel, elongated calli, opposed to the low central carina. *Column* straight, short, thick, white with a green base, 6 × 4 mm. *Clinandrium* short, margin entire. *Anther cap* reniform, 4-celled, white, 3 mm wide. *Pollinia* 4, ovate, laterally compressed, yellow, 2.5 mm. *Nectary* shallow, not forming a sac below the ovary.

Eponymy: In honor of Néstor Paz from the Universidad del Valle, Cali, who collected the type specimen.

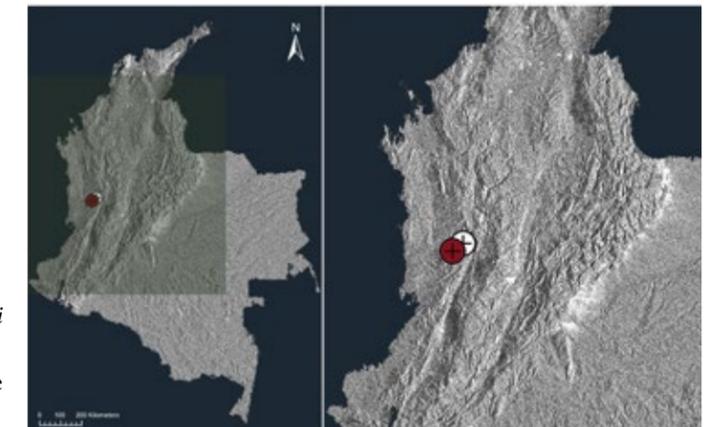
Epidendrum pazii is endemic to the southwestern Andes in Colombia in the departments of Valle del Cauca and Chocó. It differs from similar species in the sturdy plants with large, stiff leaves, and a larger number of successive flowers. *Epidendrum anderssonii* Hágsater & Dodson has narrower and shorter leaves, inflorescences with a higher degree of branching, less flowers per inflorescence and the lacks the low longitudinal carina of the lip is absent.

Epidendrum colombianum A.D.Hawkes, which is very similar to *E. anderssonii*, lacks the two laminar calli flanking the central carina of the lip of *E. pazii*.

References

Hágsater, E. 1993. *Epidendrum anderssonii* in E. Hágsater & G. A. Salazar. (eds.), *The Genus Epidendrum*, Part 1, *Icon. Orchid.* 2: pl. 107.

Hágsater, E. 2001. *Epidendrum pazii* in E. Hágsater & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 3, *Icon. Orchid.* 4: pl. 469.



LCDP: *Epidendrum pazii* Hágsater. A. Habit. B. Flower. C. Dissected perianth. D. Transversal section of column and ovary. E. Ventral and side view of the column. F. Anther cap and pollinarium.



Houlletia lowiana

RCHB.F.

GARD. CHRON., N.S., 2: 484. 1874

Synonyms: *Jennyella lowiana* (Rchb.f.) Lückel & Fessel, Caesi-
ana 13: 6. 1999.

Type: Colombia, Ocaña, Norte de Santander; *Bruchmüller s.n.*
[locality and collector questionable] (holotype, W-R-19093).

Illustrated specimen: Colombia. Antioquia: Municipality of Yarumal,
Reserva Natural Los Magnolios, 1500 m. 27 May 2019. *S. Vieira 046* (JAUM; LCDP voucher).

Terrestrial or lithophyte, caespitose *herb*, up to 55 cm. *Pseudobulbs* unifoliate, pyriform, ca. 2 cm long, surrounded by dry scarious sheaths. *Leaves* plicate, elliptic, acuminate, petiolate, ca. 50 cm long including petiole, ca. 7–8 cm broad. *Inflorescence* suberect, loosely several-flowered, 33 cm long, *peduncle* green, terete. *Ovary* terete, furrowed, 2.3 cm long. *Flowers* non-resupinate, patent, pale yellow, the lip bright yellowish-orange at the mesochile of the callus. *Sepals* concave, with multiple acrodromous veins, sub-acuminate. *Dorsal sepal* broadly oblong, 3.1 × 1.9 cm. *Lateral sepals* ovate, oblique, broader than the dorsal one, 2.9 × 2.8 cm, connate for ca. 8 mm. *Petals* slightly concave, spatulate, the apical third broader, sub-acuminate, 2.9 × 2.5 cm. *Lip* sessile, divided in hypochile and epichile, *hypochile* with long, oblong to triangular, erect, acuminate, aristate lateral lobes, the middle part with a thick callus covering the basal half of the lateral lobes, with a broad flap upturned at the apex, *epichile* long spatulate, with the broadest part in apical fourth, the apex reflexed so looking emarginate. *Column* white, dorsally suffused with green, fleshy, somewhat arcuate, club shaped, 1.7 cm long, with a short, 4 mm long foot. *Anther cap* not seen. *Pollinarium* formed of a broad pale brown, slightly curling ellipsoid viscidium, a hyaline slender ligulate stipe and two yellow flattened, incompletely cleft, oblique pollinia.

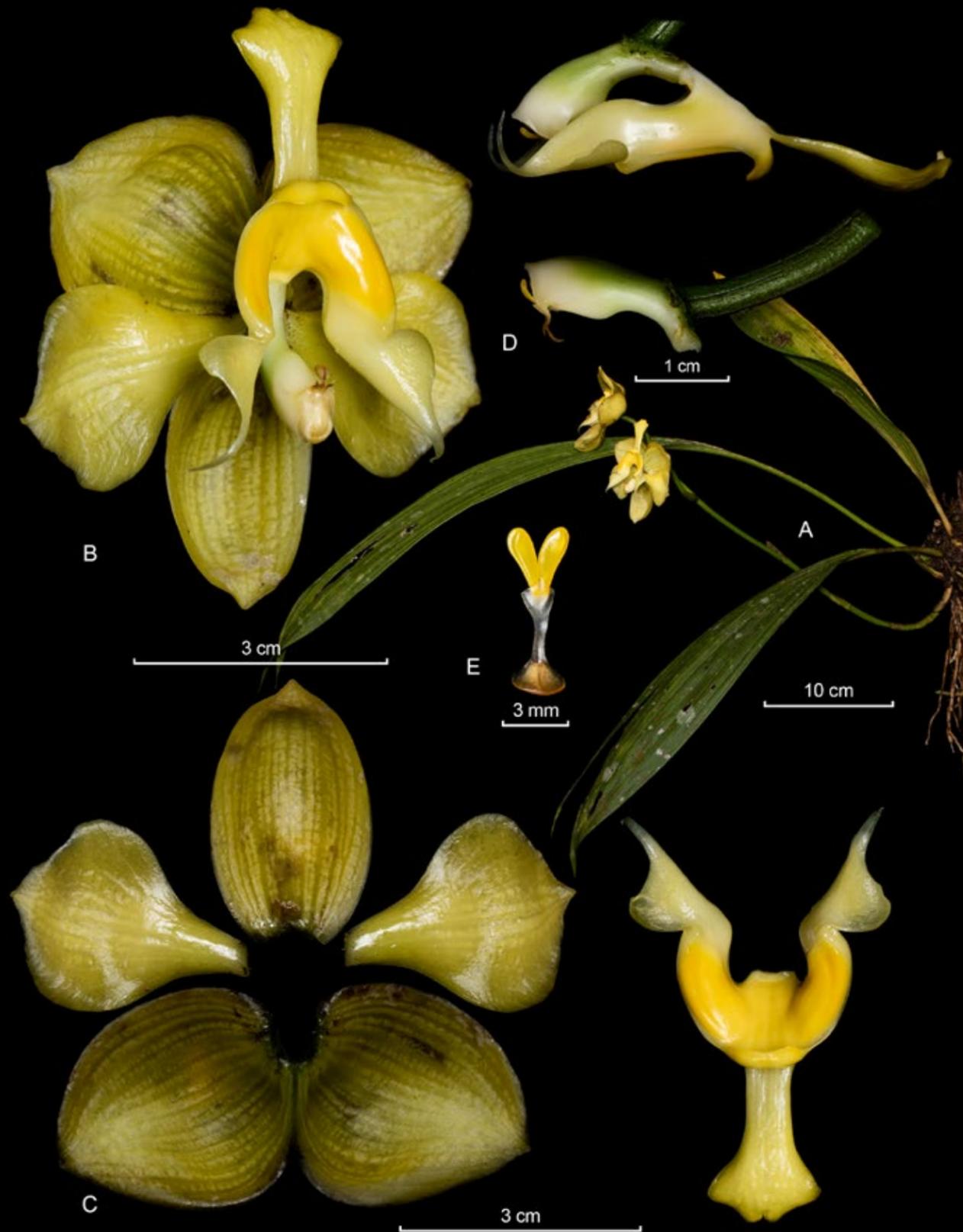
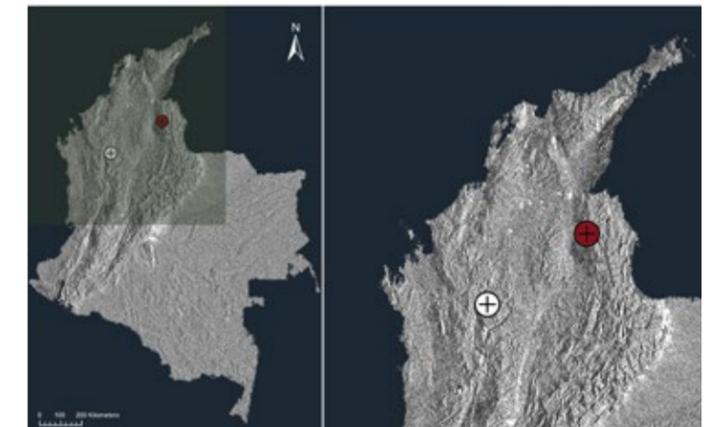
Eponymy: Named after Hugh Low (1824-1905), a British naturalist and orchid collector.

Houlletia lowiana can be easily distinguished from the other

species in the genus by its unspotted pale yellow sepals and petals together with patent wide opened flowers. Its most related species, *H. sanderi* Rolfe, has a very similar coloration, but possesses campanulate flowers. The species has a wide distribution, from Norte de Santander in Colombia to Cochabamba in Bolivia, at altitudes between 1100 and 1800 m.

References:

Gerlach, G. 2001. Die Subtribus Stanhopeinae 3. *Horichia* bis *Lacaela*. *Journal für den Orchideenfreund* 8(2): 105-118.



LCDP: *Houlletia lowiana* Rchb.f. A. Habit. B. Flower. C. Dissected perianth. D. Column and lip, side view; ovary and column, side view. E. Pollinarium



Masdevallia stenorhynchos

KRAENZL.

NOTIZBL. BOT. GART. BERLIN-DAHLEM 8: 130. 1922

Synonyms: *Alaticaulia stenorhynchos* (Kraenzl.) Luer, Monogr. Syst. Bot. Missouri Bot. Gard. 105: 6. 2006.

Type: Colombia. Antioquia: Frontino, El plateado, *Kalbreyer 1528* (holotype, B, destroyed).

Illustrated specimen: Colombia. Tolima: Municipality of Villahermosa, 2200 m. 21 September 2018. *M.A. Sierra-Ariza 21* (TOLI; LCDP voucher).

Plant epiphytic, sympodial, 8–15 cm tall. *Ramicauls* stout, erect, 1.0–2.5 cm, enclosed by 2–3 loose, tubular sheaths. *Leaf* erect, coriaceous, the blade elliptical-obovate, obtuse to round at the apex, 6–14 × 1.5 cm, including the petiole. *Inflorescence* a congested, successively few-flowered raceme, peduncle erect, triquetrous. *Ovary* 5–7 mm long. *Sepals* subcarinate, glabrous; *dorsal sepal* yellow-green, verrucose within, ovate, 14 × 9 mm, connate to the lateral sepals, apex caudate, ascending, 4 cm long; *lateral sepals* yellow heavily spotted and suffused with purple-brown and yellow tails, connate, forming an ovate synsepal, 30 × 19 mm, verrucose, apex caudate, 2–3 cm long. *Petals* white with a yellow-green midvein, oblong, 9 × 2 mm, apex bilobed, the labellar half with a low longitudinal callus, slightly swollen at the base. *Lip* white, spotted with red-purple, oblong-pandurate, 10 × 3 mm, with acute, oblique, marginal folds above the middle, with the disc shallowly sulcate, the *epichile* ovate, obtuse, spiculate-crested, with the tip deflexed and apiculate with deeply lacerate margins, the *hypochile* oblong, truncate, hinged on the end. *Column* green with purple margins, 8 × 2 mm, the foot 4 mm long, incurved extension.

Etymology: From the Greek *stenorhynchos*, “a narrow snout”, referring to the narrower tail of the dorsal sepal as compared to that of *Masdevallia elephanticeps* Rchb.f. & Warsz.

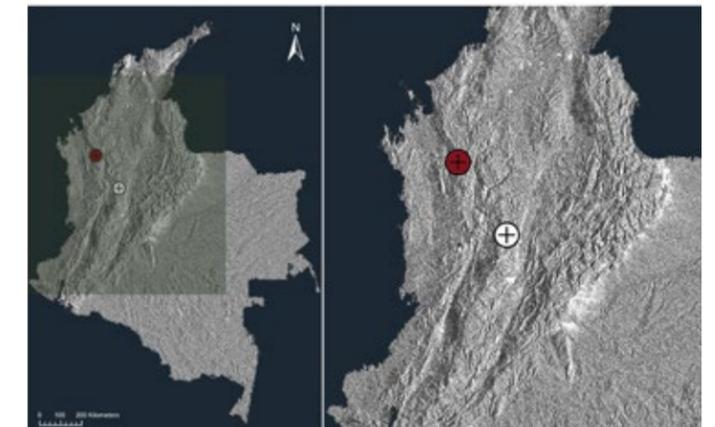
Masdevallia stenorhynchos is endemic to Colombia, where its populations are known to be distributed in the Central and Western cordilleras. The species belongs to *Masdevallia* subgen. *Polyantha* subsect. *Alaticaula* and is distinguished from the other members of the subsection by the large flowers with a yellow-green dorsal

sepal, yellow lateral sepals heavily spotted and suffused with purple-brown and yellow tails, with recurved margins, deeply connate forming a synsepal, connate to the dorsal sepal only at the base, forming a negligible sepaline cup, and the epichile of the lip which is remarkably crested and fringed. It is categorized as Endangered (EN) due to loss of natural habitat by deforestation (Calderón-Sáenz et al. 2006).

References:

Calderón-Sáenz, E., Farfán J. & Constantino, E. 2006. *Masdevallia stenorhynchos* Kraenzl. pp. 112–114. In: Calderón-Sáenz, E. (ed.). 2006. Libro Rojo de Plantas de Colombia. Volumen 3: Orquídeas, Primera Parte. Serie Libros Rojos de Especies Amenazadas de Colombia. Bogotá, Colombia. Instituto Alexander von Humboldt-Ministerio de Ambiente, Vivienda y Desarrollo Territorial.

Luer, C.A. 2000. Icones pleurothallidarum. XIX. Systematics of *Masdevallia*, Part One. Monogr. Syst. Bot. Missouri Bot. Gard. 77: 185–186.



LCDP: *Masdevallia stenorhynchos* Kraenzl. A. Habit. B. Flower. C. Dissected perianth. D. Column and lip side view. E. Petals and Lip. F. Column, ventral and side view.



Odontoglossum lindleyanum

RCHB.F. & WARSZ.
BONPLANDIA (HANNOVER) 2: 99. 1854

Synonyms: *Oncidium lindleyoides* M.W.Chase & N.H.Williams, *Lindleyana* 21(3): 25. 2008

Type: Colombia. Norte de Santander: Pamplona, ca. 2800 m, *J. Linden* 1261 (holotype: K-L; isotypes: BR; W).

Illustrated specimen: Colombia. Santander: Municipality of La Belleza, edge of the forest, 2380 m. 15 July 2018. *N. Gutiérrez M* 110 (LCDP voucher).

Epiphytic herb, 27 cm tall without the inflorescence. *Roots* basal, fleshy 2–3 mm in diameter. *Pseudobulbs* caespitose, ovate, ancipitous, compressed, longitudinally furrowed, 5 × 2.8–3.0 cm, bifoliate, surrounded basally by distichous, foliaceous sheaths. *Leaves* sub-erect, subpetiolate, conduplicate, linear-lanceolate, acute, 21 × 1.3 cm. *Inflorescence* axillary, from the base of the uppermost sheath, sub-erect, racemose, successively many-flowered, to 47 cm long. *Bracts* (including floral bracts) appressed, scale-like, triangular, acute, 5–10 mm long. *Flowers* resupinate, sepals and petals yellow with maroon spots, with the apices somewhat deflexed, the lip white with the apical half brown to maroon and commonly with a yellow apex. *Sepals* narrowly elliptic, shortly acuminate, entire, 28–29 × 6.0–7.5 mm. *Petals* narrowly elliptic, shortly acuminate, entire, 28 × 6.5 mm. *Lip* adnate to the ventral side of the column through a central, longitudinal fleshy ridge, with a canaliculated ca. 10 mm long basal part that clasp the lateral sides of the column, then with a lanceolate to triangular, more or less deflexed and apically more or less involute front-lobe, 28 × 8 mm in total; callus represented by two diverging and projecting teeth. *Column* mainly white, terete, ca. 17–18 mm including the anther cap in illustrated specimen. *Anther cap* whitish to pale yellow with brown markings, campanulate, bluntly rostrate and dorsally lobulate. *Pollinarium* of two folded/cleft pyriform pollinia on a narrowly linear ca. 2 mm long stipe on a pulvinate viscidium.

Eponymy: The name honors the famous English orchidologist John Lindley (1790-1865).

Odontoglossum lindleyanum is a locally common, widespread and

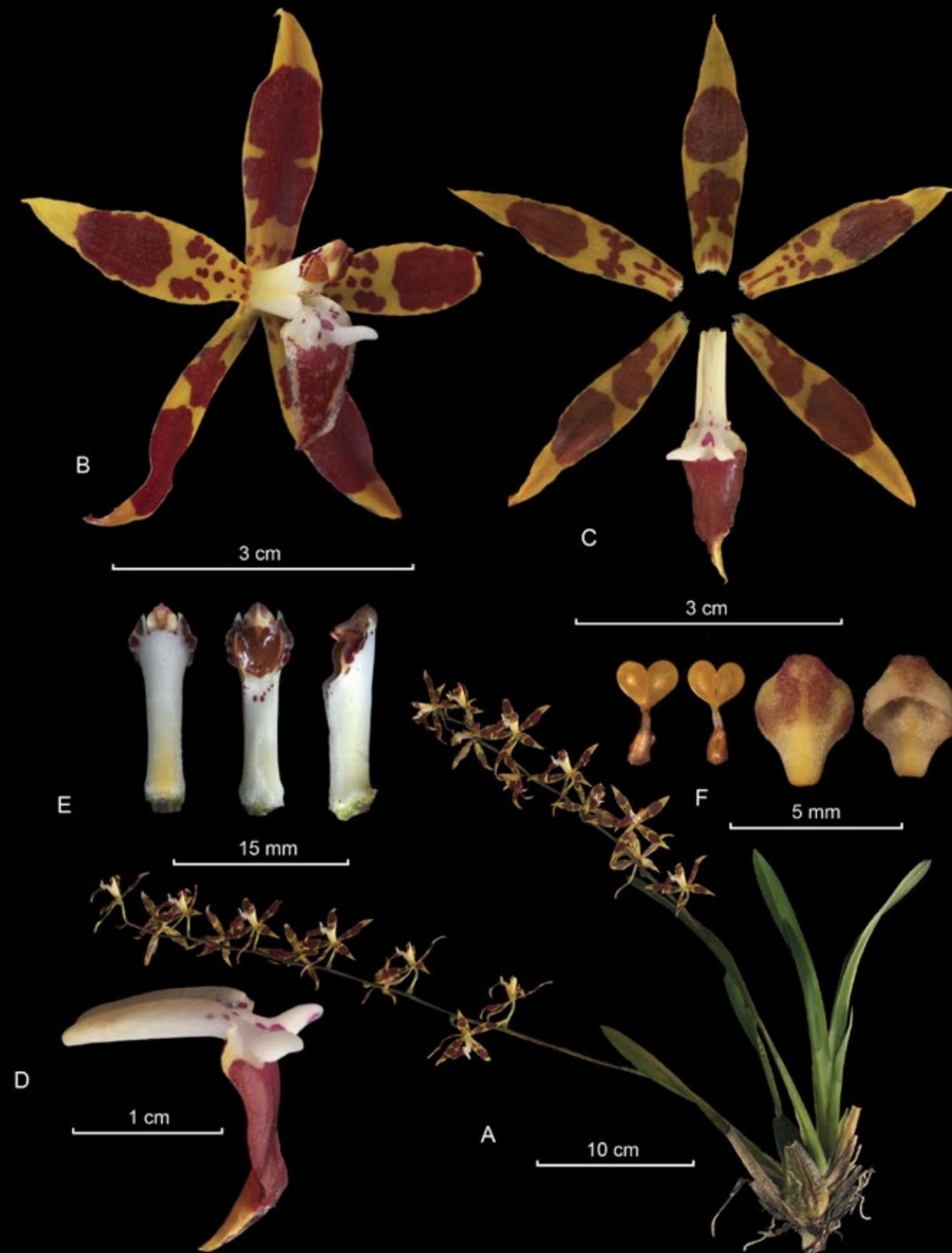
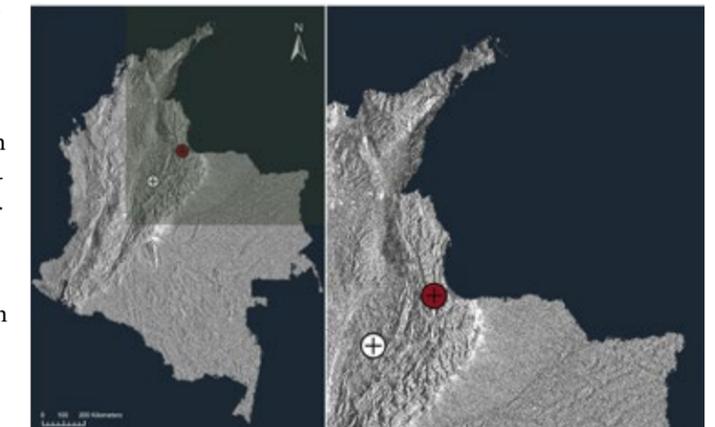
highly variable species, occurring in middle to upper elevation cloud forests throughout the Andes from Western Venezuela to central Peru. The flowers vary in size and coloration throughout the distribution but the general morphology is similar, the projecting teeth of the callus sometimes splits into four acute and more or less falcate, denticles. The considerable natural variation in size more than in the shape seems to be geographically restricted and it is debatable whether they should be treated as geographical forms, subspecies or actually vaguely distinct species. Due to the high degree of intermediate forms, however, it seems safer to keep them together as one variable “super-species” for the time being.

References:

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Dodson, C.H., & Dodson, P.M. 1984. *Orchids of Ecuador, Icones Plantarum Tropicarum* 10: pl. 901–1000. Missouri Botanical Garden. P.O. Box 299, St. Louis, Missouri 63166-0299.

Dunsterville, G.C.K., & Garay, L.A. 1972. *Venezuelan Orchids Illustrated* 5: 1–334. Andre Deutsch Limited, 105 Great Russell Street, London W C 1.



LCDP: *Odontoglossum lindleyanum* Rchb.f. & Warsz. A. Habit. B. Flower. C. Dissected perianth. D. Lip, side view. E. Column, ventral, dorsal and side view. F. Anther cap and pollinarium.



Oncidium fuscatum

RCHB.F.

ANN. BOT. SYST. 6(5): 763. 1863

Synonyms: *Miltonia warszewiczii* Rchb.f., Xenia Orchid. 1: 132 (1856).
Miltonioides warszewiczii (Rchb.f.) Brieger & Lückel, Orchidee (Hamburg) 34: 132 (1983).
Chamaeleorchis warszewiczii (Rchb.f.) Senghas & Lückel in F.R.R.Schlechter, Orchideen Beschreib. Kult. Zücht., ed. 3, I/C(33-36): 2305 (1997).

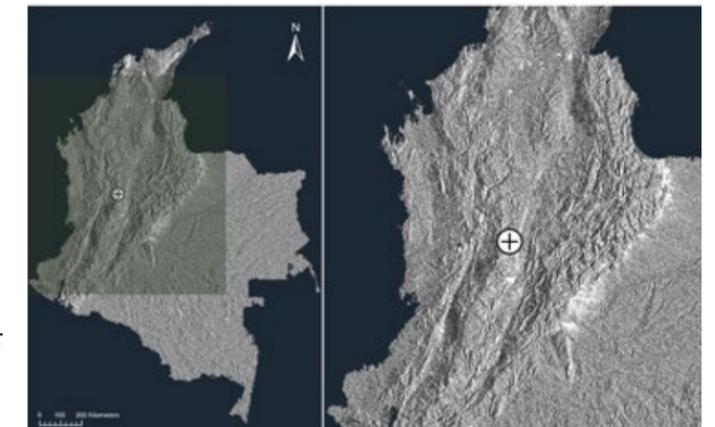
Type: Diar. Cuchero. Feb 1830. Detecta a nob. de Warszewicz.
Hab. sp. sicc. comm. ab. ill. Lindley sub N. 128. *Warszewicz s.n.* (W).

Illustrated specimen: Colombia. Tolima: Municipality of Villahermosa, 1103 m. 19 December 2018. M. A. Sierra-Ariza & A. Albino-Bohórquez 117 (TOLI; LCDP voucher).

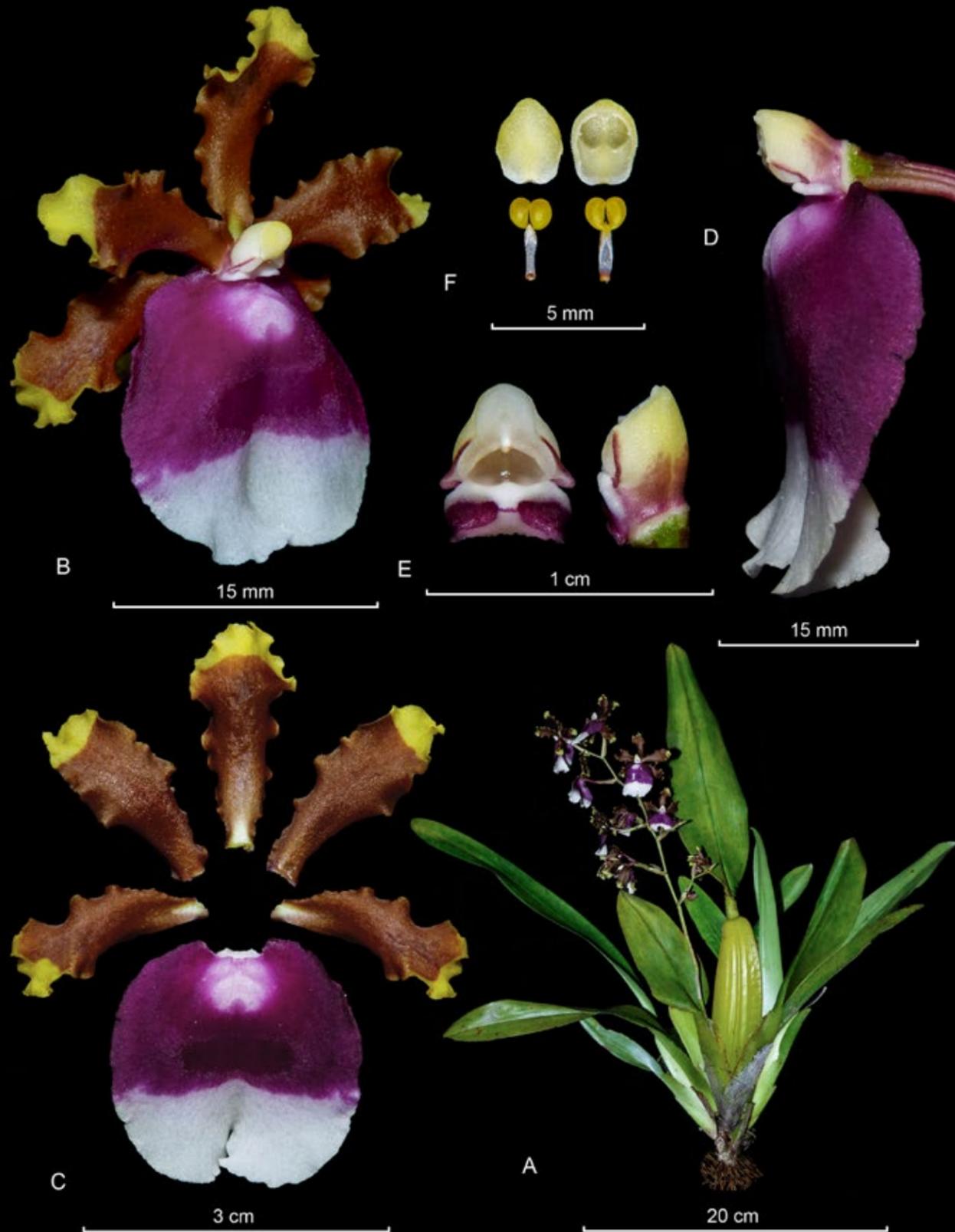
Plant epiphytic, sympodial, 30–40 cm tall. **Rhizome** short, 1 to 2 cm long. **Pseudobulbs** heteroblastic, oblong, flattened, unifoliate, 10–15 × 1.5–3 cm, surrounded at the base by sheaths foliaceous, oblong. **Leaves** apical, erect, carinate, oblong, coriaceous, rounded, 15–20 × 3.5–6 cm. **Inflorescence** paniculate, basal, erect, 28 cm long. **Floral bracts** oblong, concave. **Ovary** strongly striate, burgundy, 2.5 cm long. **Flowers** with sepals and petals brown with yellow in the apex, oblanceolate, papillose, undulate, rounded. **Dorsal sepal** 2.2 × 0.9 cm; **lateral sepals** slightly oblique, 2 × 0.6 cm. **Petals** 8 × 4 mm. **Lip** suborbicular, coriaceous, convex, deeply bilobed at the apex, vinaceous with white in the apical third, 2.5 × 2.5 cm; the callus white, broadly rounded, basal, emarginate. **Column** white with vinaceous, slightly curved, rounded wings, 6 mm long, the stigma broadly ovate. **Anther** rounded, papillose, yellowish. **Pollinia** 2, yellow, rounded, with a white stype, elongate.

Etymology: from the Latin *fuscatum* “dark” in relation to the color of the flowers.

Oncidium fuscatum is found from southern Panama to Peru, at elevations from 450 to 1700 m. This species is distinguished from the other *Oncidium* in Colombia by the dark flowers, the orbicular lip and the callus without pronounced protuberances; a rare form with fully white flowers is known to exist.

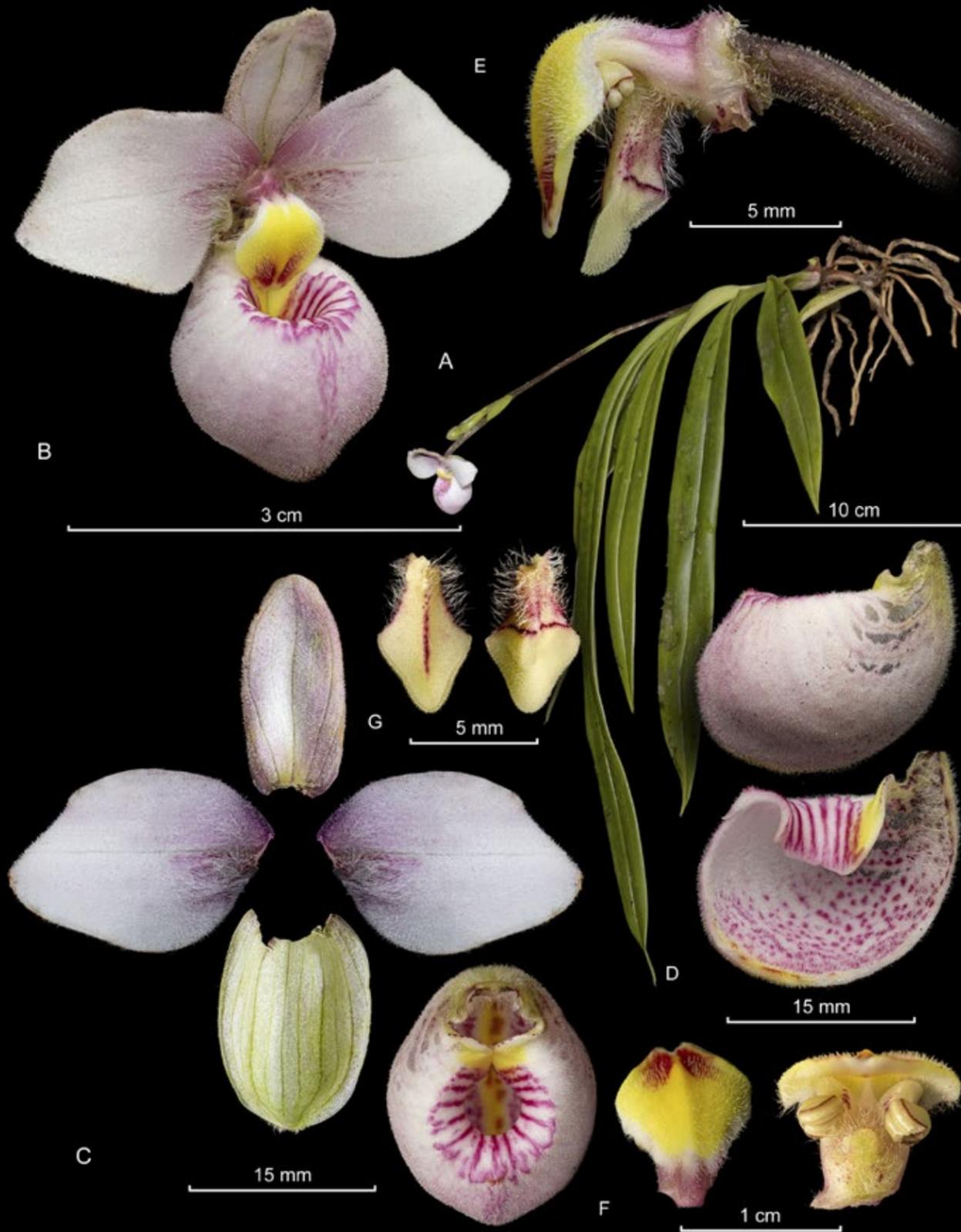


LCDP: *Oncidium fuscatum* Rchb.f.. **A.** Habit. **B.** Flower. **C.** Dissected perianth. **D.** Column and lip, side view. **E.** Column, ventral and side view. **F.** Anther cap and pollinarium.



Phragmipedium schlimii

(LINDEN EX RCHB.F.) ROLFE
ORCHID REV. 4(47): 332. 1896



Synonyms: *Selenipedium schlimii* Linden ex Rchb.f., Bonplandia 2: 277-278. 1854
Cypripedium schlimii (Linden ex Rchb.f.) Bateman, Curtis's Botanical Magazine, 3rd series, 22: t. 5614. 1866.
Paphiopedilum schlimii (Linden ex Rchb.f.) Stein, Orchid.-Buch 483. 1892.

Type: Colombia. "Ocaña, Février [1852], 4000 fts endroits humides", L.J. Schlim 407 (holotype, W).

Illustrated specimen: Colombia. Antioquia: Municipality of Yarumal, Reserva Natural Los Magnolios, 1500 m. 21 September 2019. S. Vieira 054 (LCDP voucher).

Terrestrial caespitose herb. Leaves lanceolate to ensiform, coriaceous, conduplicate with margins finely revolute, 10–30 × 2.5–3.0 cm. Inflorescence racemose with velutinous peduncle, rarely branched, 15.7 cm tall, 1–2 flowers; floral bracts triangular and compressed, very soft velutinous, 2–3 × 1.4–2.0 cm. Flowers pale pink to lavender petals crimson stained towards the base, especially at the base, the lip pale pink to pink with a crimson brushstroke, inner edges striped with pale pink and crimson with a yellow spot at the edges below the column, crimson spots within, concentrated at the center. Dorsal sepal slightly concave and arched forward, elliptic to oblong, truncate, sericeous, 1.7–1.8 × 0.8 cm. Synsepal elliptic, obtuse, rounded, slightly concave, sericeous, 1.8 × 1.2 cm. Petals minutely pubescent, slightly ovate, obtuse, oblique, convex, asymmetric, the apical half recurved, 2.1 × 1.5 cm. Lip orbicular, deeply saccate with an external central soft keel from the narrow entrance to the back, fenestrations on each side of the upper back, sericeous to villose at the internal basal face 2 × 2 cm. Column 3–5 mm long, the staminode yellow with a brownish frontal spot, minutely pubescent, rhomboid to ovate, apiculate, carinate, 10 × 7 mm; lateral anthers and stigma hidden by the staminode; stigma lobate, attenuate. Ovary dark crimson, pubescent 5–9 cm long, generally larger than the bracts.

Eponymy: Named in honor of the Belgian botanist Louis Joseph Schlim, half brother to Jean Linden

Phragmipedium schlimii is endemic to Colombia. It can be recognized by the lithophytic habit, growing in abrupt, moist slopes among leafy debris, bearing little delicate whitish-pink

fluffy flowers which differ from those of its relatives by a spherical pouch with dorsal fenestrations. It has been reported in the West, Central and north of the Eastern Andean Cordilleras, between 1200–2000 m in elevation. The *P. schlimii* group includes four more species: *P. fischeri* Braem & Mohr, *P. andreetae* Cribb & Pupulin, *P. manzurii* Higgins & Viveros and *P. anguloi* Braem, Tesón & Manzur which differ in flower color, the pouch and staminode shape and details of their vegetative morphology. The distinctness of some of these species is debated, Braem & Tesón (2016) and Cribb & Purver (2017) consider *P. manzurii* a form or variation of *P. schlimii*. Autogamy has been observed in *P. schlimii* and *P. fischeri*.

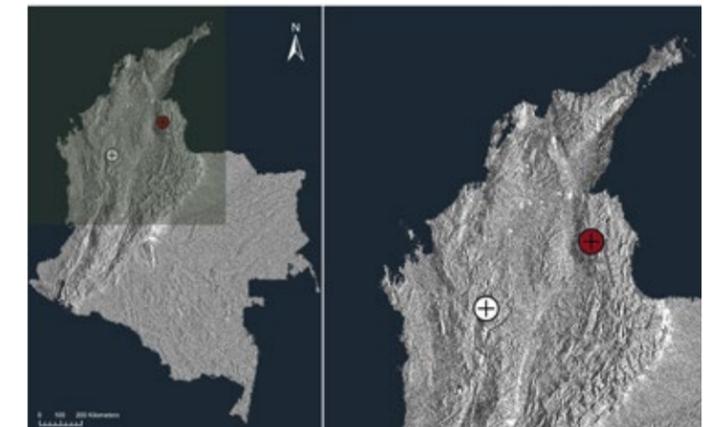
References:

Bateman, J. 1866. *Cypripedium schlimii*. Bot. Mag. 22(253): Tab 5614.

Braem, G.J., & Tesón E. 2016. A revision of the *Phragmipedium schlimii* Complex (Orchidaceae: Cypripedioideae). *Richardiana* 16: 293-321.

Cribb, P., & Purver, C. 2017. *Slipper Orchids of the Tropical Americas*. Natural History Publications and The Orchid Digest in association with Royal Botanic Gardens, Kew.

Díaz-Morales, M., & Pupulin, F. 2018. The New Refugium Botanicum—*Phragmipedium schlimii*. *Orchids, Am. Orch. Soc.* 86(12): 894-896.



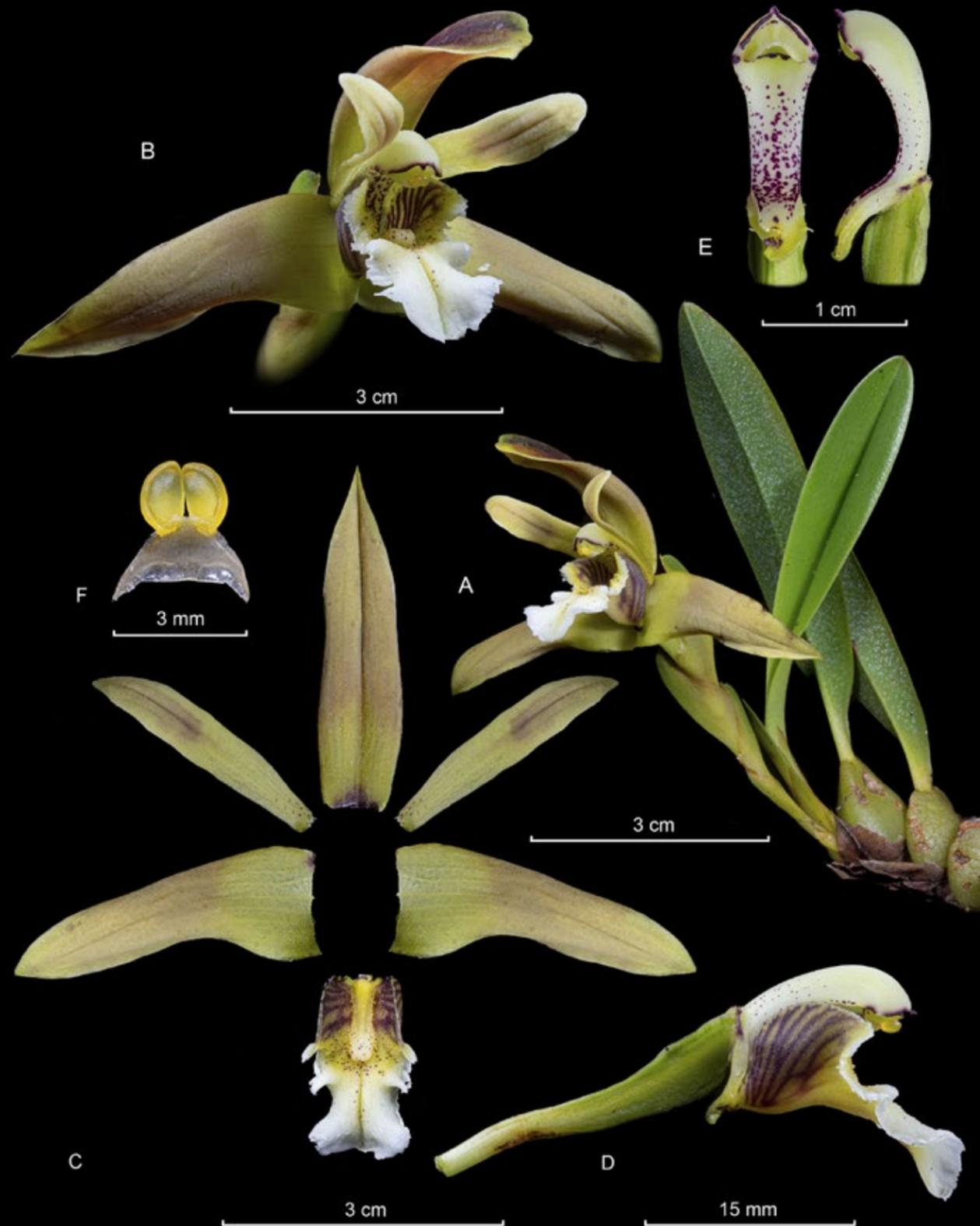
LCDP: *Phragmipedium schlimii* (Linden ex Rchb.f.) Rolfe. A. Habit. B. Flower. C. Dissected perianth. D. Dissected lip, abaxial and adaxial view. E. Column, side view. F. Column without stigma, dorsal and ventral view. G. Stigma, dorsal and ventral view.



Sauvetrea sessilis

(LINDL.) M.A. BLANCO

LANKESTERIANA 7: 535. 2007



Synonyms: *Maxillaria sessilis* Lindl., G.Bentham., Pl. Hartw 155. 1843.

Type: Ecuador. Loja. Hartweg, s.n (holotype: K).

Illustrated specimen: Colombia. Santander: Municipality of La Belleza. Mountain pluvial forest, 2380 m. 28 May 2017. N. Gutiérrez M. 030 (JBB; LCDP voucher).

Plant epiphytic, caespitose to shortly creeping, to 10 cm tall. **Roots** fleshy, produced from the rhizome, 1 mm in diameter. **Pseudobulbs** unifoliate, ancipitous, 1.9 × 1.7 cm, the youngest smooth, the older rugose, slightly separated by rhizome segments, subtended by acuminate, imbricate, papery bracts. **Leaves** elliptic, sessile, obtuse, coriaceous, 5.9 × 1.2 cm. **Inflorescence** suberect, produced from the base of the youngest growth, up to 6.5 cm, covered by 6 lanceolate, acute, appressed, imbricate, pale green to pale yellow, bracts, increasing in size as closer to the flower. **Ovary** pedicellate, trigonous, with angles slightly winged and undulated towards the perianth, ca 2.4 cm. **Flowers** resupinate, sepals and petals dull yellow suffused with maroon, the petals somewhat dotted with purple at base, lip white in the apical lobe, centrally yellow spotted with purple, including the callus, the lateral lobes marked with purple veins in a yellow background, column white dotted with purple. **Sepals** free, oblong, acute, concave, **lateral sepals** slightly asymmetrical, oblique, 3.3 × 1.2 cm, **dorsal sepal** lanceolate, with an external carinae that becomes conspicuous at the apex, 3.6 × 0.9 cm. **Petals** 3-veined, lanceolate, subacute, the apical third incurved, 2.8 × 0.5 cm. **Lip** oblong, truncated at base, rounded at apex, trilobed, 2 × 1 cm, the midlobe with undulate, crisped margins, sulcate, 1/2 the length of the lip, the lateral lobes erect, the margins entire, touching the column, callus oblong, verrucose, with three longitudinal keels, 8 × 2.5 mm. **Column** 15–18 × 3–4 mm, stout, somewhat arcuate, with a short foot, the stigma ventral. **Anther cap** not seen. **Pollinia** two pairs, subequal, attached to a lunate stipe.

Etymology: From the Latin *sessilibus*, referring to the sessile leaves of this species.

The genus *Sauvetrea* (or section *Trigonae*, if treated as part of the

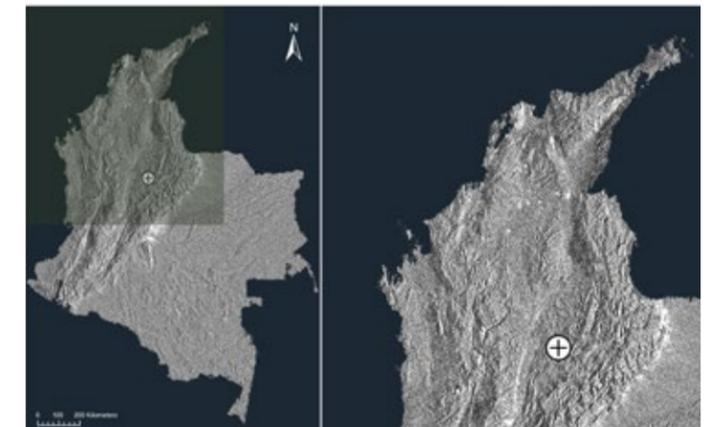
genus *Maxillaria*) is in need of a thorough taxonomic revision. *Sauvetrea sessilis* (Lindl.) M.A. Blanco, originally described (as *M. sessilis* Lindl.) from a plant collected near Loja (Ecuador), is the best match for the plant illustrated here. Plants with this morphology are frequently misidentified as *S. alpestris* (Lindl.) Szlach., a species with smaller plants and flowers, originally described from the same general area. *Sauvetrea sessilis* is recognized by the relatively large flowers (4 to 6 cm wide) with greenish sepals tinged with red, the large labellum with a ligulate callus, erect lateral lobes with red veins, and a white midlobe. Note that the plant illustrated as *M. sessilis* in Christenson (2012, 2013) is different and probably represents an undescribed species of *Sauvetrea*.

References:

Blanco, M. A., Carnevali, G., Whitten, W. M., Singer, R. B., Koehler, S., Williams, N. H., I. Ojeda, I., Neubig, K., & Endara, L. 2007. Generic realignments in Maxillariinae (Orchidaceae). *Lankesteriana* 7(3): 515–537.

Christenson, E. A. 2013. *Maxillaria*, an unfinished monograph. Compiled and edited by Harding, P. A., McIlmurray, M. & Blanco, M. A. Two volumes. Published privately by Patricia Ann Harding, Lebanon, Oregon, USA. ISBN-13: 978-0-9836747-1-9, ISBN-10: 098367471X.

Dodson, C. H., & Vásquez, R. 1982. Orchids of Bolivia, *Icones Plantarum Tropicarum* 6: pl. 551. Missouri Botanical Garden. P.O. Box 299, St. Louis, Missouri 63166-0299.



LCDP: *Sauvetrea sessilis* (Lindl.) M.A. Blanco. **A.** Habit. **B.** Flower. **C.** Dissected perianth. **D.** Column and lip side view. **E.** Column, ventral and lateral view. **F.** Pollinarium.



Xylobium elongatum

(LINDL. & PAXTON) HEMSL.

BIOL. CENT.-AMER., BOT. 3(16): 252. 1884

Synonyms: *Maxillaria elongata* Lindl. & Paxton, Paxton's Fl. Gard. 3: 69. 1852.

Type: Guatemala. Without locality, G.U. Skinner s.n. (holotype: K-L).

Illustrated specimen: Colombia. Chocó: Municipality of Unguía, "Expedición COLOMBIA BIO Cerro Tacarcuna". 1200 m. 2 April 2017. E. Dominguez 900 et al. (HUA; LCDP voucher).

Plant epiphytic, caespitose, up to 80–100 cm tall; *pseudobulbs* cylindrical, slender, elongate, 65–70 × 1.5–2 cm, the base covered in tubular sheaths. *Leaves* two, apical, plicate, coriaceous, elliptic to ovate, petiolate, 30–40 × 8–12 cm, veins prominent. *Inflorescence* basal, erect to sub-erect, racemose, 10–15 cm long, bearing multiple flowers. *Flowers* simultaneous, non-resupinate, fleshy, whitish-cream with the lip yellowish with purple papillae, and the column cream with pink spots. *Ovary* terete, 1 cm long. *Sepals* spreading, margins somewhat recurved. *Dorsal sepal* oblong-lanceolate, shortly acuminate, 2.0 × 0.5 cm. *Lateral sepals* falcate, ovate-lanceolate, shortly acuminate, 2.0 × 1.0 cm. *Petals* reflexed, lanceolate, shortly acuminate, 1.5 × 0.6 cm. *Lip* articulated at the foot of the column, very fleshy, verrucose-papillose, 3-lobed, rounded, 2.2 × 1.2 cm, the mid-lobe ovate, concave, with the margins incurved, the lateral lobes oblong, rounded, erect; disc with 3 carinate calli running from the base of the lip to before the middle. *Column* cylindrical, 1.5 cm long, including 1.0 cm long foot. *Pollinarium* with 4, round pollinia, held together by a caudicle.

Etymology: from Latin *e-* "extension or dilation" and *longus, longa, longum* "long", in reference to the shape of the pseudobulbs of this species.

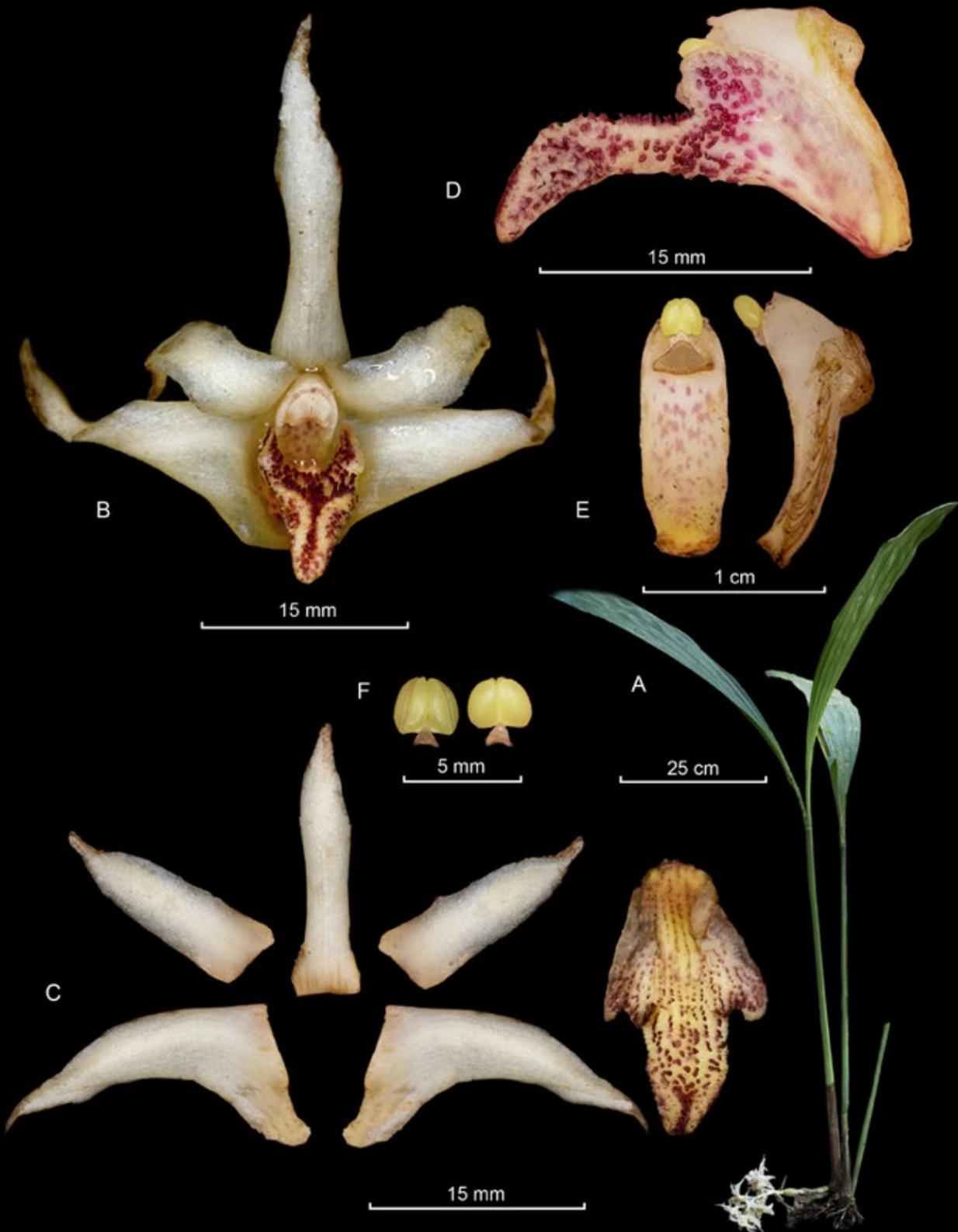
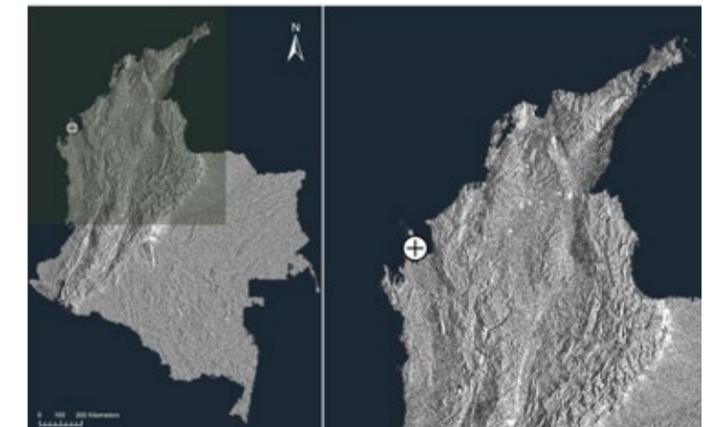
Xylobium elongatum is a widely distributed species that ranges from Mexico to Peru. It is easily distinguished from other *Xylobium* by the conspicuously slender, elongated, cylindrical pseudobulbs bearing two leaves. The pseudobulbs of *Xylobium pallidiflorum* (Hook.) G.Nicholson are also elongate, but are much smaller and bear a single leaf. The whitish-cream flowers are

similar to several other species in the genus, including *X. leontoglossum* (Rchb. f.) Rolfe and *X. variegatum* (Ruiz & Pav.) Garay & Dunst. However, *Xylobium elongatum* may be distinguished by the mid-lobe of the lip that is longer than the lateral lobes and the less prominent callus with a conspicuously papillose, conduplicate apex.

References:

Dodson, C. H., & Dodson, P. M. 1980. *Xylobium elongatum* (Lindl. & Paxton) Hemsl. in C. H. Dodson (eds.), *Orchids of Ecuador, Series I, Icones Plantarum Tropicarum* 4: pl. 355.

Hemsley, B. 1884. *Biologia Centrali-Americana*. R. H. Poret and Dulau & Co (Eds.) London, 3(16): 252 pp.



LCDP: *Xylobium elongatum* (Lindl. & Paxton) Hemsl. A. Habit. B. Flower. C. Dissected perianth. D. Column and lip lateral view. E. Column, ventral and side view. F. Pollinarium.



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Format: Photoshop PSD file with layers, RGB mode with 16 bits. Used photographs must be in RAW, NEF, DNG or similar, and edited in order to adjust from brightness, contrast, temperature, etc. Color calibrations is highly recommended so that colors are closest to nature.

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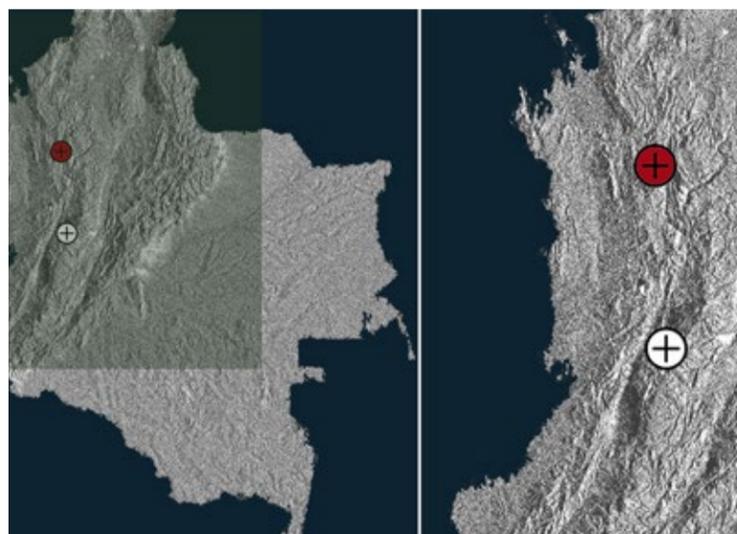
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