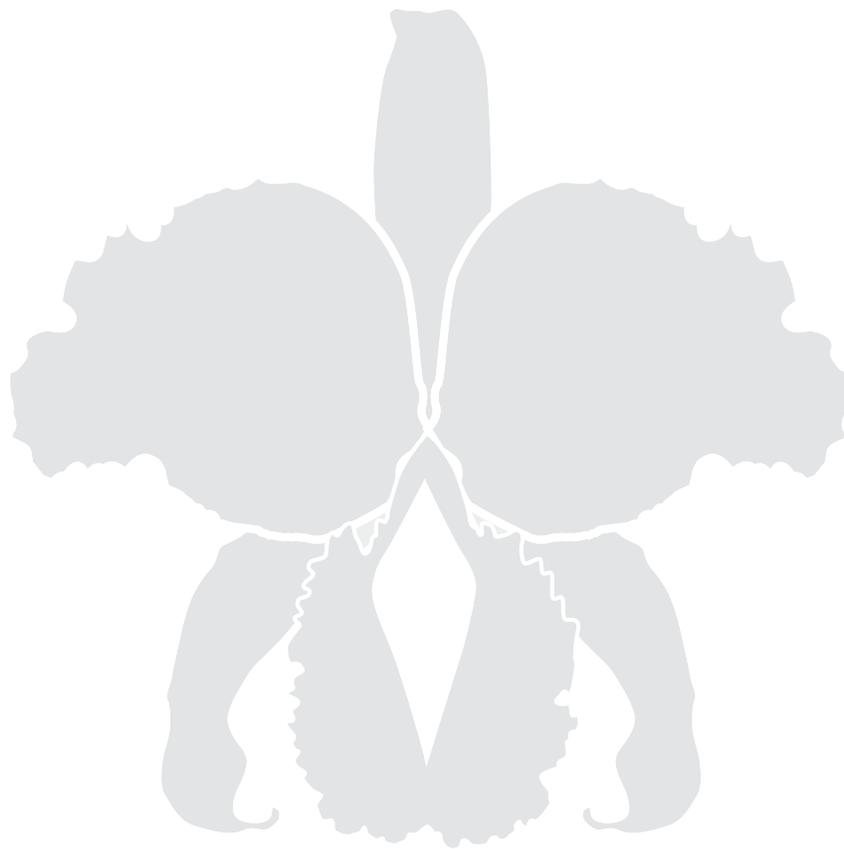


SPECIES
ORCHIDACEARUM 3
Icones Colombianae 3



SPECIES ORCHIDACEARUM ICONES COLOMBIANAE

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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

Colombia is without a doubt one of the most biodiverse countries in the world, and members of the Orchidaceae family are among the largest contributors. With reports ranging from 3600 to +4200, the country is only surpassed by Ecuador in absolute numbers of orchid species. In relative numbers, estimated as species per area, Colombia is far behind countries like Costa Rica and Panama. However, its size, the complexity of its mountainous systems, and geographical position, flanked by the Atlantic and Pacific Oceans, and with Andean, Central American and Amazonian influences, suggest that it must be much more diverse than any of the surrounding countries. It is this gap between the expected diversity in the country and what is known that we wish to address here.

The only way to make a serious attempt at understanding the orchid diversity of any country is by doing consistent and systematic research. To be consistent, long-lasting support is needed. Such support is normally attained only when botanical studies become part of governmental policy, through public interest. The interest in biodiversity in recent years has become much greater in Colombia, and support for research is on the rise. Publications on orchids including Colombian authors has grown, and so too has their presence at orchid meetings. The fact that the only Andean Orchid Conference held outside of Ecuador was, very fruitfully, celebrated in Cali is certainly an indicator of this progress.

Colombia, with its more than one million square kilometers, is far too large to attempt any serious monographic work at country level anytime soon. The only way to systematically study the orchid flora of the country is by joining efforts, in essence by adding up the hundreds of local studies that are and will be carried out by diverse people and institutions. These efforts are critical, but currently far too isolated and sparse to allow for any comprehensive oversight. Access to the information and data produced is very restrictive, creating a need for a centralized source of standard information to aid enthusiasts, students, researchers and policymakers countrywide.

It is this necessity that explains why it is the series *Icones Colombianae* that inaugurates *Species Orchidacearum*. Through this publication we will attempt to:

1) become a platform for local students to publish elements of their work that although partial, may be highly informative, 2) serve as a source for researchers and the general public, 3) stimulate cooperation between persons and institutes, and 4) highlight the necessity of conservation by making biodiversity more tangible and local variation more visible.

At this time, making an estimate of how many orchid species may be found in Colombia is very premature. Nevertheless, an extrapolation from neighboring countries suggests we should expect at least double the number of species that have been registered so far. This series is a humble effort towards uncovering part of the ungraspable diversity hidden within Colombia.

The editors



SPECIES ORCHIDACEARUM ICONES COLOMBIANAE

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Catasetum ochraceum

LINDL.

EDWARDS'S BOT.REG. 30: MISC. 44. 1844



Type: Colombia. Sent to the Horticultural Society from the Hacienda del Hospicio, in the province of Bogota, *Hartweg s.n.* (holotype, K).

Illustrated specimen: Colombia. Valle del Cauca: Rio Frio, Via a Salonica, 800 m. 29 June 2017. *Juan Sebastián Moreno 441* (CAUP; LCDP voucher).

Plant epiphytic or lithophytic, caespitose, 1 m tall including the inflorescence. *Roots* flexuous, fleshy. *Pseudobulbs* thick, cigar-shaped, clustered, fusiform to ovoid, lightly curved, 3–4 subequal internodes, enveloped by papery white sheaths. *Leaves* apical, distichous on the youngest pseudobulb, elliptic, plicate, acute, deciduous, 30–40 cm long. *Inflorescence* basal, arched, racemose, raceme up to 20 cm long. *Flowers* 6, olive-green, thick, fleshy, unisexual. *Ovary* sulcate, 7.5–8.0 mm long. *Sepals* similar, galeate, oblanceolate-ovate, concave, abruptly acute, the lateral sepals covering the petals, 15 × 10 mm. *Petals* 6-veined with brown spots at the base, obovate, subconcave, abruptly acute, 15 × 10–11 mm. *Lip* embracing the column, fused to its base, fleshy, thick, galeate, trilobate, 17 × 30 mm, spreading; lateral lobes orbicular, concave, 11–13 keels along the inner face, 13–14 × 15 mm each lobe; midlobe yellow, ovate, acute, thickened at the apex, 7 × 7–8 mm. *Column* stained with brown spots in the adaxial surface, trigonous, elliptic, erect, fleshy, subtriangular, cucullate, 1.5 × 0.5–0.6 cm; rostellum recurved, subtriangular, ca. 5 mm long; antennae convergent, parallel, curved, slender, bilaterally symmetrical, leaning on the inner face of the lip along the keels, 1.5 cm long. *Anther cap* apical, subtriangular, 2 celled, 4 mm long. *Pollinia* 2, yellow, oblanceolate, cleft, compressed, 4 mm long; stipe involute with a white, sticky rounded viscidium.

Catasetum ochraceum Lindl. is found in Colombia growing at elevations between 300 and 1700 m. It belongs to *Catasetum* sect. *Isoceras* (Mansf.) Senghas subsect. *Convergentia* Bicalho & F.Barros, where it is recognized by having olive-green helmet shaped flowers, bearing a thick, trilobate lip that embraces the column with the concave, orbicular lateral lobes. *Euglossa gairanii* Dressler

and *Euglossa modestior* Dressler have been recorded pollinating this species of *Catasetum*.

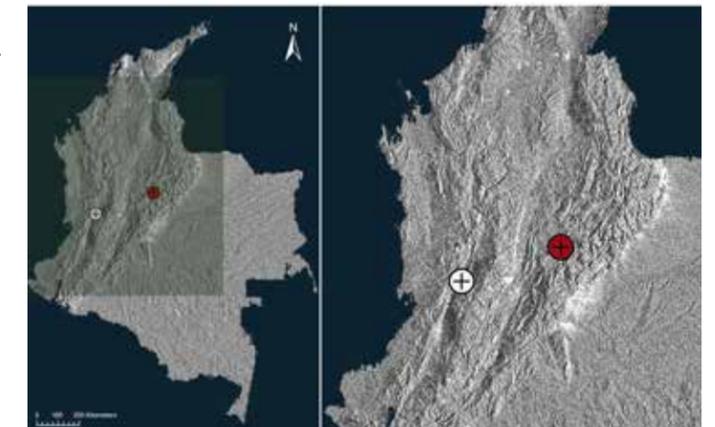
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Romero, G. 2009. Subtribe *Catasetinae*. In: A. Pridgeon, P. Cribb, M. Chase & F. Rasmussen (Eds.), *Genera Orchidacearum Vol. 5: Epidendroideae (Part two)* (pp. 11-12). Oxford: Oxford University Press.

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Holst, A. 1999. *The world of Catasetums*. Portland: Timber Press.

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LCDP: *Catasetum ochraceum* Lindl. (♂) A. Habit. B. Flower. C. Dissected perianth. D. Lip, side view. E. Dissected lip. F. Column, ventral and side view. G. Anther cap and pollinarium.



Dracula lemurella

LUER & R. ESCOBAR
ORQUIDEOLOGÍA 15(1): 23. 1981

Type: Colombia. Dept. of Antioquia: Munic. of Yarumal, Briceño, "El Oro", La Segunda Bodega, alt. 1650 m, 26 Nov. 1974, collected by G. Misas et al., flowered in cultivation at La Ceja by M. & O. Robledo, 27 Sept. 1977. R. Escobar 1540 (holotype: JAUM; isotype: SEL).

Illustrated specimen: Colombia. Antioquia: Municipio de Yarumal. Distrito Regional de Manejo Integrado "Alto de Ventanas", reserva Natural Los Magnolios. 1500 m, 12 de septiembre 2018. S. Vieira 031 & M. Mazo (JAUM; LCDP Voucher).

Epiphytic, densely caespitose *herb*, up to 15 cm tall. *Roots* slender, up to 1 mm in diameter. *Ramicauls* stout, erect to sub-erect, 2 cm long, enclosed by 2 loose, tubular sheaths. *Leaf* carinate, narrowly ovate to linear, acute, 10–20 cm long including an indistinct petiole, 1–1.5 cm wide, gradually narrowed below into the conduplicate base. *Inflorescence* much shorter than the leaf, a lax, successively few flowered raceme, borne by a slender, slightly horizontal peduncle 5 cm long, from low on the ramicaul. *Floral bract* tubular, 6–7 mm long. *Pedicel* 7–8 mm long. *Ovary* brown, verrucose, 4 mm long. *Sepals* cream-colored, densely dotted with brown below the middle, pubescent within. *Dorsal sepal* broadly obovate, to orbicular, 7–8 × 8–9 mm, connate to the lateral sepals for 4 mm to form a widely spread flower, the obtuse apex contracted into a slender, erect, red-purple tail 2.7 cm long. *Lateral sepals* broadly obovate, oblique, 11–12 × 11–13 mm, connate 5 mm into a broad, shallow mentum, the obtuse apices contracted into slender tails similar to that of the dorsal sepal. *Petals* cream-colored, marked with brown, cartilaginous, oblong, 3.5 × 2.0 mm, the apex bivalvate, papillose between the laminae, the inner lamina subacute, the outer lamina rounded, recurved. *Lip* white, dotted with pink, oblong-subpandurate, 4.5 × 2.5 mm, the epichile transversely ovate, obtuse, 2 × 3 mm, shallowly concave with a tall, thick, verrucose callus extending out from the hypochile, with one incomplete lamina on either side, verrucose externally, the hypochile thick, oblong, 3 × 3 mm, with erect, rounded, marginal angles, broadly and deeply cleft centrally, the base concave, hinged to the column-foot. *Column* white, stout, semiterete, slightly curved down, 3.5 mm long, with a thick foot 3 mm long. *Pollinia*

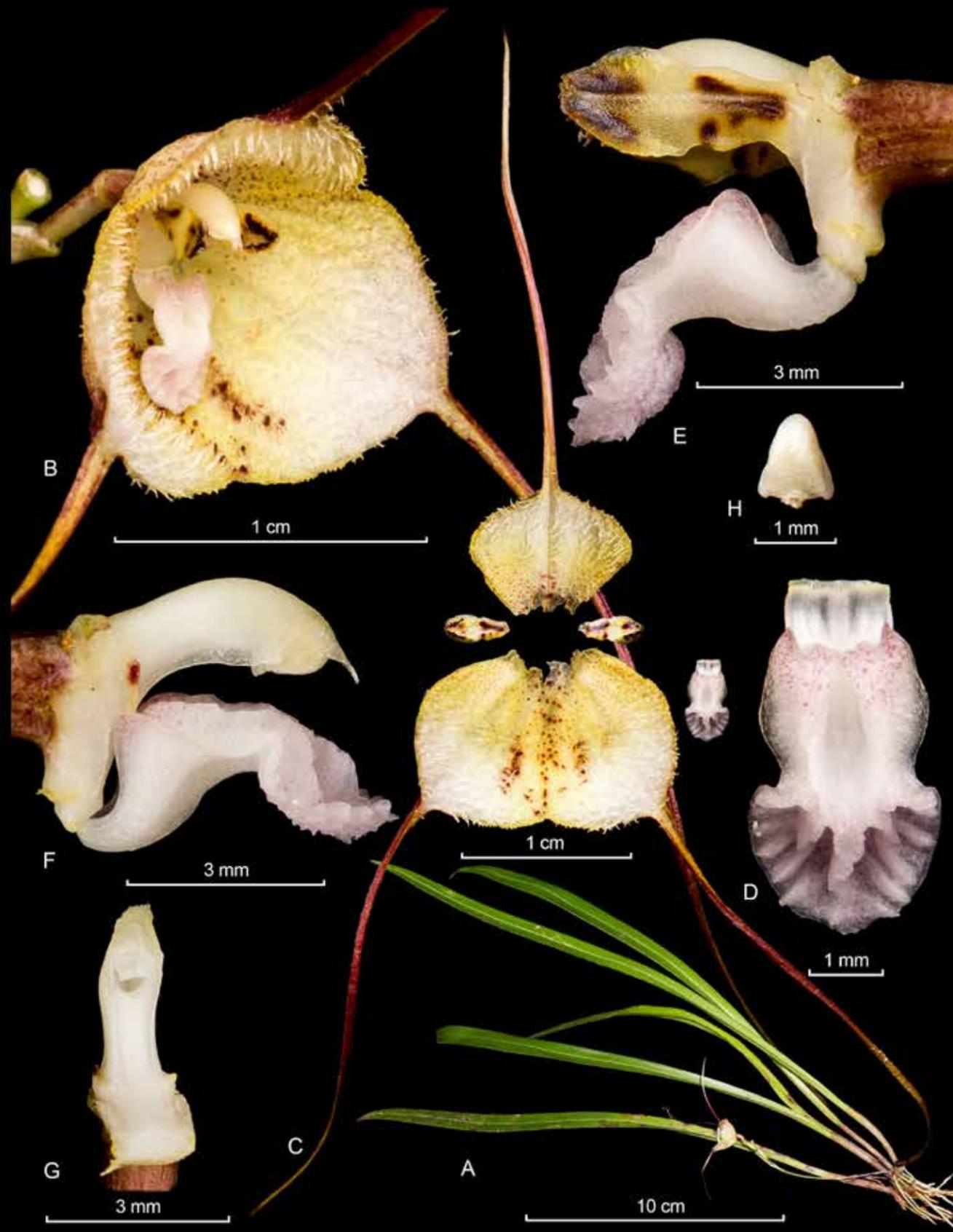
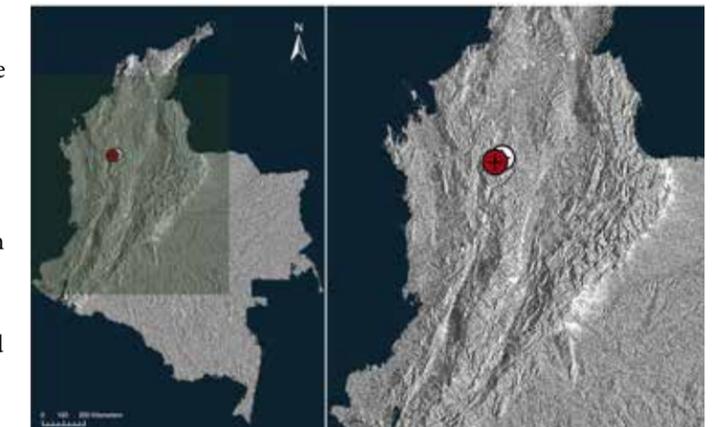
yellow, two, ovoid. *Anther cap* white, apical.

Dracula lemurella is recognized by its narrow leaves, small, successive and pubescent, cream colored flowers. The small and externally verrucose epichile has three prominent lamellae and is smaller than the hypochile with a predominantly deep cavity.

References:

Luer, C. A. & Escobar, R. 1981. Nuevas descripciones del género *Dracula* Luer. *Orquideología* 15(1): 23-27.

Luer, C. A. 1993. Icones Pleurothallidarum X. Systematics of *Dracula*. *Monogr. Syst. Bot. Missouri Bot. Gard.* 46: 124-125.



LCPD: *Dracula lemurella* Luer & R. Escobar. A. Habit. B. Flower. C. Dissected perianth. D. Lip, adaxial view. E. Column, lip and petals, lateral view. F. Column and lip, lateral view. G. Column, ventral view. H. Anther cap.



Epidendrum bispathulatum

HÁGSATER, O. PÉREZ & E. SANTIAGO
ICON. ORCHID. 13: T. 1307. 2010

Type: Colombia. Valle del Cauca: Municipality of Yotoco, Yotoco Natural Reserve, 1600 m. 11 April 2010. *O.A. Pérez-Escobar, E. Parra & V. Hidalgo 513* (holotype: VALLE).

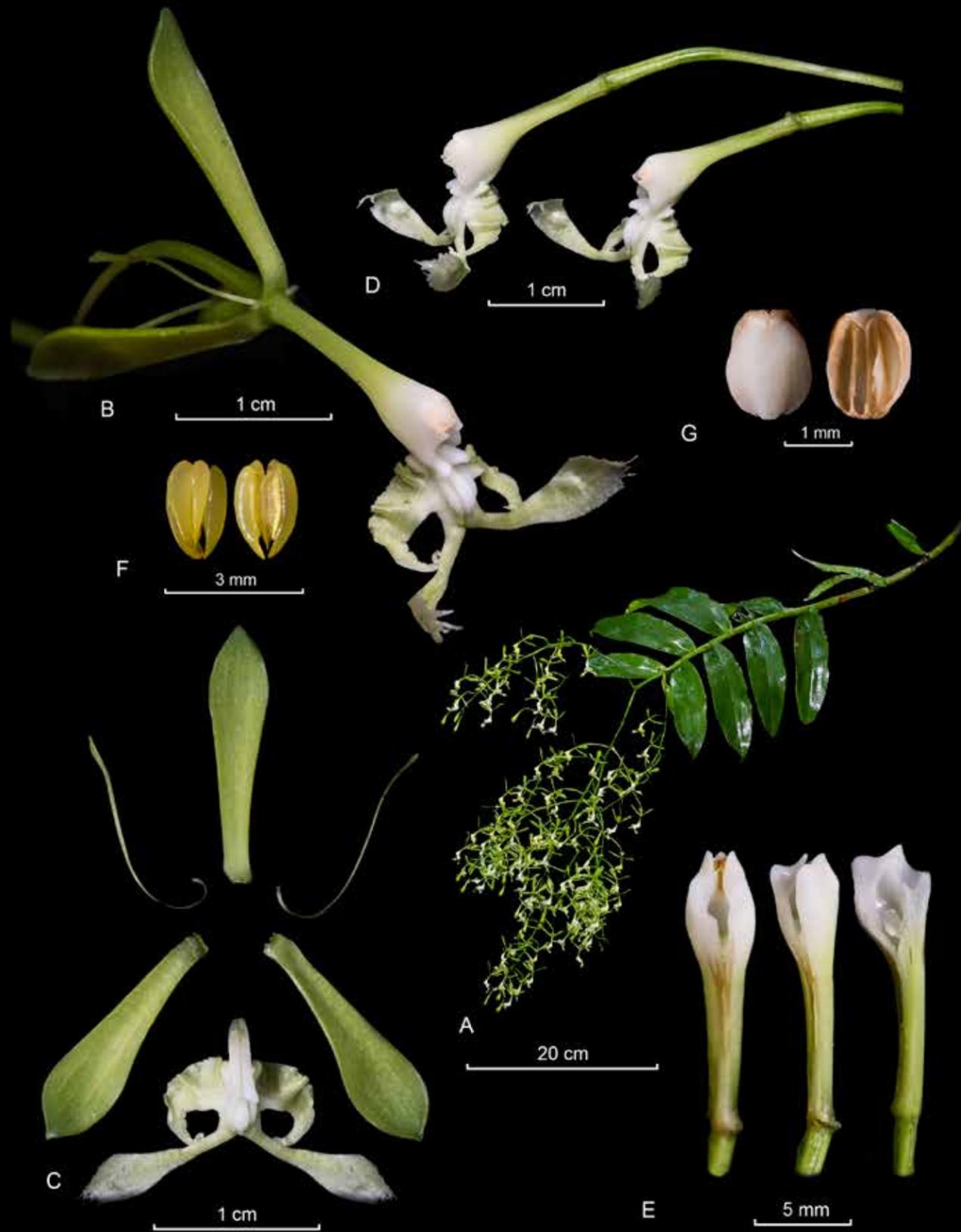
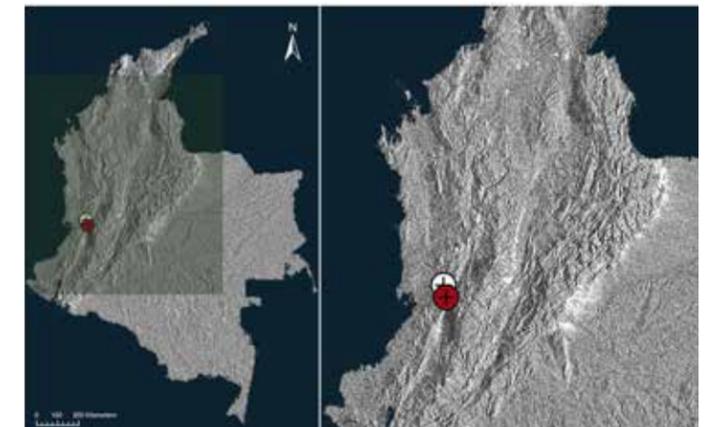
Illustrated specimen: Colombia. Valle del Cauca: Municipality of Calima, El Darién, 1800 m. March 2017. *W.G. Vargas 29477* (COL; LCDP voucher).

References:

Hágsater, E., Pérez, O. & Santiago, E. 2010. *Epidendrum bispathulatum*. In E. Hágsater & L. Sánchez S. (Eds.), *The Genus Epidendrum, Part 9, Icon. Orchid. 13: t. 1307*.

Epiphytic, sympodial, caespitose, *herb*, 160 cm tall with the inflorescence. *Stems* simple, cane-like, pendent up to 120 cm long. *Leaves* alternate, elliptic, acute, margin entire, 8–12 cm long. *Inflorescence* apical, paniculate, many-flowered, 35 cm long. *Ovary* terete, thin, 16.6–17.3 cm long. *Flowers* green with the apex of the column and the disc of the lip white, fragrant. *Sepals* reflexed, free, spatulate, sub-acute, slightly concave, 15 × 3–4 mm. *Petals* reflexed, free, filiform, apex rounded, 13.0 × 0.5 mm. *Lip* united to the column, 3-lobed, base truncate, 10 × 17 mm; bicallose, short; disc with 3, narrow, acute, parallel keels; lateral lobes obliquely triangular, acuminate, somewhat cirrhose, outer margin crenulate, 3.5 × 3.0 mm; mid-lobe deeply bilobed, the lobes slightly divaricate, each lobe linear-spatulate, obliquely truncate, erose, 8 × 3 mm. *Column* straight, short, entire, 15 mm long. *Pollinia* 4, “bird-wing” type, laterally compressed, 1.7 mm long. *Anther cap* ovoid, 4-celled, 1.7–1.8 mm long.

Epidendrum bispathulatum is recognized by the very long tall stems, the flowers green with the apex of the column and the disc of the lip white, the bilobed mid-lobe of the lip with the lobes linear-spatulate, widened towards the apex and obliquely truncate. It is most similar to *Epidendrum cirrhochilum* F. Lehm. & Kraenzl. with shorter stems, similar flowers, but the lateral lobes and lobes of the mid-lobe are cirrhose and the lip has a circular purple ring surrounding the disc of the lip.



LCDP: *Epidendrum bispathulatum* Hágsater, O. Pérez & E. Santiago. A. Habit. B. Flower. C. Dissected perianth. D. Ovary with column and lip. E. Column, side view, dorsal view and longitudinal dissection. F. Pollinia. G. Anther cap.



Epidendrum hamatum

(GARAY) DRESSLER

PHYTOLOGIA 21(7): 441. 1971



Synonyms: *Stenoglossum hamatum* Garay, Orquideología 4: 72. 1969.

Type: Colombia. Cundinamarca: Supatá y San Francisco, 1500–2000 m, *M. Ospina-Hernández no. 22A* (holotype: AMES, 86296!).

Illustrated specimen: Colombia. Antioquia: Municipality of Jardín, road to Reserva Natural Cueva del Esplendor, pluvial mountain forest. 2250 m, 10 October 2018, *E. Domínguez, Y. Cardona & L. Echeverry 1568* (JAUM; LCDP voucher).

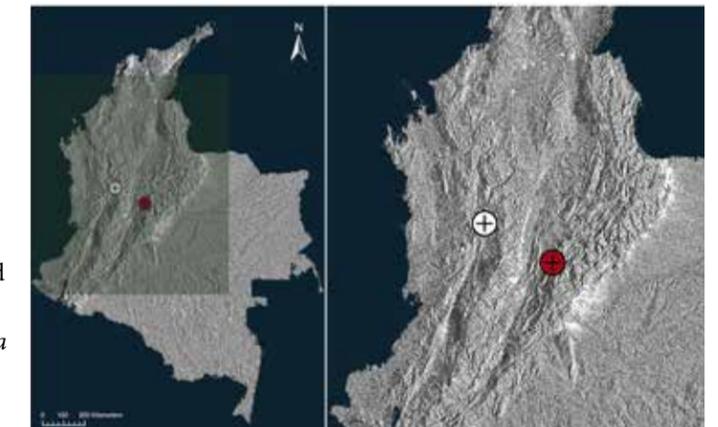
Epiphytic, sympodial, caespitose, erect herb, 10–15 cm tall. *Roots* flexuous, pale brown. *Stem* 8 × 0.6–1.0 cm, simple, cane-like. *Leaves* 1–6, (6 on primary stem, 1–2 on successive stems) distichous, alternate, distributed throughout the stem, green; sheaths 10–22 × 0.6–1.0 cm, tubular, membranous, pale green; blade 3.0–9.0 × 0.8–1.5 cm, oblong, apex unequally bilobed, unequal, progressively larger, coriaceous. *Spathe* 4.4 × 0.4 cm, oblong, laterally compressed, sides parallel. *Inflorescence* 19 cm long, apical, erect, racemose; peduncle 12 × 0.15 mm. *Flowers* 10, non-resupinate, pale green, with small brown spots, except for the column which is green with purplish spots at the apex, calli yellow at base, then green spotted brown; anther pale yellow. *Floral bracts* much shorter than the ovary, triangular, acute. *Ovary*, 6 × 0.9 mm, terete. *Sepals* free, fleshy, glabrous, 3-veined, margins entire, spreading; dorsal sepal 6 × 2 mm, reflexed in natural position, narrowly cuneate, apex rounded and minutely apiculate; *lateral sepals* 7 × 2.5 mm, narrowly cuneate, falcate, apex obtuse, with a low dorsal keel ending short apiculate. *Petals* 6.5 × 0.7 mm, free, somewhat reflexed, linear-oblong, slightly widened at the obliquely truncate apex, 1-veined, margins entire. *Lip* 7.2 × 1.5 mm, united to the column, 3-lobed, incurved in natural position; lateral lobes 1 mm long, very small, retrorse, sub-terete, apex hook-like; mid-lobe hamate, linear-filiform, apex rhomboid, concave, acute; bicallose, elongate, parallel, rounded. *Column* 3 × 2 mm, short, thick, arched upwards, apex forming a pair of wide, prominent rounded wings; clinandrium-hood short, entire. *Anther* reniform, 4-celled. *Pollinia* 4, obovoid, somewhat laterally compressed; caudicles soft and granulose; viscidium viscous. *Nectary* wide, short, without pene-

trating the pedicellate ovary, glabrous.

Epidendrum hamatum is an endemic species that belongs to the *Mancum* group, *Stenoglossum* sub group, which is characterized by its non-resupinate flowers, lip with a linear, terete or semi-spathulate central lobe. The most related species is *Epidendrum coryophorum* (Kunth) Rchb.f., but differs from the last by its pale green flowers with purplish spots at the apex and the lip lip with lateral lobes very small, sub-terete, apex hook-like; mid-lobe hamate, linear-filiform, apex rhomboid, concave, acute; bicallose, elongate, parallel, rounded.

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- Garay, L. A. 1969. El Género *Stenoglossum*. *Orquideología* 4(2): 67–75.
Dressler, R. L. & G. E. Pollard. 1971. Nomenclatural Notes on the Orchidaceae – IV. *Phytologia* 21(7): 433–443.
Sánchez, S. L. & Hágsater, E. 2009. *Epidendrum hamatum* in The Genus *Epidendrum*, Part 8, in E. Hágsater & L. Sánchez S. (eds.) *Icon. Orchid.* 12: pl. 1252.v



LCDP: *Epidendrum hamatum* (Garay) Dressler. A. Habit. B. Flower. C. Dissected perianth. D. Column-lip, lateral view, and longitudinal section. E. Column, ventral and lateral view. F. Anther cap.



Huntleya gustavi

(RCHB.F.) ROLFE

ORCHID REV. 24(286): 236. 1916

Synonyms: *Batemannia gustavi* Rchb.f., Linnaea 41: 108. 1876.**Type:** Colombia, Neu Granada, 1500–1800 m, *G. Wallis s.n.* (holotype: W).**Illustrated specimen:** Colombia. Risaralda: Municipality of Pueblo Rico, Monte Bello, Tatamá National Natural Park, 1424 m, 8 June 2017. *S. Vieira-Uribe 33, K.D. Fernandez, L.F. Perez* (JAUM; LCDP Voucher).

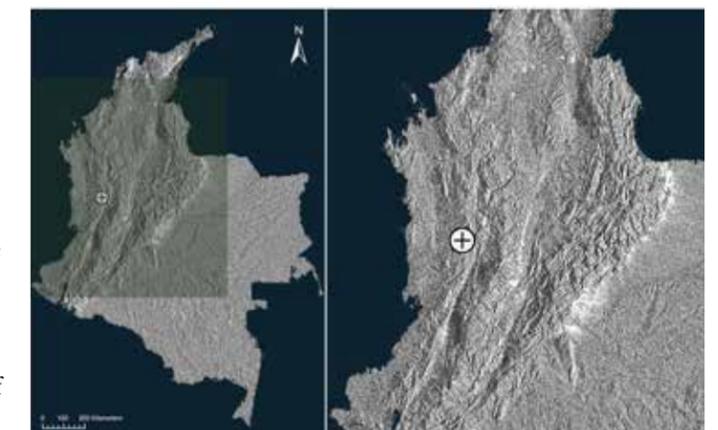
Plant of medium size growing as epiphytic tuft, usually found on trunks or large branches of trees, up to 30 cm in length. *Roots* thick, fleshy and flexuous. Plants lacking pseudobulbs but with a thickened stem palpable at the base of the leaves. *Petiole* and leaves conduplicate, *leaves* plicate at base, lying flat apically, arranged distichously along stem to form an open fan, up to 28 × 2.5 cm. *Inflorescence* produced from axils of central leaves. Peduncle upright with single flower. *Flowers* light yellow, sepals and petals with two transverse red blotches which almost merge in the center to become a band at mid length; sepals are suffused with red at the tips, making the whole apical portion red; petals with a second red suffusion forming a second bar but fading to red distally; lip apically white, crest fimbria red, lip epichile yellow, minutely spotted red arranged along veins; column white, apical margins and wings green-yellow, ventral surface with minute red spots. *Sepals* and *petals* ovate and shortly acuminate, surface smooth and shiny, minimal dimpling on lateral sepals. *Dorsal sepal* 2.6 × 1.5 cm; *lateral sepals* 2.7 × 1.7 cm; *petals* 2.4 × 1.6 cm. *Lip* attached to a long column foot, 1.5 × 1.4 cm, hypochile convex with semicircular crest, apical fimbria short, lateral fimbria longer, 7 mm long; epichile ovate and apiculate, markedly recurved, 8 mm long. *Column* stout, straight, 2.1 cm long, apex arcuate producing a hood over the clinandrium, column foot with apicule, ca. 1 cm long. *Column wings* are large, earlike, longer than wide, and angle outward. *Anther* ventral, operculate. *Pollina* 4 oval, subequal, waxy.

Huntleya gustavi belongs to a group of species with only one set of fimbria on the hypochile. These species have medium size flowers

with sepals approximately 3 cm long and a lip approximately 2 cm long. Similar species with these traits are *Huntleya brevis* Schltr. (distinguished by having sepals longer than wide), *H. caroli* P. Ortiz (sepals and lip with red apexes), *H. citrina* Rolfe (yellow lip), and lastly *H. apiculata* (Rchb. f.) Rolfe (described as white).

References

Harding, P. A. 2008. *Huntleya and Related Orchids*. Portland: Timber Press.



LCDP: *Huntleya gustavi* (Rchb.f.) Rolfe. A. Habit. B. Flower. C. Dissected perianth. D. Ovary, column and lip, side view. E. Column, ventral view. F. Pollinarium.



Lepanthes calimae

P. ORTIZ

ORQUIDEOLOGÍA 21(1): 69. 1998

Type: Colombia. Valle del Cauca: [Darién], Represa del Lago Calima, ca. 1500 m. Junio 28 1996, P. Ortiz, J.H. Ramírez & J.A. González 1090 (holotype, COL).

Illustrated specimen: Colombia. Valle del Cauca: Dagua, San Jose del Salado, Altos de San José del Salado, 1860 m. July 2016, J.S. Moreno & A. Erazo 376 (CAUP; LCDP voucher).

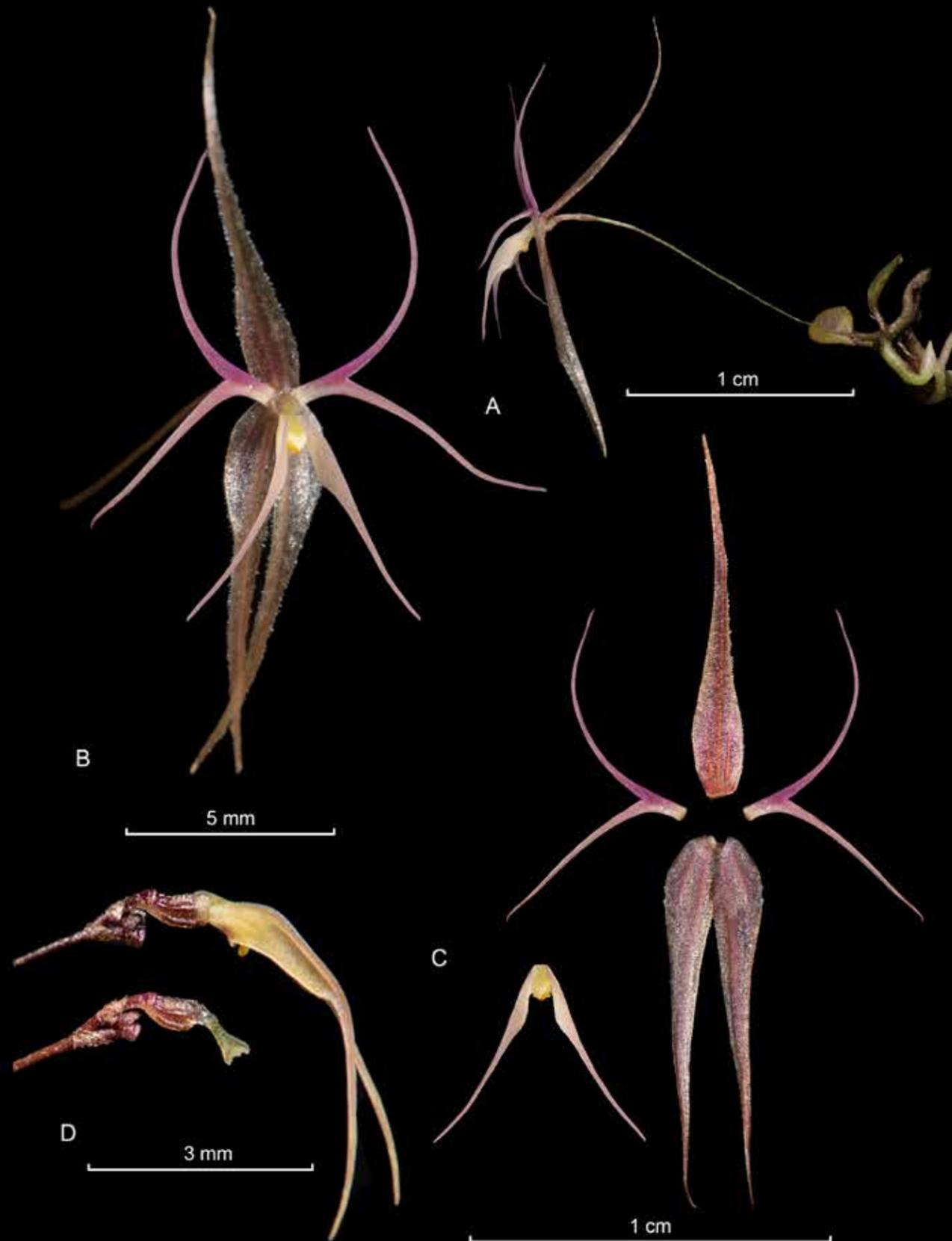
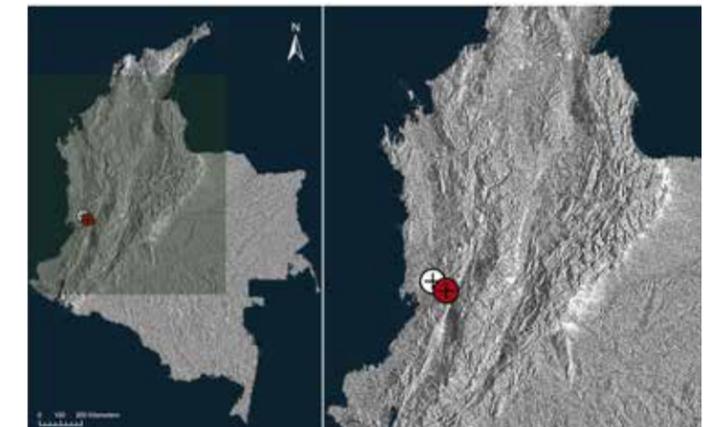
References:

Luer, C.A. & Thorerle, L. 2012. Icones Pleurothallidarum XXXII, *Lepanthes* of Colombia (Orchidaceae). *Monographs in Systematic Botany from the Missouri Botanical Garden* 123: 1–296.

Ortiz, P. 1998. Una interesante especie nueva de *Lepanthes*. *Orquideología* 21(1): 68-71.

Plant epiphytic, caespitose, up to 1 cm tall including the inflorescence; roots, flexuous, thick. *Ramicauls* erect, 2 mm long. *Leaves* erect, coriaceous, obtuse, 3.0 × 1.5 mm. *Inflorescence* a loose, successively few-flowered raceme up to 1 cm long, surpassing the leaf. *Ovary* obliquely obovoid, 1 mm long. *Dorsal sepal* rose, carinate, narrowly ovate, long acuminate, acute, microscopically ciliate, 3-veined, free from the lateral sepals, 1.0 × 1.8–2.0 mm. *Lateral sepals* rose, carinate, narrowly ovate, long acuminate, acute, microscopically ciliate, connate 1.5 mm, 2-veined, 1 × 2 mm. *Petals* rose, light yellow at the base, glabrous, 1 mm wide at the base, bifurcated into linear lobes 1 mm above the base, the segments equal, capillary, 7 mm long. *Lip* light yellow with rose, glabrous, bifurcate less than 1 mm above the base, bilobate, the lobes narrowly long-acuminate, 7.5 × 1.0 mm, 2-veined, slightly revolute in the basal half, the base connate to the base of the column, 5.5 × 1.0 mm. *Column* red-pink, terete, 1 mm long; the anther and the stigma apical.

Lepanthes calimae P. Ortiz, is an endemic species from Valle del Cauca Department, in the southwest of Colombia. Its distribution is restricted to the Calima region in the municipality of Darién, with additional records from near the Anchicayá Valley, where the specimen illustrated was collected. It is characterized by having pink-yellow flowers larger than the leaves, a filamentous perianth, bifurcate petals and a lip bifurcate above the base into narrowly ovate, attenuate lobes.



LCDP: *Lepanthes calimae* P. Ortiz. A. Habit. B. Flower. C. Dissected perianth. D. Ovary, column and lip.



Masdevallia coccinea

LINDEN EX LINDL.
ORCHID. LINDEN. 5. 1846

Type: Colombia. Santander: Old Dept. of Ocaña, terrestrial, on the southern slopes of the high mountains near Pomplona, alt. 9,500 ft.. April 1843, *J. Linden 1262* (holotype, K; isotypes, BR, W).

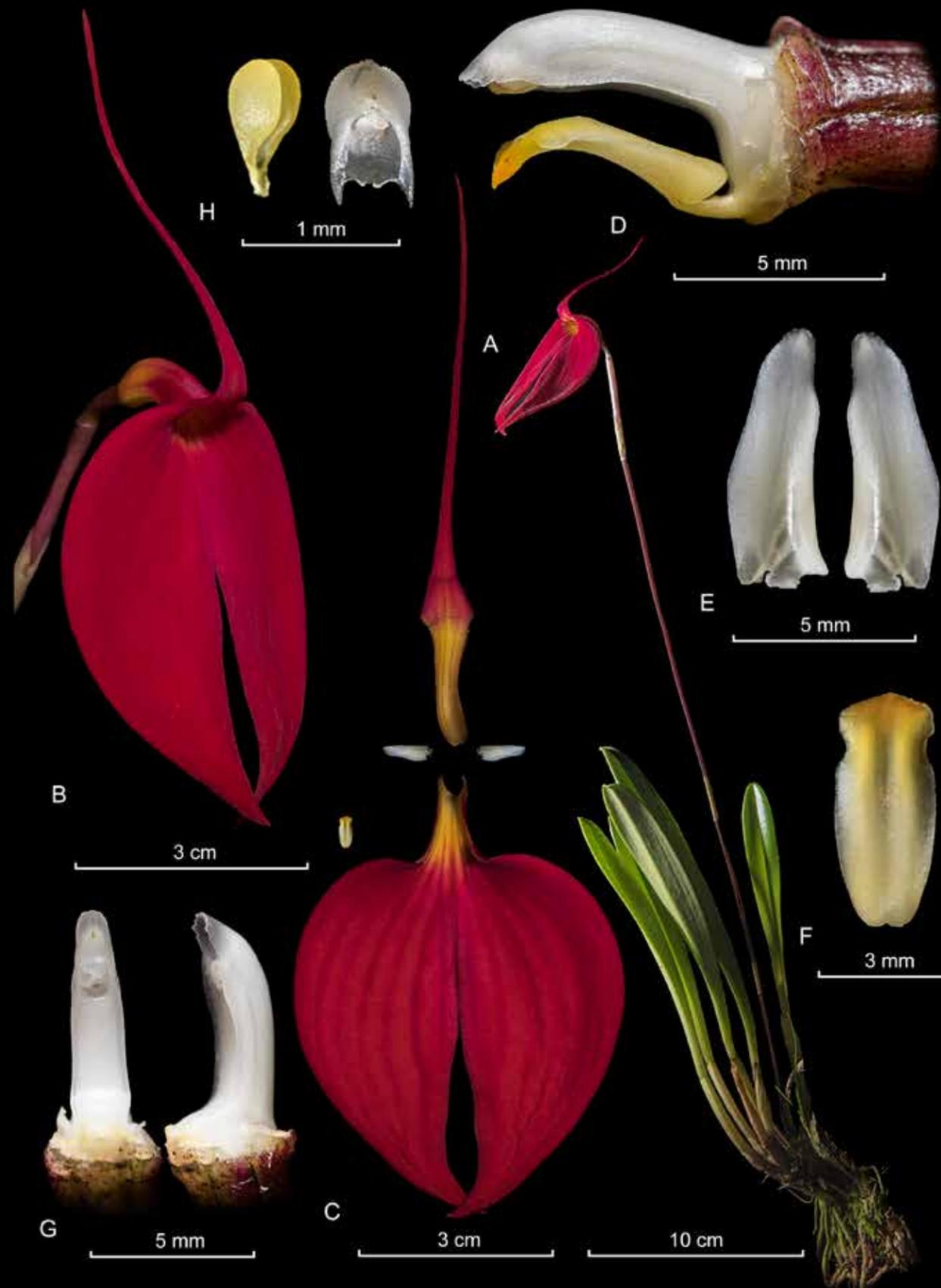
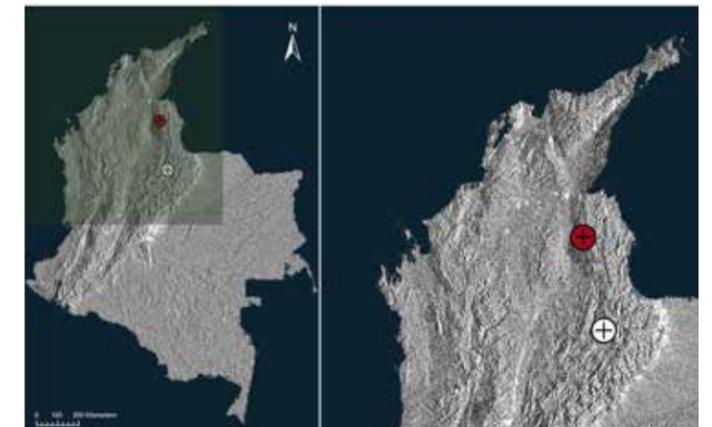
Illustrated specimen: Colombia. Boyacá: Santa Rosa de Viterbo, 2800 *J. S. Moreno & Fredy Alexander Acosta 518* (CAUP; LCDP voucher).

References:

Luer, C. A. 2003. Icones Pleurothallidarum XXV. Systematics of *Masdevallia* part five. *Monographs in Systematic Botany from the Missouri Botanical Garden* 91: 1049-1293.

Plant terrestrial, caespitose, up to 20 cm tall, excluding the inflorescence, roots flexuous, slender. *Ramicauls* erect, 5–8 cm long. *Leaves* erect, coriaceous, narrowly obovate, obtuse, 10–15 × 1.5–2 cm. *Inflorescence* elongate, erect, bearing a solitary flower, 8 cm tall; peduncle erect, 35–38 cm long. *Ovary* cylindrical, 12 mm long. *Sepals* large, red. *Dorsal sepal* connate to the lateral sepals in the basal fourth, narrowly obovate, with a long slender, reflexed tail, 8.5–9.0 × 0.3–0.8 cm. *Lateral sepals* oblique, broadly falcate, connate for about one third of their length, into a bifid lamina, 6.5 × 5 cm. *Petals* white, oblong, apex obtuse, labellar margin with a longitudinal callus ending in a short, tooth at the base, 7 × 2 mm. *Lip* yellowish, oblong-subpandurate, with a pair of low longitudinal calli near the middle, the apex rounded, with a slight point, 5.25 × 2.5 mm. *Column* white, semiterete, 7 mm long; the foot 2 mm long with a short, incurved extension. *Anther cap* cucullate, 1 × 0.5 mm. *Pollinia* two, ovoid, 1 mm long.

Masdevallia coccinea is a widely distributed species in the Eastern Cordillera of Colombia, being locally abundant. It is “a most remarkable plant”, with large, bright red flowers. The lateral sepals are tail-less, and the tail of the dorsal sepal is commonly erect, sometimes directed either slightly backwards or forwards.



LCDP: *Masdevallia coccinea* Linden ex Lindl. A. Habit. B. Flower. C. Dissected perianth. D. Ovary, column and lip. E. Petals. F. Lip, adaxial view. G. Column, ventral and side view. H. Anther cap and pollinia.



Masdevallia picturata

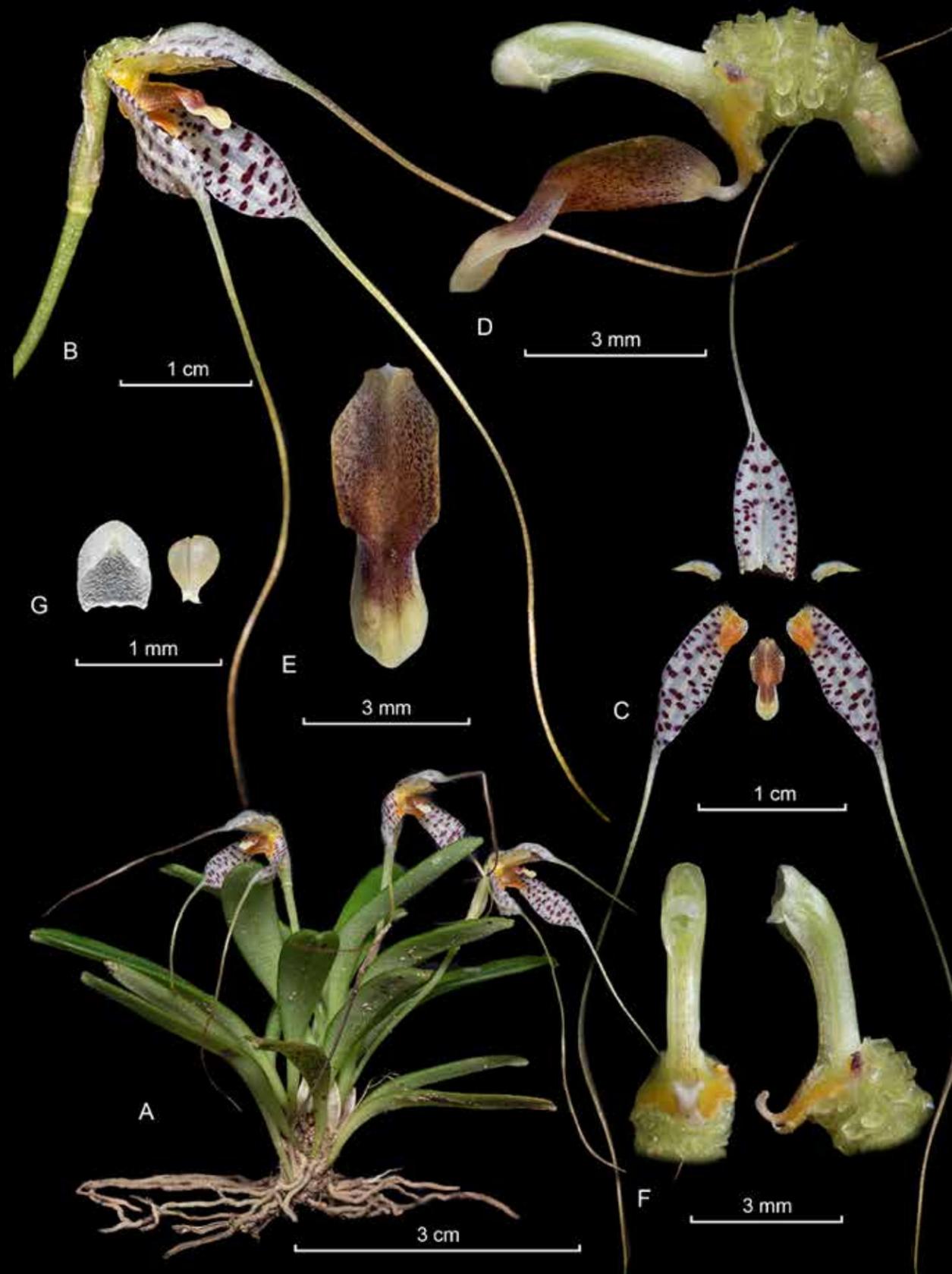
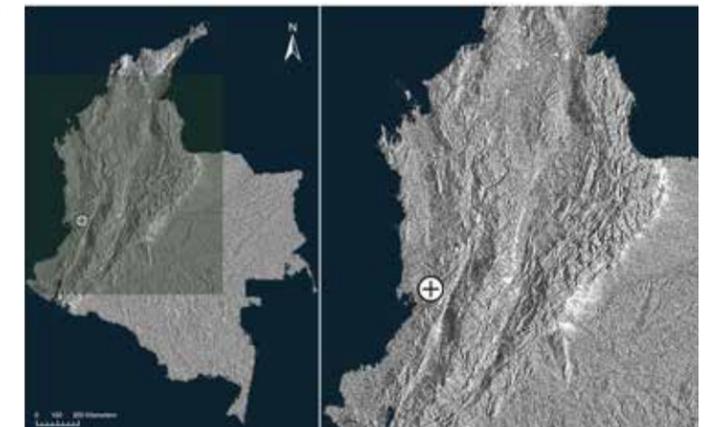
RCHB. F.

OTIA BOT. HAMBURG. I: 16. 1878

Synonyms: *Fissia picturata* (Rchb. f.) Luer, Monogr. Syst. Bot. Missouri Bot. Gard. 105: 9. 2006.**Type:** Venezuela. Near Caracas, alt. 6.000 ft. July 1850, *H. Wagne*ner s.n. (holotype, W).**Illustrated specimen:** Colombia. Valle del Cauca: Restrepo, Rio Bravo, 1600 m. September 2018, *J. S. Moreno 443* (CAUP; LCDP voucher).**References:**Luer, C. A. 2003. Icones Pleurothallidarum XXV. Systematics of *Masdevallia* part five. *Monographs in Systematic Botany from the Missouri Botanical Garden* 91: 1049-1293.

Plant epiphytic, caespitose, up to 5 cm tall, *roots* flexuous, slender. *Ramicauls* erect, 1.0–1.5 cm long. *Leaves* erect, coriaceous, narrowly obovate, obtuse, 3.0–1.5 × 0.5–0.7 cm long. *Inflorescence* a solitary flower; peduncle erect, 3.0–3.5 cm long. *Ovary* markedly tortuous, undulating lamellae, 3.0 mm long. *Sepals* white, spotted with purple, subacute apices contracted into filiform, green tails 3.5 cm long. *Dorsal sepal* free, ovate, 1.0 × 0.5 cm. *Lateral sepals* orange at the base, oblong, 1.0 × 0.5 cm. *Petals* white, suffused with orange, elliptical, tridentate, 5 × 1 mm. *Lip* red, cream yellow at the epichile, subpandurate, 5.5 × 1.5–1.7 mm; marginal folds near the middle, obtuse; epichile oblong, obtuse; hypochile dilated, obovate, sulcate centrally. *Column* white-green, semiterete, 4.5 mm long; the foot 1.5 mm long with a short, incurved extension. *Anther cap* cucullate, 7.0 × 0.5 mm. *Pollinia* two, ovoid, 0.5 mm long.

Masdevallia picturata Rchb. f. is distributed in the three cordilleras of Colombia from 1500 to 2800 m of elevation, with numerous variations in size and color. The species is easily recognized by its solitary white flowers spotted with purple on the, long-tailed, sepals.



LCDP: *Masdevallia picturata* Rchb. f. A. Habit. B. Flower. C. Dissected perianth. D. Ovary, column and lip. E. Lip, adaxial view. F. Column, ventral and side view. G. Anther cap and pollinia.



Maxillaria colorata

RCHB. F.

ANN. BOT. SYST. 6: 523–524. 1863

Type: Peru. *Warszewicz, J. s.n.* (Holotype: W; Isotype: G).**Illustrated specimen:** Colombia. Santander: Provincia de Vélez. Municipio La Belleza. Vereda Vista Hermosa. Mountain pluvial forest. 2420 m, 18 Nov 2016, *N. Gutiérrez M. 024* (JBB; LCDP Voucher).

Plant epiphytic, caespitose, to 60 cm tall. *Roots* white, fleshy, produced from the rhizome, 2.0–3.0 mm in diameter. *Pseudobulbs* ovoid, 7–8 × 3.5 cm, slightly compressed, smooth, with a single apical leaf, clasped by scarios bracts. *Leaves* petiolate; petiole 16–17 × 1.5 cm; blade elliptic, coriaceous, acute, up to 34.0 × 7.0 cm. *Inflorescence* suberect, reddish rachis, produced from the base of the youngest pseudobulbs, up to 12 cm, covered by 3–4 thin, acute, lanceolate, appressed, greenish bracts, minutely spotted with dark purple. *Floral bract* shorter than the ovary, lanceolate, acute, appressed, 2–3 cm long. *Ovary*, terete, slightly channeled, dark purple with black dots. *Flowers* resupinate, the sepals and petals orange to reddish, the lip pale yellow ocher, tinged reddish-orange toward the base, the midlobe purple. *Sepals* free, narrowly lanceolate, 4.2–5 × 0.6–0.9 cm, *lateral sepals* asymmetric, the margins revolute toward the middle. *Petals* linear-lanceolate, acute, falcate, 3.2–3.5 × 0.3–0.4 cm. *Lip* three-lobed, thick, smooth, glabrous, rounded at the apex, 1.2–1.3 × 0.5–0.7 cm; the lateral lobes oblong-triangular, obtuse, incurved; the callus oblong, rounded at the apex. *Column* 7.0–8.0 mm long, clavate, thick, reddish-orange; the clinandrium slightly crenate, the anther apical, incumbent, with a cucullate, smooth, cap; the stigma ventral; the foot perpendicular to the column, 0.5 cm long. *Pollinarium* with two pairs of ovoid, subequal yellow pollinia, attached to a horseshoe-shaped stipe.

Maxillaria colorata is recognized by its inflorescences generally shorter than the petioles, reddish-orange flowers, drooping sepals and petals that are ca. four times as long as the lip, and basally twisted lateral sepals. This species was originally described by H.G. Reichenbach from a Peruvian collection; Blanco (2013) placed *Maxillaria portillae* Christenson (described from a culti-

vated plant supposedly from Ecuador) in its synonymy. *Maxillaria rubroglossa* Szlach., Kolan., Lipińska & Medina Tr., described from southern Colombia, is also a synonym.

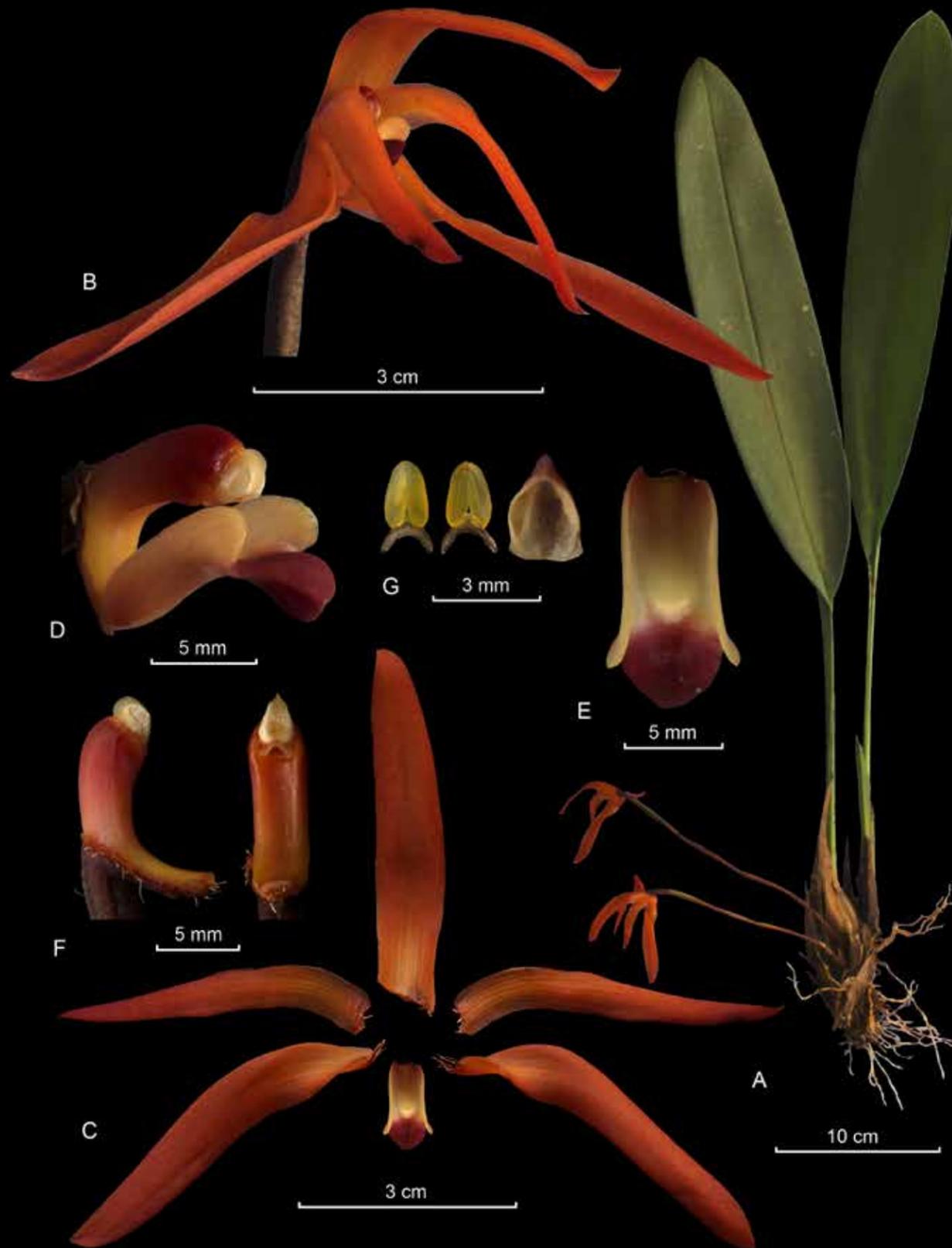
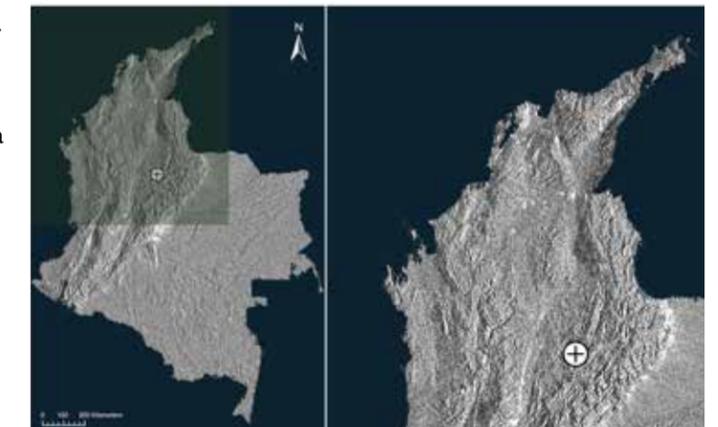
References:

Blanco, M. A. 2013. New combinations and synonyms in the Maxillariinae (Orchidaceae). *Selbyana* 31(1): 52–59.

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

Christenson, E. A. 2002. *Maxillaria*, an overview. In: J. Clark, W. Elliott, G. Tingley, & J. Biro (eds.). *Proceedings of the 16th World Orchid Conference*, Vancouver, 1999. Vancouver Orchid Society, Vancouver, British Columbia, Canada. 279–290.

Whitten, W. M., M. A. Blanco, N. H. Williams, S. Koehler, G. Carnevali, R. Singer, L. Endara, and K. M. Neubig. 2007. Molecular Phylogenetics of *Maxillaria* and related genera (Orchidaceae: Cymbidieae) based on combined molecular data sets. *Amer. J. Bot.* 94: 1860–1889.



LCDP: *Maxillaria colorata* Rchb.f. A. Habit. B. Flower. C. Dissected perianth. D. Column and lip three quarters view. E. Lip, adaxial view. F. Column, side and ventral view. G. Anther cap and pollinarium.



Pleurothallis anceps

LUER

SELBYANA 5(2): 159. 1979

Synonyms: *Ancipitia anceps* (Luer) Luer, Monogr. Syst. Bot. Missouri Bot. Gard. 95: 254. 2004.

Type: Ecuador. Carchi: epiphytic in cloud forest near Maldonado, alt. 1500 m, cultivated at SEL, greenhouse acc. no. 78-942, flowered in cult. 30 Sept. 1978. M. Madison, L. Besse, H. Kennedy & T. Plowman s.n. (holotype, SEL).

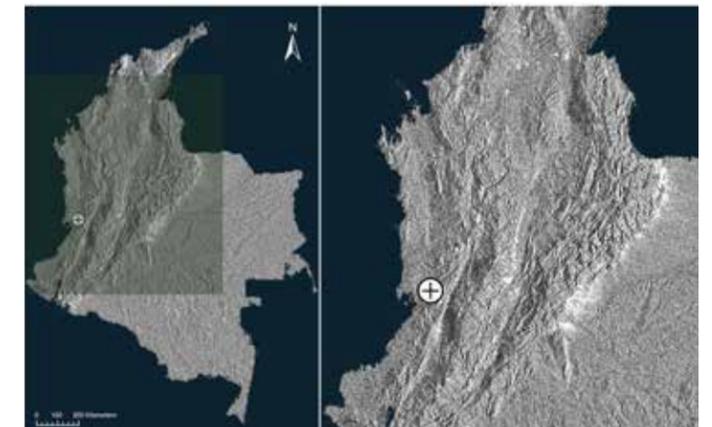
Illustrated specimen: Colombia. Valle del Cauca: Restrepo, Río Bravo, 1600 m. September 2018, J. S. Moreno 442 (CAUP; LCDP voucher).

References:

Luer, C. A. 1989. Icones Pleurothallidarum VI. Systematics of *Pleurothallis* subgenus *Ancipitia*, subgenus *Scopula* and *Trisetella*. *Monographs in Systematic Botany from the Missouri Botanical Garden* 31: 1–125.

Plant epiphytic, caespitose, up to 40 cm tall, *roots* slender, flexuous. *Ramicauls* erect, monophyllous, sharply ancipitous, 10–20 cm long. *Leaves* erect, coriaceous, elliptical, revolute, carinate along the midrib, apex tridenticulate, the base rounded, 7.5–10 × 1.5–2.2 cm. *Inflorescence* a succession of single flowers borne in a fascicle from the base of the leaf. *Ovary* green, subverrucose, 3 mm long. *Sepals* white at the base transitioning to yellow at the apex, suffused with purple dots increasing in size towards the apex. *Dorsal sepal* narrowly ovate, linear, obtuse, concave, carinate, 12.0 × 2.5 mm. *Lateral sepals* connate into a synsepal, similar in shape to dorsal sepal, concave, bicarinate, 14.0 × 2.5 mm. *Petals* white at the base becoming yellow at the apex, densely covered with small purple dots at the base, fewer, larger purple dots towards the tip, narrowly ovate, acuminate, acute, semiterete, minutely serrate, 1.0 × 1.5 mm. *Lip* white at the base, heavily suffused and dotted with purple, ovate, acute, the truncate base broadly fixed to the column-foot, the mesochile with a broad, rounded callus in the middle, 3.0 × 1.8 mm. *Column* white, suffused with pink, semiterete, minutely verrucose, 1.5 mm long.

Pleurothallis anceps Luer, is characterized by laterally compressed secondary stems, white-to-yellow flowers suffused with purple dots and an ovate, acute, truncate-based lip with a broad mesochile and a rounded callus in the center.



LCDP: *Pleurothallis anceps* Luer. A. Habit. B. Flower. C. Dissected perianth. D. Ovary, column and lip. E. Lip, adaxial and side view.



Prosthechea mejia

(WITHNER & P.A.HARDING) W.E.HIGGINS
SELBYANA 29: 214. 2009

Synonyms: : *Anacheilium mejia* Withner & P.A.Harding, *Cattleyas* & Relatives: Debatable Epidendrums: 101. 2004.

Type: Colombia. Hort. *Mejia de Moreno s.n.* (holotype: US).

Illustrated specimen: Colombia, Tolima: Roncesvalles, vía entre Rovira y Roncesvalles, 1400 m. November 2018, *Milton Rincón González 481* (TOLI; LCDP Voucher).

Epiphytic, creeping, erect *herb*, creeping, rhizome separating growths up to 8 cm, 50 cm tall including the inflorescence. *Roots* fibrous. *Pseudobulb* long spindle-like, slightly compressed, up to 20 cm long. *Foliar sheath* 1, deciduous or persistent. *Leaves* 2 per pseudobulb, long elliptic, dark green, 20–30 × 1.0–2.5 cm. *Floral spathe* 2–10 cm long, brown. *Inflorescence* 20–40 cm long, terminal. *Pedice*l 2 cm. *Ovary* 1 cm, three sided, three low wings laterally. *Flowers* numerous 10–20, long lasting, non-resupinate, patent; sepals and petals dull yellow to yellow-green, red-brown blotches at base; lip white, dark purple centrally, sparing margins; callus white; column green at base becoming white, dark maroon blotches at base. *Sepals* 1.0–1.5 × 0.3 cm, lanceolate, acute. *Petals* 1.0–1.5 × 0.3 cm, spatulate, narrow. *Lip* obscurely three lobed, lateral lobes oblong, medial lobe oval, apex acute; callus two parallel lamella with a central sulcus at their bases, distally flattening be slightly raised from lip medial lobe. *Column* short 2.5 mm long, fused to lip base 2 mm, base hollowed out, apex with lateral wings and apical teeth equal, dorsal tooth with ligule. *Clinandrium* semicircular, bilobed, apical, rostellum with central thickening, bi-toothed ventrally. *Anther cap* 4-celled. *Pollinia* 4, obovoid, equal, stipe 1 mm, viscidium small.

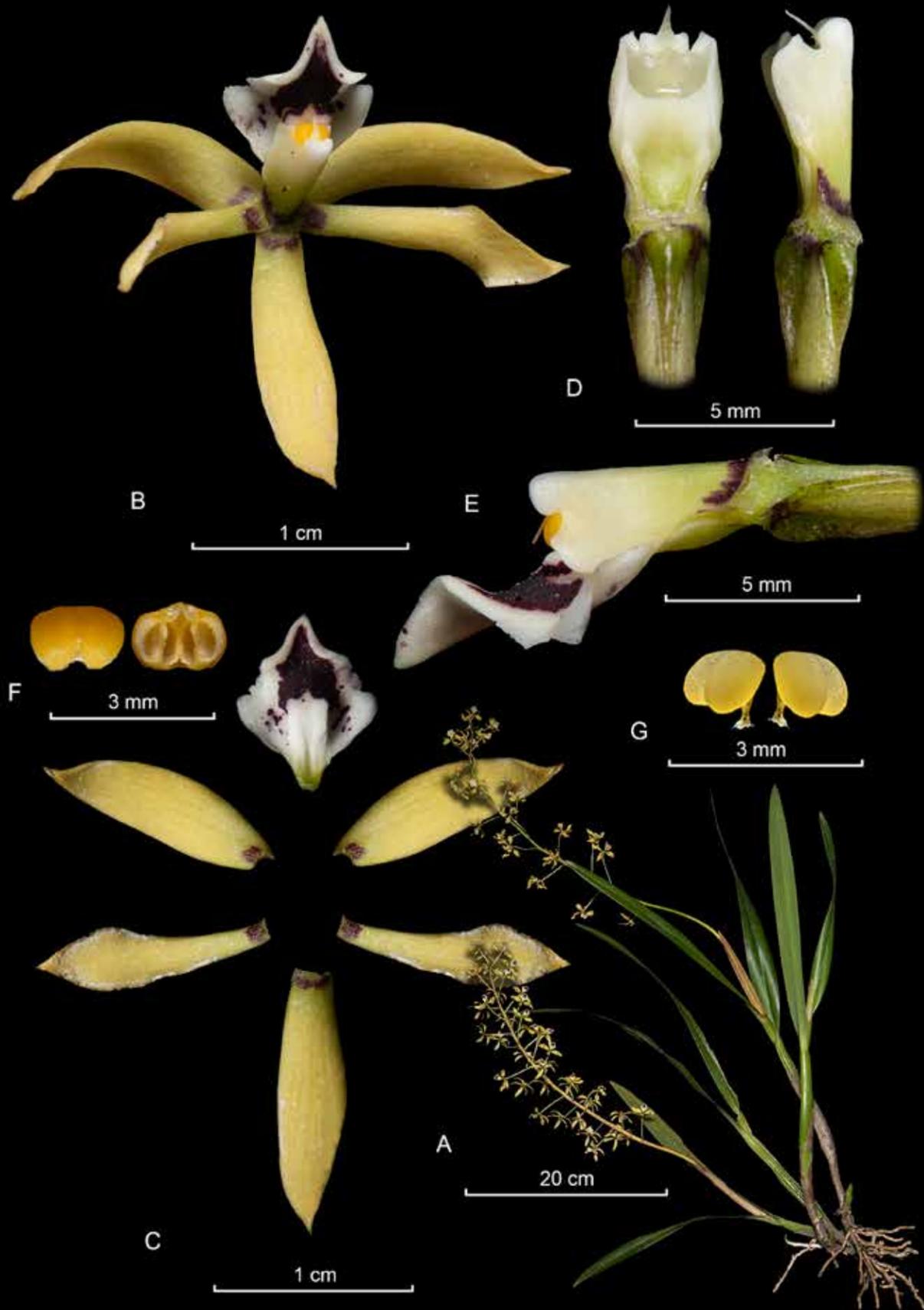
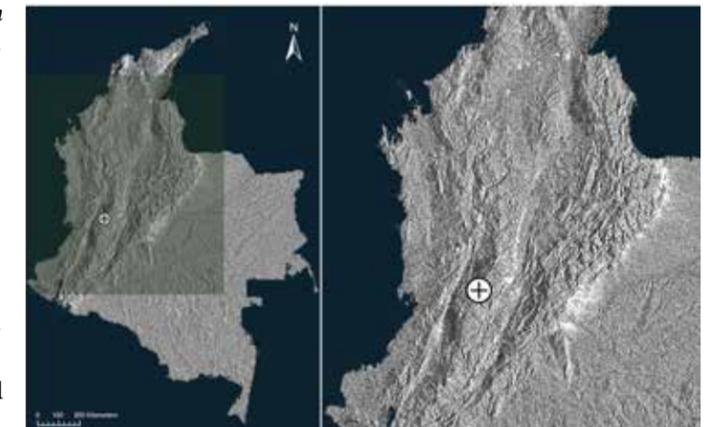
Prosthechea mejia is easily recognized by its multi-flowered inflorescence with distinctly colored flowers and a lip that is white with a dark purple central blotch. The closest relative is *P. spectra* (Lindl.) W.E.Higgins, with fewer flowers, yellow with many purple spots on the sepals and petals, and lighter purple on the lip. *Prosthechea vita* (D.G.Hunt, Withner & P.A.Harding) J.M.H.Shaw, described at the same time as *P. mejia*, is based on a plant obtained

from Ecuagenera. The artist prepared the original drawings of *P. mejia* from a desiccated specimen and that of *P. vita* from a flower in liquid. At the time of description they appeared different, but the cultivated plants which served as types have continued flowering in Patricia Harding's personal collection and are undoubtedly the same species.

References:

Higgins, W. E. 2008. New Combinations in *Prosthechea* Knowles & Westc. (Orchidaceae). *Selbyana* 29(2): 214.

Whitner, C.L. & Harding, P.A. 2004. *The Cattleyas and their relatives Vol. VII : The Debatable Epidendrums*. 300 p.



LCDP: *Prosthechea mejia* (Withner & P.A.Harding) W.E.Higgins. A. Habit. B. Flower. C. Dissected perianth. D. Column, side and ventral view. E. Ovary with column and lip. F. Anther cap. G. Pollinia.



Restrepia sanguinea

ROLFE

BULL. MISC. INFORM. KEW 1896: 44. 1894



Type: Colombia. Without collection data. Flowered in cultivation Nov. 1895 by Messrs. Charlesworth & Co. s.n. (Holotype: K).

Illustrated specimen: Colombia. Antioquia: La Ceja. Trees along the banks of the Piedras River on the road to Abejorral, 2140 m. 20 July 2018. S. Vieira 032, L. F. Pérez (LCDP Voucher).

Plant epiphytic, densely caespitose herb up to 18 cm. *Roots* slender. *Ramicauls* suberect, 5–11 cm long, enclosed by 5–7 thin, whitish, loose, compressed, imbricating sheaths, the lowermost dotted with black. *Leaves* erect, coriaceous, more or less suffused with purple, elliptical-ovate, acute, 6–8 × 3.4–4.6 cm, the base cuneate, contracted into a petiole ca. 1 cm long. *Inflorescence* a solitary flower, produced successively in a fascicle on the abaxial surface of the leaf; peduncle slender, 4–5 cm long. *Floral bract* thin, tubular, 6–7 mm long; pedicel stout, ca. 2 mm long, with a short filament; ovary green, lightly sulcate, 6 mm long. *Dorsal sepal* free, erect, translucent white with the veins crimson, narrowly ovate below the middle, attenuate above the middle with the apex clavate, yellowish sparsely spotted with crimson, 32–34 × 3–4 mm. *Lateral sepals* connate to near the apex into a shallowly concave, ovate-elliptical lamina, whitish suffused with violet-red, densely spotted in coalescing rows of intense crimson, becoming solid toward the base except for an unpigmented area on either side of the base along the margins, 12-veined, 30–31 × 16–17 mm, minutely bifid. *Petals* membranous, translucent white, with a crimson midvein, narrowly linear-triangular, attenuate above the middle with the apex clavate, yellowish spotted with crimson, 22–23 × 1.2 mm. *Lip* yellow, obscured by intense crimson dots, bright fuchsia at the base, oblong, subpandurate, 13.5 × 4.8 mm, the epichile truncate, submarginate, minutely scabrous with minutely denticulate margins, the hypochile subquadrate, concave with thin, erect margins, each side with a capillary, uncinuate process, the disc with a pair of low carinae extending from the base of each process onto the epichile, connected to the column foot by a rigid, cylindrical neck. *Column* yellowish white, slender, clavate, ca. 8 mm long, the base pedestal-like with a pair of obtuse, pubescent, yellow calli. *Pollinia* yellow, four, pyriform, viscidium granular. *Anther cap* white, cuc-

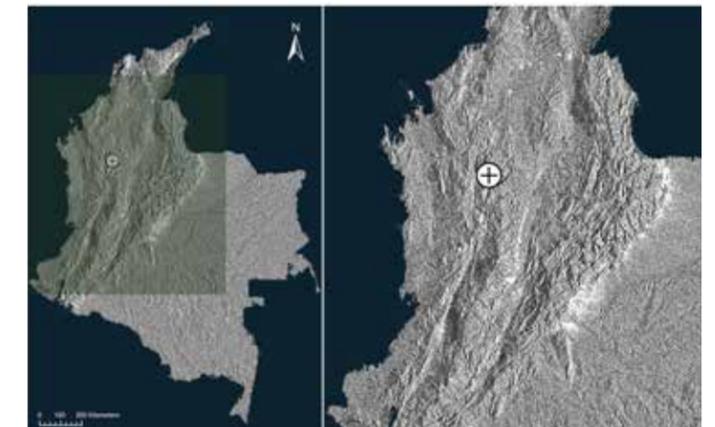
ullate, apical.

Restrepia sanguinea Rolfe is apparently endemic to the highland areas near Medellín, Antioquia, and is not easily differentiated from other medium to large sized species; its main distinguishing characters being the crimson flowers with yellow blotches at the base of the column, the violet-red lateral sepals with stripes of rows of crimson dots and with a marginal whitish area near the base, and the peduncles slightly longer than half the length of the leaf.

A specimen with the same locality data as the one illustrated here, from the Piedras river at La Ceja, was designated by Luer & Restrepo (1996) as neotype of this species due to the poor quality of the extant type material. However, as part of the original material still exists, a neotype cannot be designated.

References:

Luer, C. A. & Escobar, R. 1996. Icones Pleurothallidarum XIII, Systematics of the genus *Restrepia* (Orchidaceae). *Monogr. Syst. Bot. Missouri Bot. Gard*, 59: 124–126.



LCDP: *Restrepia sanguinea* Rolfe. A. Habit. B. Flower. C. Dissected perianth. D. Lip, adaxial view. E. Ovary, column and lip, side view. F. Column, ventral view. G. Anther cap and pollinia.



AUTHOR INSTRUCTIONS

Species Orchidacearum (SO) is a serial publication. It is published in volumes, freely available online, and peer-reviewed. Icons from any author are received, they may treat any species of the Orchidaceae family, from any country, previously published or not, as long as they comply with the author's instructions. The icons are made up of a digital plate (LCDP from here on), and one page of text, specified further on.

SO looks to be a universally accessible platform where species of the Orchidaceae family are made available, by systematically documenting each species' local and regional variation. In order to reach this goal, each icon must comply with the following requirements: 1) The illustrated specimen needs to be determined to species with confidence. The authors must show that the protologue and original type material have been studied, and should annex these material to their submission. 2) The origin of each illustrated specimen has to be known and as specific as possible. No plates of unsure origin will be received. 3) Each icon must include an LCDP, in full color, and it needs to be complete and of high quality (see published examples for reference). 4) Each icon must include a text prepared on the basis of the illustrated specimen. Each icon must represent a single individual, not a species, and be as faithful as possible. 5) Authors are responsible for obtaining the permits required to illustrate and prepare the materials for each icon. When any of the elements of an icon have been previously published, reprint permission from the original publisher has to be obtained prior to submission to Species Orchidacearum.

For the sake of consistence, scientific names follow those established in Genera Orchidacearum, with well funded exceptions. The specific epithet has to be given by the authors. Homotypic synonyms have to be listed in the text, heterotypic synonyms should be omitted. New taxa may be proposed in SO.

Lankester Composite Digital Plate (LCDP)

Size: Letter, 8.5 × 11 inches (215.9 × 279.4 mm)

Resolution: 300 dpi

Background: Black

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.

Scale bars: White, horizontal, 6 pixels wide, with two sides that rise 10 pixels above the scale.

Labels: Each illustrated part has to be labeled with a letter. These are in all caps, Arial 14 pts, white, placed horizontally on the bottom left of each structure. Parts are labeled in alphabetical order starting with A, in the following order when presents: habit (plant), leaf, inflorescence, flower, perianth, sepals, petals, lip, column, polinia, anther cap, capsule.

Measurements: these are given in entire numbers, no decimals (105 mm rather than 10.5 cm), with a space separating the units (normally mm or cm, but m and ddm may be used in exceptional cases).

They are given in Arial, 12 pts, white, and should be centered over the scale bar, 20 pixels above the line. Easily comparable values should be used (1, 3, 5, 10, 20, 50, etc.), rather than less informative ones (like 4, 7, 9, 11, 13, etc).

Texts

One or more authors have to be indicated, specifying the author(s) of each element (LCDP and text). The text is in English, not longer than a single page, in Times New Roman, 12 pts.

Name: a species name has to be indicated, followed by its authors in their standard from (IPNI), followed by the abbreviated citation of the publication, with journal volume (number) and publication year. Only the species name will be in italics and bold. As follows:

Acianthera lojiae (Schltr.) Luer, Monogr. Syst. Bot. Missouri Bot. Gard. 95: 254. 2004.

Synonyms: Only homotypic synonyms should be listed.

Type: Here the information of the type collection must be given as is given in the protologue. This typically includes country, collector and herbarium where the specimen is deposited.

Description: A standard morphological description of the specimen is expected here, from the most general elements to the most specific. The description should be based only on the specimen studied by the authors, do not add information from other sources onto the description.

Illustrated specimen: Here the information on the illustrated specimen must be given when it differs from the type. The information given is the same as that requested for the type specimen.

LCDP Caption: The illustrated plant parts must be given in the same order as the plate numbers.

Ranges: To give ranges, separate by a single dash, without spaces (20–45, not 20 - 45).

Use a multiplication symbol “×” instead of the letter “x” to separate length and width (1.0–1.1 × 3.2–3.3 mm).

Units: should be metric, abbreviated (10 km, 2.3 cm).

Anexes

The authors must show they have studied the original description (protologue) and its elements (type material). They are encouraged to submit the studied elements together with the LCDP and plate as either web-links or as separate files in .PDF, .JPG or .TIFF. These original elements may include the protologue, original publication, holotype, isotype, lectotype, neotypes, paratypes, illustrations of type material, etc. Material not associated with the original description should not be submitted. Authors are not required to provide all elements, but at least those that allowed for an interpretation of the studied specimen. The anexes are not published with the icon.

Submissions

Species Orchidacearum is published online whenever an issue is complete, submissions are therefore accepted anytime.

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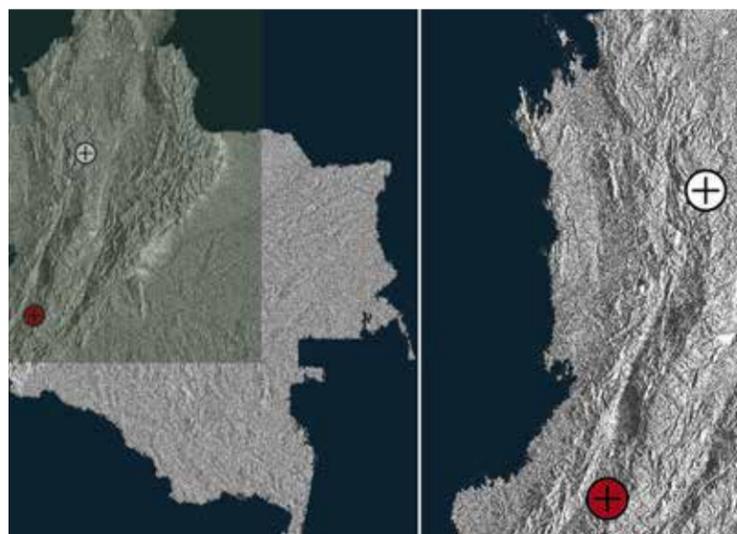
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MAP SYMBOLS



A red dot on the map represents the type collection, a white dot, the illustrated specimen if it differs from the type



