



ANGEL  
ANDRETTA  
FUNDACIÓN PARA LA INVESTIGACIÓN,  
CONSERVACIÓN & DESARROLLO

# ANDRETTANA

TROPICAL ANDES BIODIVERSITY AND CONSERVATION

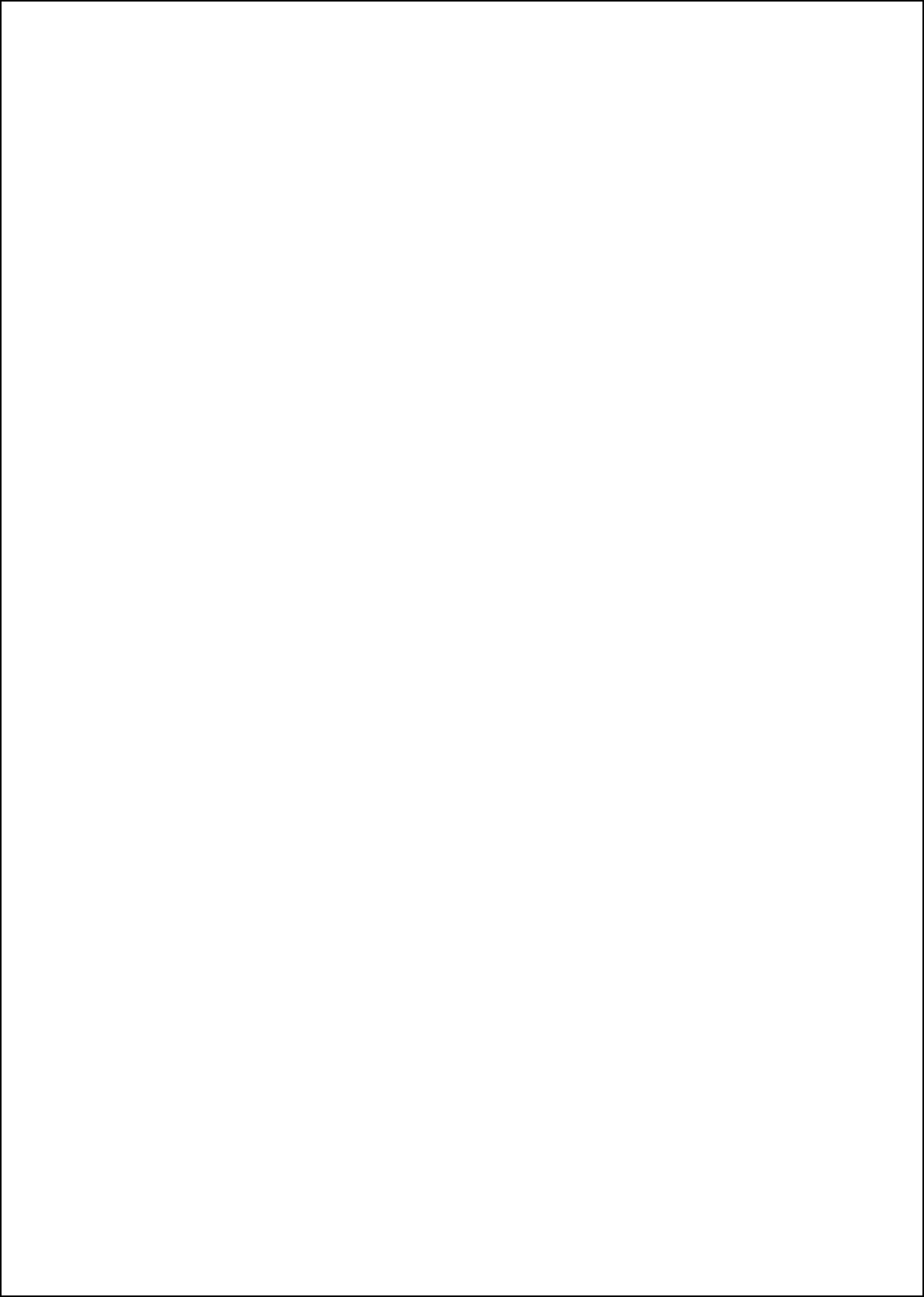
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# VIII

Ecuador 2025

## SCIENTIFIC CONFERENCE ON ANDEAN ORCHIDS

OCTOBER 21 TO 25, 2025

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Conference - October 22 to 24  
Tour - October 25

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15 de Julio de 2025

ANDREETTANA, publicación de la FUNDACION PARA LA INVESTIGACION, CONSERVACION, DE LA BIODIVERSIDAD Y DESARROLLO DE LOS ANDES TROPICALES "ANGEL ANDREETTA" es una revista científica dedicada a la publicación de investigaciones originales sobre la biodiversidad de la región neotropical, con énfasis en los Andes tropicales. La revista recibe trabajos en las áreas de taxonomía (descripción y revisión de especies), biodiversidad, ecología, biogeografía, restauración ecológica, usos culturales de la biodiversidad, así como horticultura de plantas tropicales, haciendo especial énfasis en orquídeas. Los manuscritos que ofrezcan aportes relevantes al conocimiento taxonómico y ecológico, así como a la conservación y el manejo sostenible de la biodiversidad andina, tendrán prioridad.

Se publican tanto estudios empíricos como revisiones, ensayos y comunicaciones breves que presenten nuevos métodos, enfoques conceptuales o aplicaciones prácticas. Se valoran contribuciones que trasciendan casos específicos y planteen soluciones o reflexiones aplicables a otras regiones y contextos.

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"ANDREETTANA," a publication of the Foundation for Research, Conservation, and Development of the Tropical Andes "Angel Andreetta," is a scientific journal dedicated to publishing original research on the biodiversity of the Neotropical region, with an emphasis on the Tropical Andes. The journal welcomes submissions in the areas of taxonomy (species description and revision), biodiversity, ecology, biogeography, ecological restoration, cultural uses of biodiversity, as well as the horticulture of tropical plants, with a special focus on orchids. Manuscripts offering relevant contributions to taxonomic and ecological knowledge, as well as to the conservation and sustainable management of Andean biodiversity, will be prioritized.

Both empirical studies and reviews, essays, and short communications presenting new methods, conceptual approaches, or practical applications are published. Contributions that transcend specific cases and propose solutions or reflections applicable to other regions and contexts are valued.

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**EDITORIAL**

Nos complace presentar el tercer número de Andreettana, una publicación que reafirma nuestro firme compromiso con la investigación científica y la conservación de la biodiversidad en la costa, sierra y oriente Ecuatoriano.

Este volumen recoge la descripción de siete especies nuevas para la ciencia y cuatro nuevas variedades, consolidando avances significativos en el conocimiento taxonómico de la flora andina. En la familia Orchidaceae se incluyen contribuciones en los géneros *Waczewiczella*, *Dracula*, *Acianthera*, *Karma* y *Porroglossum*, así como un híbrido natural y una nueva variedad del género *Dracula*. Asimismo, se describen tres variedades inéditas del género *Sphyrospermum* (Ericaceae), un grupo de arbustos epífitos distribuidos en el sur de Ecuador, lo que pone de relieve la riqueza florística aún por descubrir en la región.

En la sección de horticultura, se abordan aspectos clave del cultivo del género *Cycnoches* y se presentan experiencias prácticas en el manejo de *Dendrobium cuthbertsonii* en los viveros de Ecuagenera. Estas contribuciones permiten vincular el conocimiento científico con estrategias aplicadas de propagación y conservación *ex situ*, esenciales para asegurar la supervivencia a largo plazo de especies.

La satisfacción de contribuir al conocimiento botánico mediante la descripción de nuevas especies, así como el potencial de su propagación masiva con fines conservacionistas, constituye un motor fundamental de nuestra labor. A través de este esfuerzo editorial, buscamos no solo enriquecer la literatura científica, sino también fomentar acciones concretas de preservación y uso sostenible de nuestra biodiversidad.

Expresamos nuestro profundo agradecimiento a los autores, ilustradores, revisores y al equipo editorial, cuyo trabajo y dedicación han hecho posible esta nueva edición.

José Portilla Andrade  
Director

**EDITORIAL**

We are pleased to present the third issue of Andreettana, a publication that reaffirms our firm commitment to scientific research and the conservation of biodiversity in the coast, highlands, and eastern region of Ecuador.

This volume compiles the description of seven species new to science and four new varieties, consolidating significant advances in the taxonomic knowledge of the Andean flora. In the family Orchidaceae, contributions are included in the genera *Waczewiczella*, *Dracula*, *Acianthera*, *Karma*, and *Porroglossum*, as well as a natural hybrid and a new variety of the genus *Dracula*. Likewise, three previously undescribed varieties of the genus *Sphyrospermum* (Ericaceae), a group of epiphytic shrubs distributed in southern Ecuador, are described, which highlights the floristic richness yet to be discovered in the region.

In the horticulture section, key aspects of the cultivation of the genus *Cycnoches* are addressed, and practical experiences in the management of *Dendrobium cuthbertsonii* at the Ecuagenera nurseries are presented. These contributions make it possible to link scientific knowledge with applied propagation and *ex situ* conservation strategies, which are essential to ensure the long-term survival of species.

The satisfaction of contributing to botanical knowledge through the description of new species, as well as the potential for their mass propagation for conservation purposes, constitutes a fundamental driving force of our work. Through this editorial effort, we seek not only to enrich the scientific literature but also to promote concrete actions for the preservation and sustainable use of our biodiversity.

We express our deep gratitude to the authors, illustrators, reviewers, and the editorial team, whose work and dedication have made this new issue possible.

José Portilla Andrade  
Director

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## A new species of *Warczewiczella* (Orchidaceae: Zygopetalinae), from the northwest of Ecuador.

Hugo Medina<sup>1</sup> & José Portilla<sup>1</sup>, Iván Portilla<sup>1</sup>

**Resumen:** Una nueva especie de *Warczewiczella* se describe a través del permiso de investigación denominado "Rescate, conservación, reproducción y manejo ex situ de la flora del Ecuador", con autorización No. 004-2016-IC-FLO-DNB/MA del Ministerio del Ambiente, en uso de las atribuciones que le confiere la codificación a la Ley Forestal y de Conservación de Áreas Naturales y Vida Silvestre, otorgado a Ecuagenera Cia. Ltda. *Warczewiczella mashpiensis*, proveniente de la provincia de Pichincha, al noroccidente de Ecuador, es descrita, ilustrada y se muestran fotos comparativas. La especie nueva se compara con *Warczewiczella ionoleuca* (Rchb.f.) Schltr., respectivamente.

**Keyword:** Ecuador, especies nuevas de Zygopetalinae, *Warczewiczella*; especies descritas por Ecuagenera.

**Introducción:** El género *Warczewiczella* Rchb.f., ha sido considerado complejo, desde la creación del nombre, debido a que originalmente fue creado como *Warczewiczella* por Rchb.f., en honor al lituano Josef Warszewicz Ritter von Ravicz. Así, en la base de datos del World Checklist of Monocotyledons y en International Plant Name Index es denominado *Warczewiczella*, mientras que, en el Trópicos del Missouri Botánica Garden, consta el género de ambas formas (*Warszewiczella* y *Warczewiczella*), siendo reconocido el nombre más antiguo, aunque etimológicamente no es el más adecuado, puesto que fue nombrado en honor a Warszewicz. (Vienna Code 2006, art. 60 y art. 60.3)

En 1852, H.G. Reichenbach clasificó tres géneros: *Kefersteinia* Rchb.f., *Zygopetalum* Hook. y *Chondrorhyncha* Lindl., basados en la continuidad de la morfología del labelo con el pie de la columna, el margen proximal del estigma y el diente rosetelar.

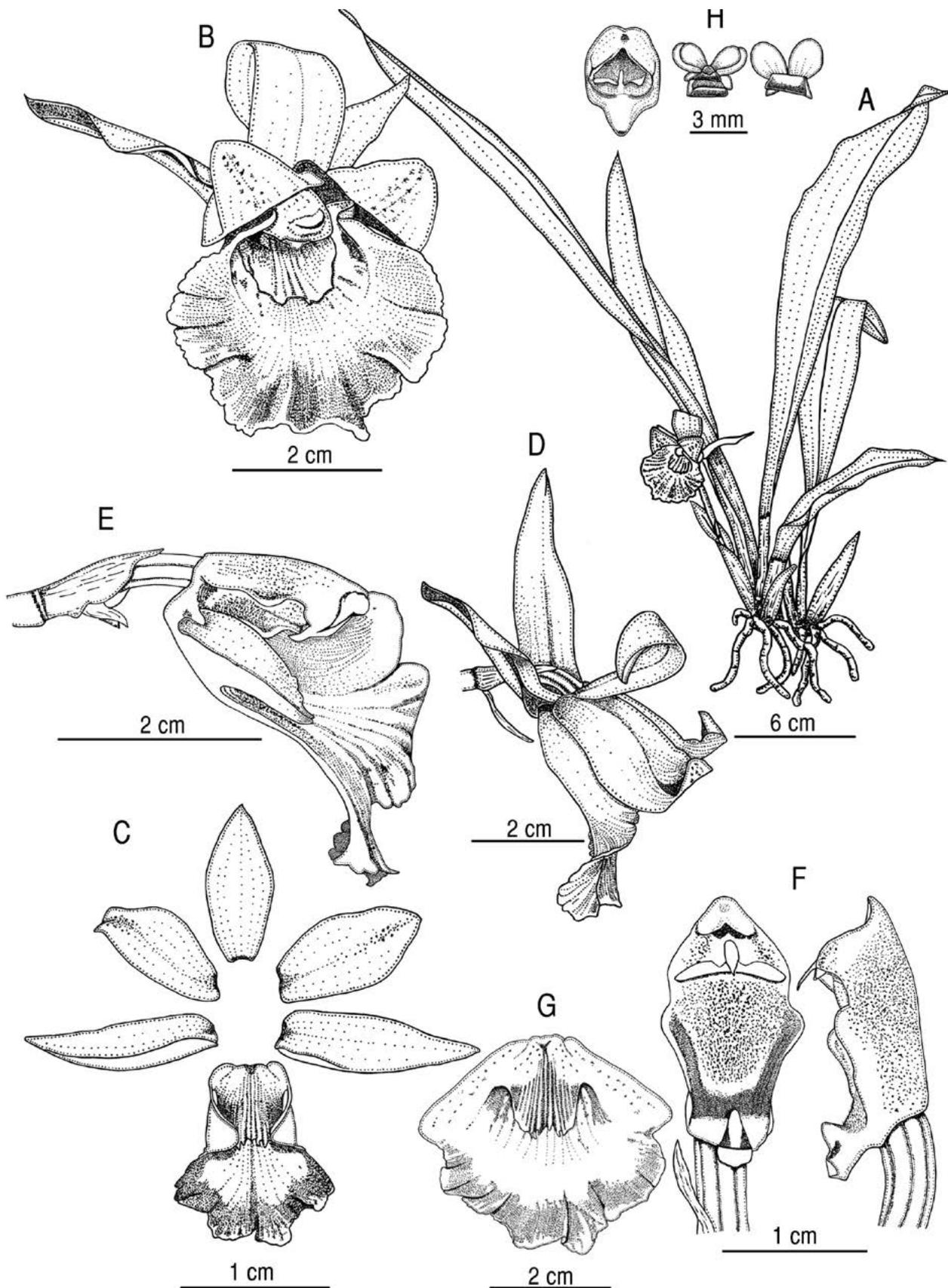
En ese mismo año, separa dos géneros bastante parecidos, apoyando su descubrimiento en la forma de la columna y la posición de los callos en el labelo, estos son: *Cochleanthes* Raf. y *Warczewiczella* Rchb.f. Nombró *Warczewiczella*, basado en un ejemplar denominado como *Warrea discolor*, por Lindley en (1849), también



**Figure 1.** *Warczewiczella mashpiensis* in bloom exsitu

transfirió al mismo tiempo, *W. discolor*, *W. marginata* y *W. candida*, de iguales características, pasaron a formar parte de este género. (Harding, 2008). En su descripción, resaltó que "el callo es adnato a la base del labelo, pero libre lateralmente y hacia el ápice", caracteres morfológicos que distinguen este género con los demás miembros del complejo *Chondrorhyncha*, además, hizo hincapié en que "los sépalos laterales son reflexos hacia atrás; los callos mucho más pequeños, siempre basales; dos pares de polen aplanados y desiguales", (Fowlie, 1969 p. 224).

Finalmente, en el 2005 los profesores M. Whitten, N. Williams, R. Dressler, G. Gerlach y F. Pupulin, hicieron una revisión con marcadores moleculares de la subtribu *Zygopetalinae* Schltr., con materiales provenientes de Centro y Suramérica, y corroboraron que efectivamente el género *Warczewiczella* es diferente de los demás géneros. Notaron que se encuentran separados dentro del cladograma, en donde *Warczewiczella* es más cercano molecularmente a *Aetheorhyncha*, *Chaubardiella*, *Chondrosaphe*, *Ixyophora* y *Pescatoria*, mientras que *Cochleanthes* es más cercano a *Stenotyta*.



**Figure 2.** *Warzewiczella mashpiensis* H. Medina et al. **A.** Habit, **B.** flower front view, **C.** Perianth dissected, **D.** flower side view, **E.** lip dissected, side view, **F.** column, front and side views, **G.** Anther cap, polem front and back views. Illustration of the plant that served as holotype, by Hugo Medina.

**Taxonomy:** *Waczewiczella mashpiensis* H. Medina, José Portilla & Iván Portilla sp. nov.

**Type:** ECUADOR. Pichincha: Cantón Quito, Parroquia Pacto, en las cercanías de la reserva Ecológica Mashpi, 0°11'10.43" N 78°49'50.57" O, 1100 m., floreció en cultivo en Ecuagenera El Pangui, marzo del 2024, EG-0650 (holotipo: HA). Figs. 1-2 -3

### ***Waczewiczella mashpiensis***

*Species novae similis est Waczewiczella ionoleuca (Rchb.f.) Schltr., sed magnitudine plantae differt; sepala dorsali abrupte reflexa; labium apice dilatatum, laciniis brevibus ovato-obtusis; columna angusta cum aculeo valde producto in pede et lobis lateralibus brevibus.*

**Descripción:** **Planta** herbácea perenne, epífita y rizomatosa, 40.00–45.00 cm de largo; **raíces** cilíndricas carnosas, no ramificadas velamen blanco verdoso, cofia verde claro, 12.00–24.00 cm de longitud, 0.38 cm de diámetro; **Rizoma** cilíndrico, reptante, sin escamas; yemas axilares blanco-verdosas, dispuestas en forma espirada. **hojas** lisas, color verde brillante, elípticas-lineares, dispuestas en abanico con una línea media desde la base al ápice, margen entero, ápice acuminado, base ligeramente atenuada, 6.50–34.00 cm de largo, 2.50–5.90 cm de ancho, cubiertas en la base por dos vainas foliares papiráceas ápice acuminado base truncada, 4.00–7.00 cm de largo, 1.00–3.00 de ancho; **pedúnculo** terete, estriado o liso longitudinalmente, 5.50–7.00 cm de largo, 1.00–4.00 de diámetro, estrechamente conduplicado en la base; **inflorescencia** cilíndrica 12.00–14.00 cm de largo, 0.20 cm de diámetro, con tres entrenudos cubiertos por una bráctea espatácea, ápice acuminado, base truncada, 0.16–0.17 cm de largo, 0.60 cm de ancho; **flor** hermafrodita, solitaria, no resupinada, sin olor, color crema-marrón con manchas en los pétalos, más notoria en la base y ápice del labio, 3.50–7.00 cm de diámetro; **ovario** color verde claro, estriado longitudinalmente, hexámero, 2.35 cm de largo, 0.35 cm de diámetro, cubierto por dos brácteas espatáceas, una superior e inferior, ambas ápice acuminado, base obtuso, la superior de, 1.54 cm de largo, 0.64 cm de ancho, la inferior, 1.46 cm de largo, 0.36 cm de ancho; **sépalos dorsal** elíptico, ápice acuto y truncado en la base, color crema, apenas manchado linealmente en el centro, erecto hasta la mitad, luego deflexo hacia atrás hasta tocar el ápice con la parte posterior media, formando un círculo, 3.60 cm de largo, 1.30 cm de ancho; **sépalos laterales**, 4.00 cm de largo, 1.50 cm de ancho, de similar color, lanceolados, ápice acuminado y base truncada, deflexos abruptamente

hacia atrás, doblado hacia adentro el margen posterior, desde la base hasta cerca del ápice, doblado de 0.35 cm de ancho; **pétalos** elípticos, acuto truncado, descansando sobre el labio, ápice deflexo hacia atrás, de 3.30 cm de largo, 1.50 cm de ancho, similar color a los sépalos, con manchas de color marrón más marcadas hacia el centro formando una franja desde el ápice hasta la base; **labelo** oblato, margen apical ondulado apenas deflexo hacia atrás, trilobulado de apariencia tubular, cóncavo en la base, 3.50 cm de largo, 4.80 cm ancho, color crema con abundantes manchas café-marrón, más oscuras en la base, parte discal y ápice, siempre abrasando la columna y de manera connivente, lóbulos laterales con margen entero, ovados, abrasando la columna, ápice obtuso de 0.70 cm de largo, 0.75 cm de ancho, callo basal semiquadrado y hendido más ancho en la base 1.50 cm largo, 1.08 cm ancho, color café-marrón, dentado desde la base hacia el ápice consta de 10 quillas o estrías longitudinales, las 3 centrales más carnosas y notorias, siempre termina libre hacia el ápice, la parte libre de 1.00 cm de largo; **columna** 1.90 cm de largo, 0.90 cm de ancho, romboide, pie corto y acúleo 0.35 cm de largo, 0.15 cm ancho, lóbulos inclinados al frente, fondo color blanco-rosáceo pigmentado de manchas marrón, tornándose amarillo verdoso en los lóbulos laterales, la parte basal ventral hendida vellosa de color marrón claro, cavidad estigmática linear, horizontal semiarqueada, 0.80 cm de largo, 0.20 cm de ancho, con un rostelo apiculado, notoriamente más alargado inclinado hacia la parte ventral, 0.43–0.61 cm de diámetro, **antera** oblonga, acuminada en la base, 0.40–0.43 cm de diámetro, cavidad ovalada con dos alveolos; **polen** de color amarillo, dos pares aplanados 0.35–0.43 cm de diámetro, las dos frontales notoriamente más pequeñas, caudículas en forma de espiral hacia atrás, 0.38 cm de largo, 0.18 cm de ancho; **semilla**, no vista.

**Etimología:** Nombrada en honor al río y comunidad Mashpi, cercanos a la Reserva Ecológica privada de Ecuagenera y la Fundación Angel Andreetta, del mismo nombre, ubicada en la provincia de Pichincha, lugar donde fue encontrada la especie.

**Distribución:** *Waczewiczella mashpiensis* sp nov. se distribuye en la región occidental al noroeste de Ecuador en la provincia de Pichincha, Cantón Quito, Parroquia Pacto.

**Cultivo:** En cultivo son plantadas en macetas con una mezcla de corteza de pino con roca pómez, con sombra del 40% y alta humedad ambiental, florecen esporádicamente entre los meses de marzo, mayo y noviembre.

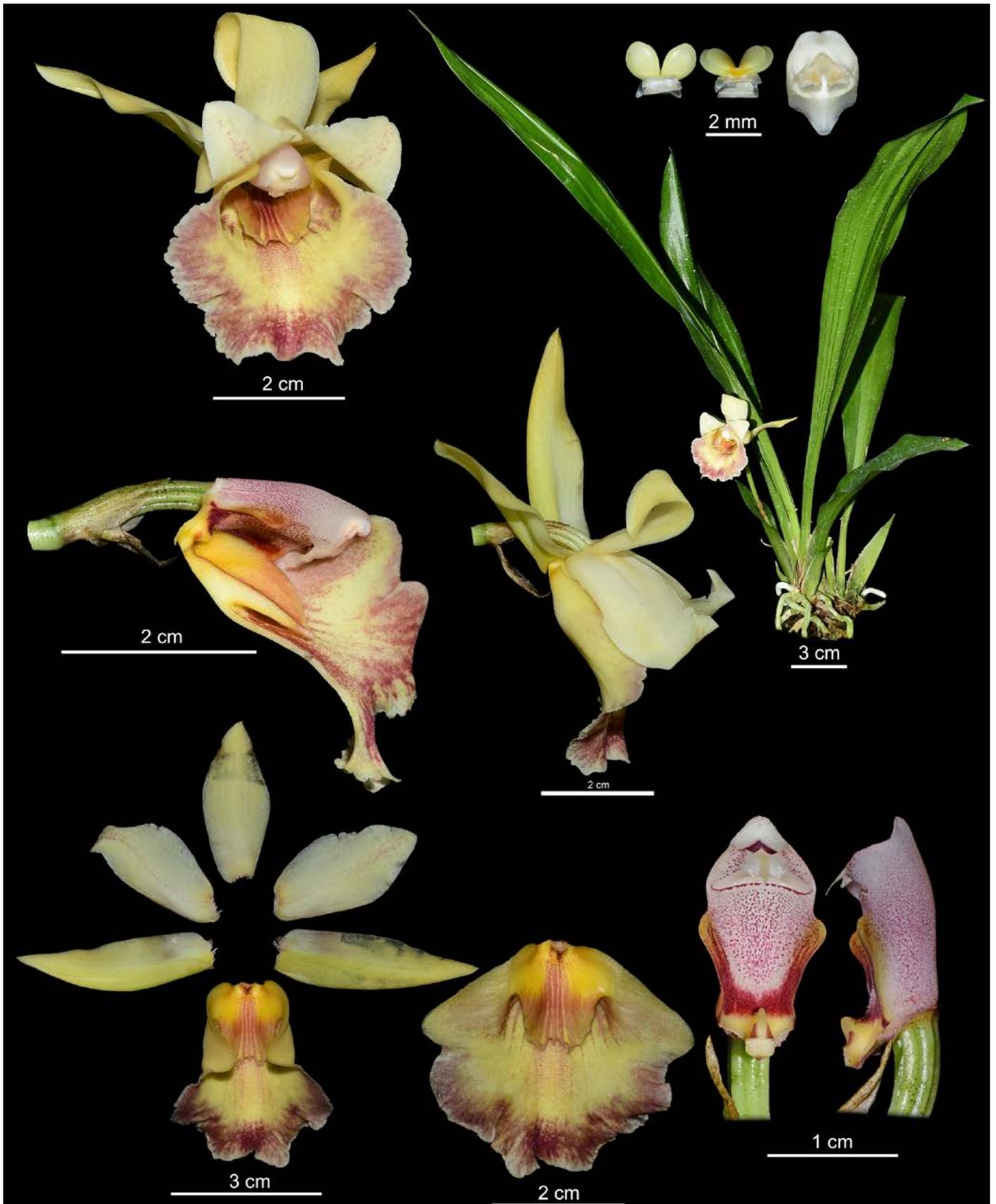


FIGURE 3: *Warczewiczella mashpiensis*, prepared sheet of the plant that served as holotype, by H. Medina.



**Figure 4.** **A** *Warczewiczella mashpiensis* front view, **B** – *Warczewiczella ionoleuca*, **C** – *Warczewiczella mashpiensis* side view, **D** – *warczewiczella ionoleuca* side view, **E** – *warczewiczella mashpiensis* view of the dissected lip, **F** – *warczewiczella ionoleuca* view of the dissected lip, **G** – *warczewiczella mashpiensis*, frontal and profile view of the column, **H** – *warczewiczella ionoleuca*, frontal and profile view of the column.

**Hábitat y ecología:** Son de crecimiento epifito, en bosques primarios y húmedos, en el tronco de los árboles medianos bajo el dosel de la vegetación alta.

**Discusión:** La nueva especie se atribuye al género *Warczewiczella*, similar a *Warczewiczella ionoleuca* (Rchb.f.) Schltr., pero difiere en el tamaño de la planta notoriamente más grande vs. planta corta; sépalo dorsal abruptamente deflexo vs. sépalo dorsal erecto en dirección a la columna y hacia el frente; labelo ápice ensanchado, con lóbulos cortos, ovado-obtuso vs. labelo ápice estrecho, con lóbulos alargados acuminados; columna estrecha con un acúleo muy pronunciado sobre el pie y lóbulos laterales cortos vs. columna ancha con un acúleo notoriamente más corto y lóbulos laterales más pronunciados.

#### **Literature Cited**

McNeil, J. 2006. Vienna Code. International Code of Botanical Nomenclature, Gantner Verlag Publishers 568p.

Alzate, N., Álvarez, L., Dressler, R., 2011. Revisión Taxonómica del Género *Warczewiczella* Orchidaceae: Maxillarieae en Colombia, Boletín Científico Centro de Museos. Vol. 15 (1): 17 - 40.

Whitten, M., Williams, N., Dressler, R., Gerlach, G., Pupulin, F., 2005. Generic Relationships of Zygopetalinae (Orchiidaceae: Cymbidiae): Combined Molecular Evidence, Lankesteriana 5(2): 87 - 107.

Fowlie, J.A., 1969. An Annotated Check List of the Genus *Warczewiczella*, The Orchid Digest, 33: 224 - 231.

Harding, P.A., 2008. Huntleyas and Related Orchids, London: Timber Press, Inc, 235 - 236.

Reichenbach, H.G., 1852. Gartenorchideen. *Warczewiczella*, Botanische Zeitung, 10: 634-765.

## A NEW SPECIES, A NATURAL HIBRID AND A VARIETY OF *DRACULA* (ORCHIDACEAE: PLEUROTHALLIDINAE), FROM ECUADOR

Hugo Medina, José Portilla, Alfonso Doucette & Saul Ruiz

**ABSTRACT:** A new species, *Dracula doucettei*, a natural hybrid *Dracula x ruizii* and a variety of *Dracula chimaera* are described and illustrated through the collaborative efforts of the Ecuagenera project "Rescate, conservación, reproducción y manejo ex situ de la flora del Ecuador," authorization number No. 004-2016-IC-FLO-DNB / MA from the Ministry of Environment (MAE, 2016). The new species described here is compared with *Dracula orientalis* Luer & R.Escobar, This differs widely in the shorter leaves. The natural hybrid species is compared with *Dracula deniseana* Luer, where it differs basically in the coloration of the yellow-white petals and sepals with reddish maculae located towards the base, dense and elongated hairs. The variety of *Dracula chimaera* (Rchb. f.) Luer, basically differs in the shape of the lip.

**KEYWORDS:** Ecuador new species, natural hybrid, new varieties *Pleurothallidinae*, *Dracula*, discovered by *Ecuagenera*.

### INTRODUCTION

The genus *Dracula* was originally immersed within the genus *Masdevallia*, created by Professor Reichenbach in 1872, the first recorded species being *Masdevallia chimaera*, Reichenbach described 21 species of *Masdevallia*, which were later transferred to the genus *Dracula* (Mon. in Sys. Bot...., Vol. 46 1993), likewise botanists Charles Jacques Edouard Morren in 1833-1886, Harry James Veitch in 1840-1924, Friedrich (Fritz) Wilhelm Ludwig Kraanzlin in 1847-1934, Friedrich Carl Lehmann in 1850-1903, Robert Allen Rolfe in 1855-1921, and Rudolf Schlechter in 1872-1925, contributed with the description of new species, for the initial catalog of *Dracula*, until then the genus already included some 51 species all published under the generic name of *Masdevallia*, (Pupulin et al, *Draculas* del Ecuador 2009). Later all species with similar characteristics were transferred to the genus *Dracula* proposed by Dr. Carlile Luer in 1978).

At present, the genus *Dracula* comprises about 168 taxa, of which 140 are recognized as valid names, leaving 28 species that are not valid, i.e. as synonyms (kew.org).

*Dracula* species are distributed from southern Mexico with only one species, to Peru, with the highest concentration in the northern Andes of Colombia with 70 species (Calderón Sáenz & Efraín Camargo 2003) and Ecuador with more than 63 species. (<https://wcsp.science.kew.org/qsearch.do>).

### TAXONOMY

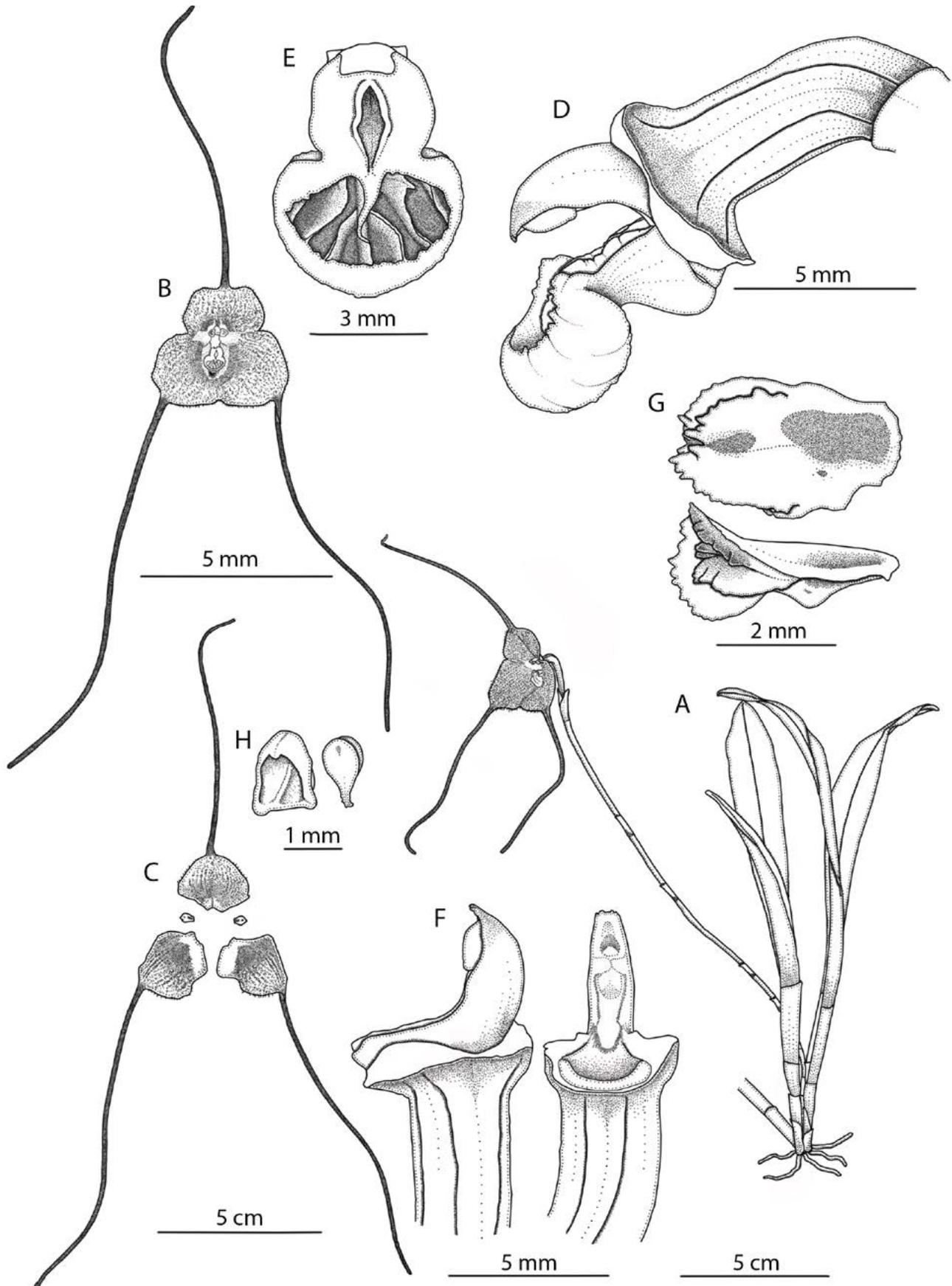
***Dracula doucettei*** H.Medina & J.Portilla, *sp.nov*

**TYPE:** ECUADOR: El Oro, Piñas canton, between the towns of Moromoro, Palo Solo and ÑacaIpa, 3°40'59.50" S 79°47'03.50" O, 1900 m. flourished in cultivation in Ecuagenera Gualaceo, EG-0624 (holotype: HA). Figs. 1-2 A, B, C -3.

**ETYMOLOGY:** The new species is named for Alfonso Doucette for his assistance in the identification and description of this new species.

**DIAGNOSIS:** The new species is most similar to *Dracula orientalis* Luer & R.Escobar of Colombia but can be distinguished by the shorter leaves (9.9-12.3 cm vs. 17.0-20.0 cm), higher number of bracts per peduncle (ca. 8 vs. ca. 4), broadly deltoid sepals (vs. suborbicular) patterned with a purple-brown radiating pattern along the veins (vs. densely mottled, not in a radiating pattern), and the lip, which is suffused with pink (vs. all white), shorter (6.0 mm vs. 8.0 mm) pandurate (vs. spatulate) with a smaller epichile (3.1 mm long, 4.8 mm wide vs. 5.0 mm long, 5.5 mm wide) that trends towards more accessory lamellae along the primary carina (4-5 vs. 2-4), and lamellae with entire to denticulate margins (vs. irregular-lobate).

**DESCRIPTION:** Plants erect, herbaceous, epiphytes under 20 cm tall; roots whitish, with a yellow-green tip, filiform, 1.3-1.8 mm in diameter; stems semiterete, erect, 37.8-47.03 mm long, 3.5-3.9 mm wide, enveloped by 2-3, papery, laterally compressed sheaths, 1.8-29.9 mm long, 3.3-7.2 mm wide; leaf coriaceous, oblong, obtuse, sessile, entire, 99.4-122.8 mm long, 13.5-15.3 mm wide; inflorescence a solitary, nutant flower, peduncle terete, 160.3 mm long, 1.0-1.8 mm in diameter, enveloped by eight or more, membranous, tubular, acute, truncate bracts, 3.5-10.7 mm long, 1.3-2.6 mm wide; pedicel terete, 20.0 mm long, 1.4-2.0 mm in diameter; ovary terete, 7.0 mm long, 3.0 mm in diameter, fruit not seen; flowers without a detectable odor; dorsal sepal cream, mottled with purple-brown in a radiating pattern along the veins, densely spiculate, broadly deltoid, 16.2 mm long, 20.6 mm wide, contracted into a purple, filiform tail, 78.4 mm long, 0.9 mm wide; lateral sepals similar in color to the dorsal sepal, fused for about half their length with a shallow, white

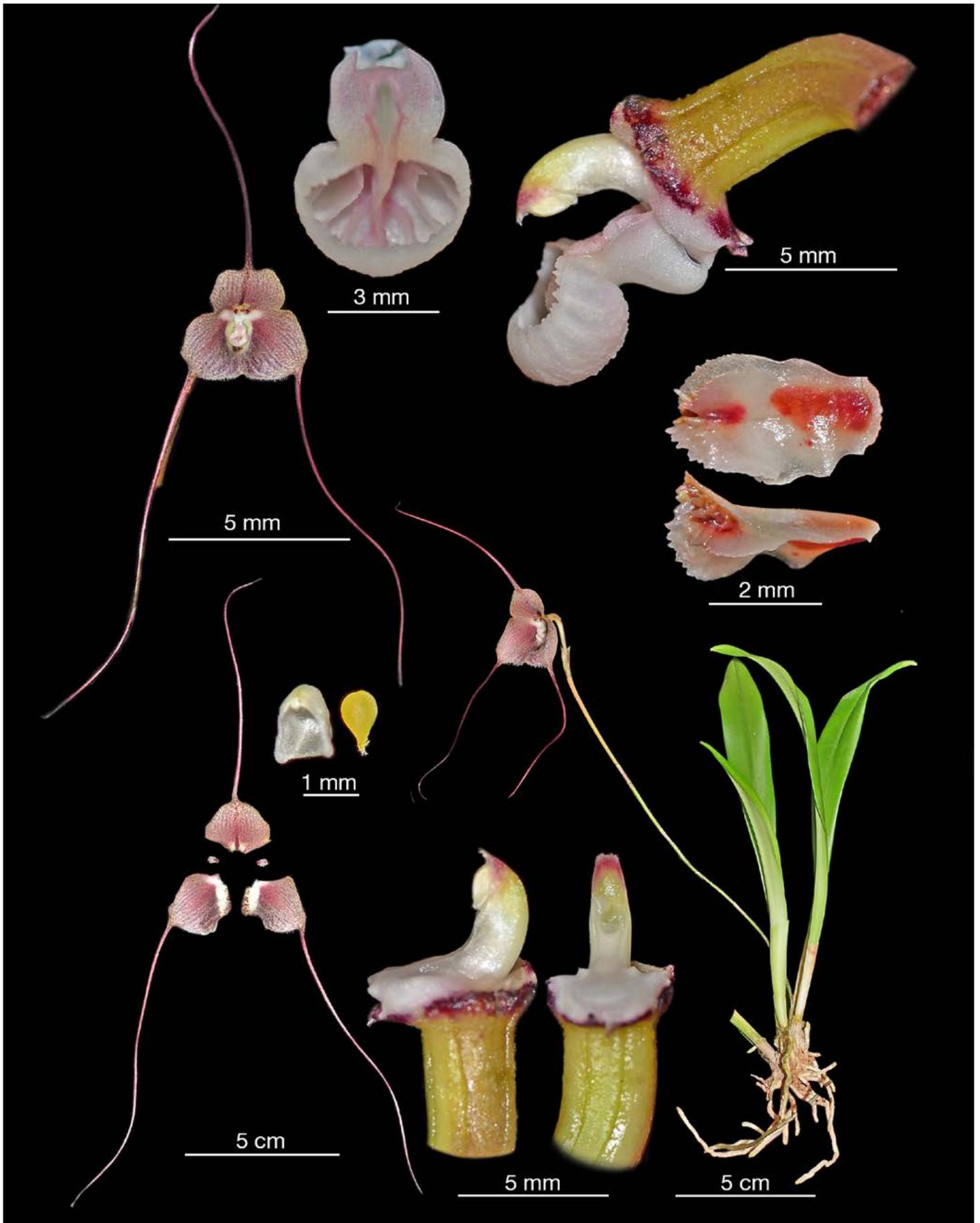


**Figura 1.** *Dracula doucettei* H.Medina & José Portilla et al. **A** Habit, **B** Flower three quarter view, **C** Column and lip, side view, **D** Lip front view, **E** Column, ventral and lateral view, **F** petals front and back view, Illustration of the plant that served as holotype, by Daniela Tacuri.

mentum filled with purple-brown tubercles, 22.2 mm long, 19.0 mm wide, contracted into a purple, filiform tail 99.4 mm long, 0.9 mm wide; petals translucent white, suffused with reddish brown, oblong, bivalvate, filled with tubercles between the lamina, the apices erose with low angular margins below the middle, 3.8 mm long, 2.2 mm wide; lip pandurate, loosely hinged to the base of the column foot, whitish suffused with pink, 6.0 mm long, 4.8 mm wide, the hypochile orbicular, cleft, with a concave base, 2.9 mm long, 3.0 mm wide, the epichile subreniform, concave, denticulate margin, small tubercles externally, filled with nine to 11 radiating lamellae, 3.1 mm long, 4.8 mm wide; column whitish, suffused with yellow and purple towards the membranous, erose apex, semiterete, 4.1 mm long, 1.4 mm wide, with a ventral, cream, cucullate anther cap, 1.3 mm long, 1.0 mm wide, housing two yellow, ovoid, laterally compressed pollinia terminating in short caudae, 1.0 mm long, 0.6 mm wide.



**Figura 2.** Comparison of the new species **A.** *Dracula doucettei* photographed in situ, **B.** *Dracula doucettei*, photographed in studio, **C.** *Dracula orientalis* Luer & R.Escobar front view, the one was used for comparison with the new specie, photographed by Hugo Medina.



**Figura 3.** *Dracula doucettei* dissected flowers the one was used for description of the new species, photographed by Hugo Medina.

## TAXONOMY

*Dracula chimaera f. klisiocheilos* H.Medina & J.Portilla, A.Doucette *sp.nov*

**TYPE:** ECUADOR: Carchi, Canton Tulcán, parish Maldonado, grows in primary forest under tree canopy, 0°54'00.41" N 78°07'01.08" O, 1900 m. flowered in cultivation at Ecuagenera Gualaceo, EG-649 (holotype: HA). Figs. 4–5–6 (A, B, C)

**ETIMOLOGIA:** The name comes from the Greek words "cheilos" meaning "lip" and "klísi" meaning "folded, closed" in reference to the shape of the flower's lip.

**DIAGNOSIS:** *Dracula chimaera forma labelli rigidi basim versus reflexi*.

## DESCRIPTION

**planta;** epiphyte of 25.0–32.0 cm long; **root** thick, white cylindrical of 9.0–12.0 cm length, 0.2 cm diameter; **leaves** erect, deeply carinate, conduplicate, gradually tapering toward the base, coriaceous, elliptic, acuminate at the apex, 11.8–26 cm length not including petiole, 4.5–6.0 cm wide; **petiole** erect 0.4–0.6 cm diameter, 0.3–0.5 cm long, covered by two tubular, nonattached, scarious bracts, 2.0–6.5 cm long, 1.4–1.8 cm wide, apex acuminate, base obtuse; Horizontal inflorescence with several successive flowers of 20–24 cm long, 0.2–0.3 cm diameter, appears from the base of the ramicaul breaking the basal bract, cylindrical appearance, semi-verrucous, has 8 internodes along the flower spike covered by bracts of lighter green color of 0.6–1.3 cm long, 0.2 cm wide; **flower** odorless, concave, always looking downward, brownish brown with yellowish macules accentuated on the adaxial surface, 19.0–4.0 cm diameter including cauda, **dorsal sepal;** 10.6 cm long, 1.0 cm at the base 2.4 cm at the widest part, ending in a cylindrical tip, connate to the lateral sepals, 0.9 cm, brown brown with yellowish macules at the base with thin rounded elongated caudae ending in tip, yellow color protruding at the apex, covered by long and intense hairs especially on the margins a little smaller giving the appearance of glabrous in the center, hairs 0.4 cm long, on the back there is a line that divides the sepal, **lateral sepals;** 10.7 cm long including acicular tail, 1.6 cm at the base, 4.0 cm in the central part, connate at the base 2.3 cm forming a deep angulated chin with large brown macules, is where it accommodates the labellum seen in profile, ends cylindrical tip at the apex, similar color to the dorsal sepal, the caudae become yellowish at the apex, covered with fine hairs elongated especially on the margins becoming noticeably smaller in the central part where they

merge, **petals;** brown cartilaginous with white margins, serrated with an overlaying, grooved appearance and a brown spot, posterior view, ending in a point attached to the spine giving a triangular appearance, 0.4 cm long, 0.23 cm wide, 0.04 cm at the base when viewed in profile, **lip;** cream white with pale yellow densely marked on the veins inside the hypocotyl, forward 2.7 cm long in flattened position, 1.0 cm wide, oblong, resembling a boxing glove with closed fist, 2.0 cm long in its natural whole shape, the inflated rounded apex bent inward, forming a pouch, the cavity is crossed by seven branched veins, ending in serrated margins, rib-shaped seen from the outside, **the hypochyle;** rhombic hypochyle, white turning light brown at the inner apex, with rounded marginal angles cleft centrally, the concave base articulated at the foot of the **column;** semi-arched greenish becoming white at the base, adaxial surface 0.5 cm long, 0.2 cm diameter, winged, semi-concave from base to apex, stigmatic cavity oval vertically, anther hood cuculate, apical margin fimbriate, white foot fused to the column forming an "L" in lateral view, a pair of yellow pollinia, **ovary;** hexamer, 0.9 cm long, 0.4 cm diam, narrowly arched at base, covered by an acuminate bract at apex truncate at base 1.7 cm long, 0.4 cm wide, **fruit;** not seen.

**DISTRIBUTION:** *Dracula chimaera f. klisiocheilos* is distributed in northwestern Ecuador in the province of Carchi.

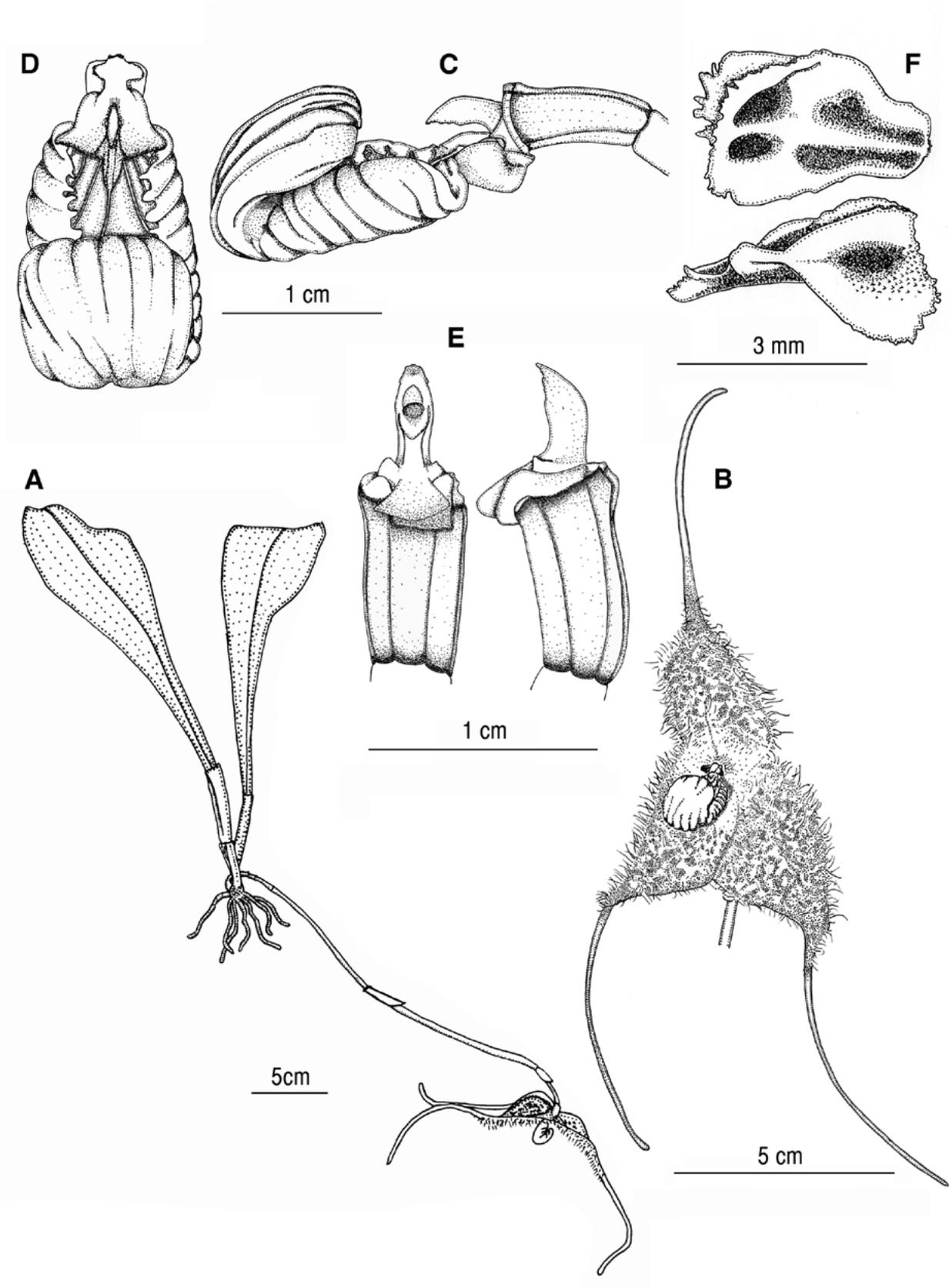
**PHENOLOGY:** In cultivation the plant flowers sporadically between January, April, October and December.

**HABITAT AND ECOLOGY:** It is generally found growing in primary forests among the branches of small vegetation under the canopy of trees, always with high humidity at an altitude between 1900 m.

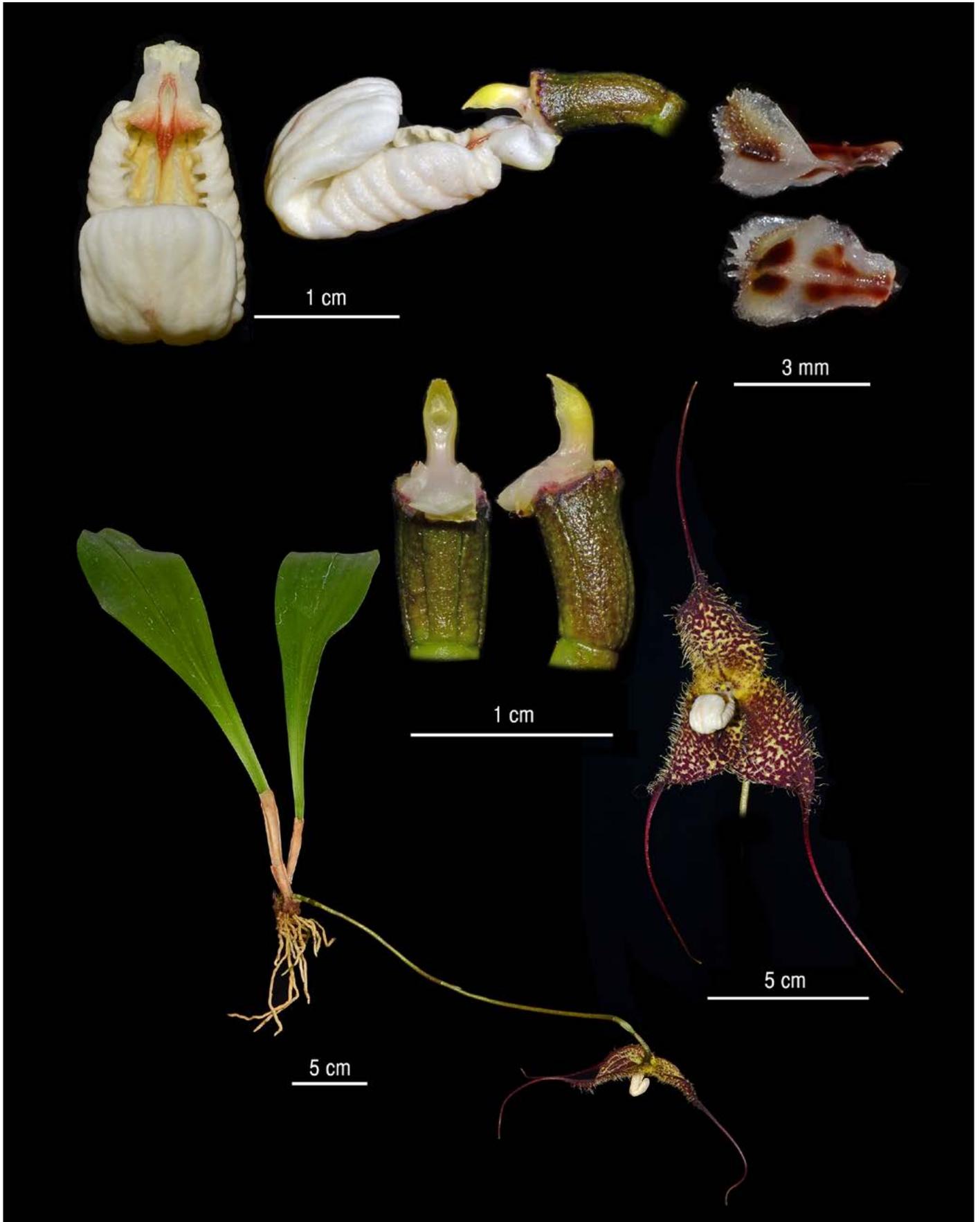
## DISCUSSION:

*Dracula chimaera f. klisiocheilos* is apparently a phenotype of *Dracula chimaera* with a completely serrated lip, flowering behavior has been monitored for some years, expecting variation in the unusual shape of the lip, since in some cases in other nurseries it has been noted that the same *Dracula chimaera* is shown with a semi-closed lip, varying the behavior in the next blooms. In the case of the species described here there is no such variation.

**ACKNOWLEDGEMENTS:** we would like to thank Dr. Gary Meyer for their insightful comments on this new strain of *Dracula*.



**Figure 4.** *Dracula chimaera* f. *klisiocheilos* H.Medina & José Portilla et al. **A.** Habit, **B.** Flower three quarter view, **C.** Column and lip, side view, **D.** Lip front view, **E.** Column, ventral and lateral view, **F.** petals front and back view, Illustration of the plant that served as holotype, by Hugo Medina.



**Figure 5.** *PDracula chimaera* f. *klisiocheilos*, Medina et al. Prepared sheet of the plant that served as holotype, by H. Medina.



**Figure 6** *Dracula chimaera* f. *klisiocheilos*, front and three-quarter view, photographed by Hugo Medina



**Figure 7** *Dracula chimaera* (Rchb. f.) Luer, plant used for the comparison of the variety, photographed by Hugo Medina.

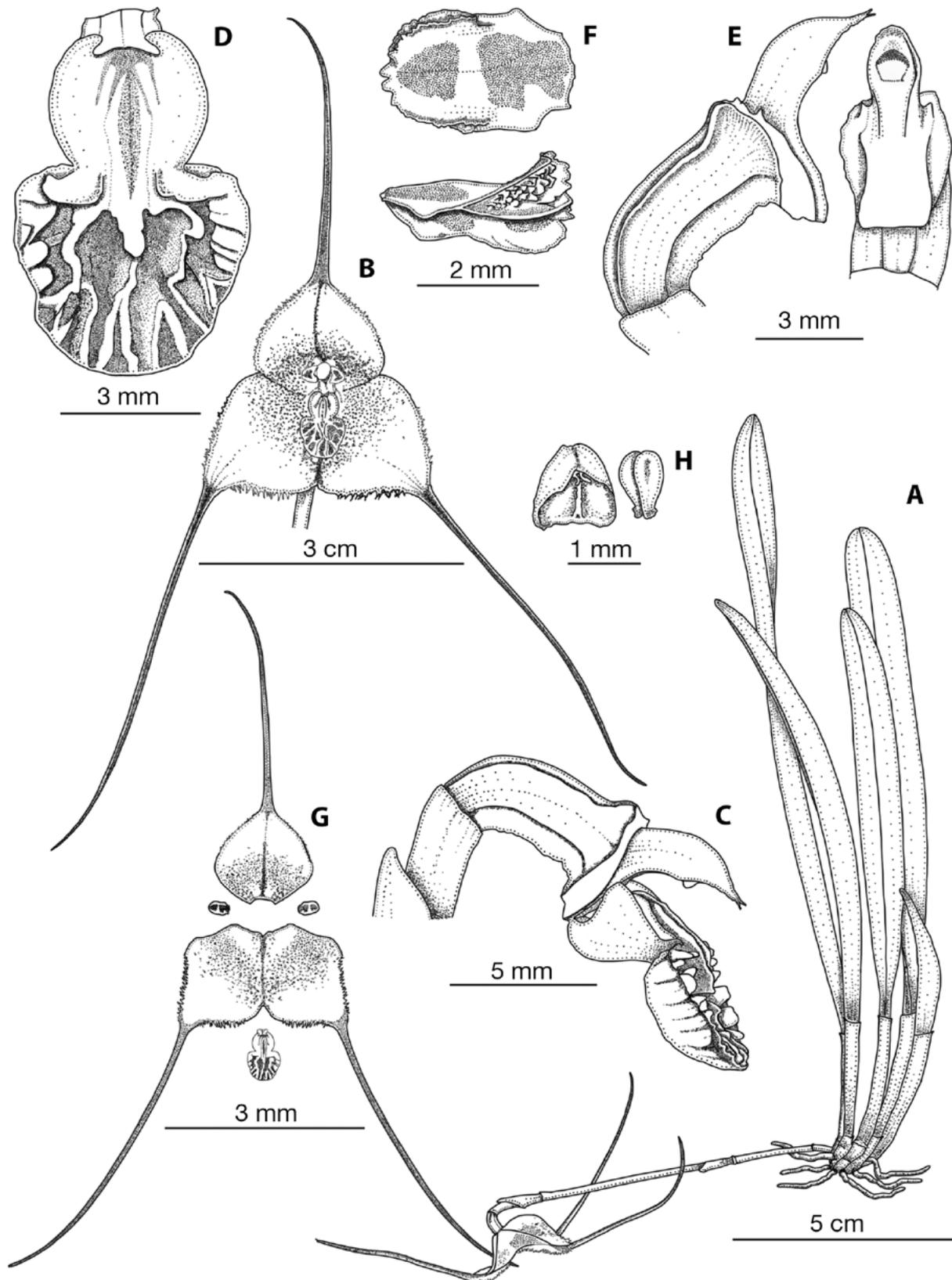
**Taxonomy:** *Dracula x ruizii* H. Medina, José Portilla A, Doucette & Saul Ruiz sp. nov.

**Type:** Perú. No collection data, acquired from Peruflorea at a show in USA, flowered in cultivation at Ecuagenera, Gualaceo. EG-0420 (holotipo: HA). Figs. 1 - 4

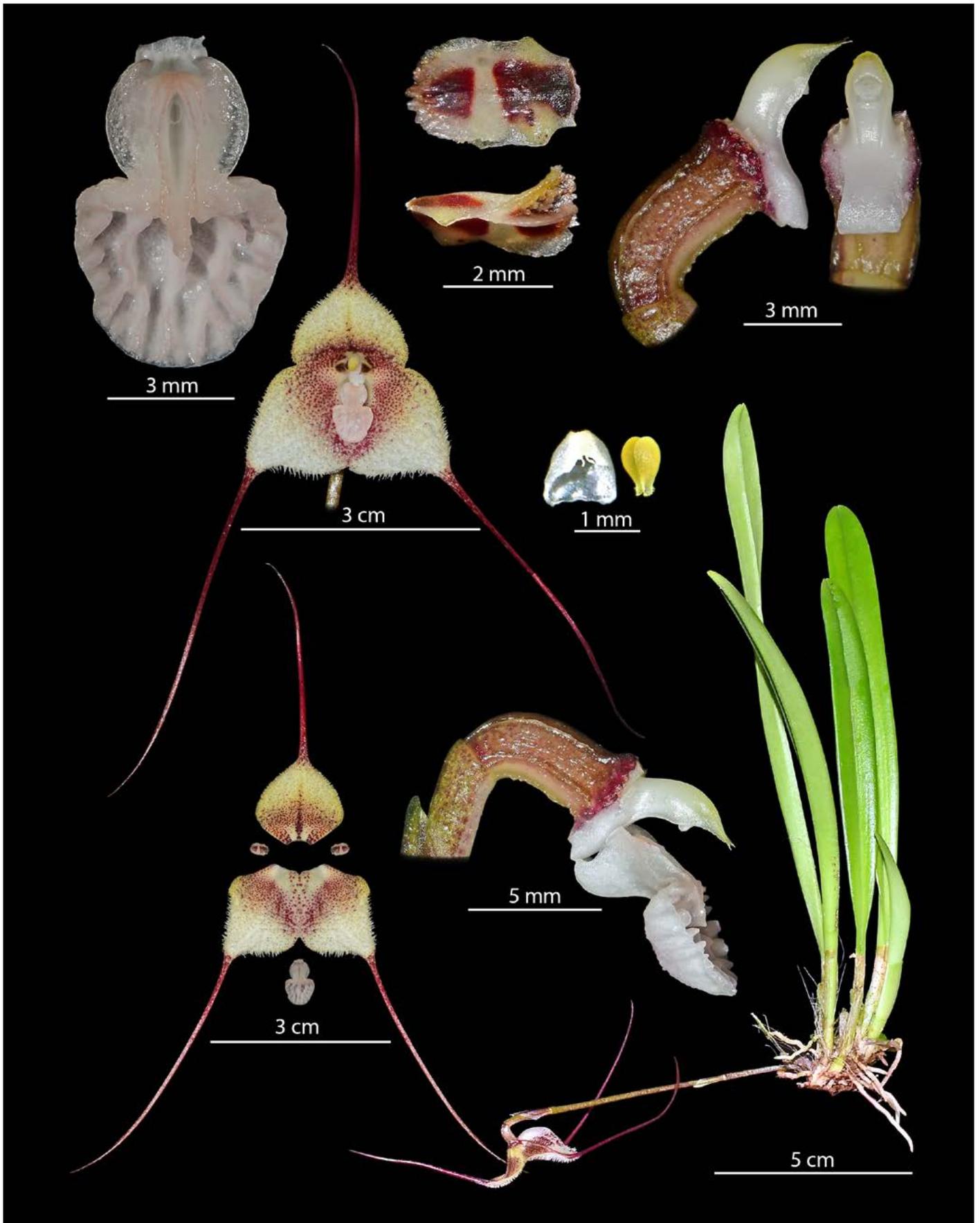
**Diagnosis:** *Species hybrida naturalis, ex Dracula saulii Luer & Sijm × Drac denisiana Luer, sed agnoscitur per flores albas, sepala crassa et copiosa villositate oblecta, incluso marginibus, versus basin maculis fuscis conspersa, caudis rubris.*

The new species was acquired at a show in the USA, coming from the Peruflorea cultivation, through communication with the selling agent it was known that this species is a natural hybrid, it shares the habitat with *Drac. saulii* Luer & Sijm and *Drac. deniseana* Luer, of which it shows divided characters, however, in the coloration of the flowers *Drac. deniseana* predominates.

**Description:** Plants erect, herbaceous, epiphytes under 20 cm tall; roots whitish, with a yellow-green tip, filiform, 1.0–1.2 mm in diameter; stems semiterete, erect, 26.3–29.4 mm long, 2.5–3.2 mm wide, enveloped by 2–3, papery, laterally compressed sheaths, 3.3–19.0 mm long, 2.8–3.9 mm wide; leaf coriaceous, oblong, obtuse, sessile, entire, 93.2–141.0 mm long, 9.0–11.4 mm wide; inflorescence a solitary, nutant flower, peduncle terete, 66.8 mm long, 1.8 mm in diameter, enveloped by membranous, tubular, acute, truncate bracts, 8.3–10.6 mm long, 2.1–3.0 mm wide; pedicel terete, 11.4 mm long, 1.6 mm in diameter; ovary terete, 5.2 mm long, 2.7 mm in diameter, fruit not seen; flowers without a detectable odor; dorsal sepal cream, spotted with brown below the middle, densely pubescent, 3-veined, 13.7 mm long, 14.7 mm wide, the apex contracted into a reddish purple tail, 33.2 mm long, 1.0 mm wide; lateral sepals similar in color to the dorsal sepal, fused for about half their length with a shallow mentum filled with purple-brown tubercles, 17.2 mm long, 14.5 mm wide, contracted into tails similar to those of the dorsal sepal, 44.5 mm long, 0.8 mm wide; petals beige suffused with purple-brown, oblong, bivalvate, filled with tubercles between the lamina, the apices erose with low angular margins below the middle, 3.1 mm long, 2.0 mm wide; lip pandurate, loosely hinged to the base of the column foot, pandurate, whitish suffused with pink, 7.6 mm long, the hypochile round, cleft, the base concave, 4.0 mm long, 4.8 mm wide, the epichile, subreniform-semicircular, concave, filled with low radiating crests terminating in short teeth along the margin, 2.8 mm long, 3.4 mm wide; column



**Figure 8.** *Dracula x ruizii* H.Medina & José Portilla et al. **A.** Habit, **B.** Flower frontal view, **C.** Column and lip, side view, **D.** Lip front view, **E.** Column, ventral and lateral view, **F.** petals front and back view, **G.** Dissected flower, **H.** Anther and pollinia. Illustration of the plant that served as holotype, by Hugo Medina.



**Figure 9.** *Dracula x ruizii*, Medina et al. Prepared sheet of the plant that served as holotype, by H. Medina.



**Figure 10** A. *Dracula saulii*, B. *Dracula deniseana*, parents of *Dracula x ruizii*, photo by Hugo Medina



**Figure 11** *Dracula x ruizii*, natural hybrid front view, photographed by Hugo Medina

whitish, suffused with yellow towards the membranous, erose apex, semiterete, 4.0 mm long, 1.5 mm wide, with a ventral, cream, cucullate anther cap, 1.0 mm long, 1.0 mm wide, housing two ovoid, laterally compressed pollinia terminating in short caudae, 0.9 mm long, 0.4 mm wide.

**Etymology:** Named after Saul Ruiz from Lima Peru, collector and grower of the species in Peruflora.

**Distribution:** *Dracula x ruizii*, Perú Western South América.

**Phenology:** In cultivation, the plant flowers sporadically from February to July.

**Discussion:** *Dracula x ruizii*, is compared with *Dracula deniseana* Luer, where it differs basically in the coloration of the yellow-whitish petals and sepals with reddish macules basically towards the base, dense and elongated hairs vs. petals and sepals more brown than white with short hairs in *Dracula deniseana* Luer.

#### Literature Cited

Calderón Sáenz, E & J. C. Farfán Camargo 2003. Species of the genera *Dracula* and *Masdevallia* (Orchidaceae) in Colombia Biota Colomb. 4(2): 187-201

Dracula-species. <https://www.dracula-species.eu/list.html>, accessed mayo 26, 2025.

Luer, C. 1978 *Dracula* a new genus in the *Pleurothallidinae*, Selbyana 2: 190-198

Luer, C. 1993. Monographs In Systematic Botany from the Missouri Botanical Garden vol. 46, p1

Ministry of Environment (MAE). 2016. Scientific Research Authorization No. 004-016-IC-FLO-FLO-DNB/MA for the Rescue, Conservation, Reproduction and Ex Situ Management of the Flora of Ecuador. Documento Oficial. Unpublished. Quito - Ecuador.

Pupulin, et al 2009. *Draculas* del Ecuador, Orchid Research Center of the Andes "Ángel Andreetta", p11

World Checklist of Selected Plant Families (WCSP). Facilitated by the Royal Botanical Gardens, Kew. wcsv. Science.kew. Accessed mayo 26, 2025

<https://wcsp.science.kew.org/qsearch.do>

Ruiz, S. 2024. Personal communication

## THREE NEW SPECIES OF ACIANTHERA, (ORCHIDACEAE PLEUROTHALLININAE) FROM SOUTH EASTERN ECUADOR

Hugo Medina<sup>1</sup> & José Portilla<sup>1</sup>

**ABSTRACT:** three new species of *Acianthera* (*Pleurothallidinae* *Orchidaceae*) *Acianthera equatoriana*, *Acianthera medinae* *Acianthera mirendana*, are described from material gathered under the research permit "Rescate, conservación, reproducción y manejo ex situ de la flora del Ecuador," No. 004-2016-IC-FLO-DNB/MA, authorized by the Ministerio del Ambiente of Ecuador under, La Codificación a la ley Forestal y de Conservación de Áreas Naturales y Vida Silvestre, granted to Ecuagenera Cia. Ltda. The new species described here are compared with; *Acianthera litensis* (Luer & Hirtz) Luer, *Acianthera geminicaulina* (Ames) Pridgeon & M.W.Chase, *Acianthera sandaliorum* G.A.Romero & Carnevali.

**KEYWORDS:** Ecuadorian orchids, new species of *Acianthera*, miniature epiphytes, intermediate growing orchids, discovered by Ecuagenera.

### INTRODUCTION:

The Belgian botanist Michael Joseph François Scheidweiler (1799-1861) described *Acianthera* in 1842, for a species with connivent sepals, connate laterals and a galeate dorsal sepal with dilated apex, an articulated labellum with winged column, two pollinia and a pointed anther. The generic name derives from the Greek roots *akis* (tip) and *anthera* (anther), in reference to the morphology of the latter. The type species is *Acianthera punctata* Scheidw., based on a Brazilian plant with ovate, obtuse, glaucous leaves and hairy sepals on the outside and purple spots on the inside.

The type specimen of *A. punctata* has not been located, and Luer (1986) considered it synonymous with *Pleurothallis recurva* Lindl. (described in 1841 without precise locality but presumably from Brazil). Therefore, *A. punctata* was neotyped with *P. recurva* (Luer, 1986). In 1859, John Lindley transferred *Acianthera* to *Pleurothallis*, creating *P. acianthera* Lindl. as the epithet *punctata* was previously occupied by another species of *Pleurothallis* described by Ker Gawler in 1823 (now in *Notylia* Lindl.). Thus, the genus *Acianthera* remained without nomenclatural recognition for more than a century.

Carlyle A. Luer revived the name *Acianthera* as a subgenus of

*Pleurothallis* in 1986, to group species with fleshy flowers, connate lateral sepals, and terminal inflorescence habits. Based on molecular phylogenetic analyses (Pridgeon et al. 2001; Pridgeon & Chase, 2001), it was again given generic rank. According to this delimitation, *Acianthera* comprises about 220 species distributed from Mexico to Argentina, Uruguay and the Antilles, growing as epiphytes or lithophytes in humid or cloud forests between 250 and more than 2500 m a.s.l. (Pridgeon, 2005).

Luer (2002, 2004) recognized the morphological closeness of *Acianthera* to other infrageneric taxa of *Pleurothallis* and pointed out the presence of intermediate forms, which led him to maintain it as a subgenus. In his 2004 revision, Luer excluded from *Acianthera* some groups such as *Brenesia*, *Sarracenella*, and species such as *P. oscitans*, *P. aberrans* and *P. lepidota*, considering them sufficiently distinct. However, in the same year (2004b), he accepted the segregation of *Acianthera* as a genus, published 64 new combinations, granted generic rank to *Didactylus*, *Aberrantia* and *Unguella* Luer, and resurrected *Brenesia* Schltr.

To date, approximately 65 species have been documented in Ecuador and continue to be described (Zambrano-Romero & Solano 2019). In this work we present three new species for orchidaceae flora of Ecuador.

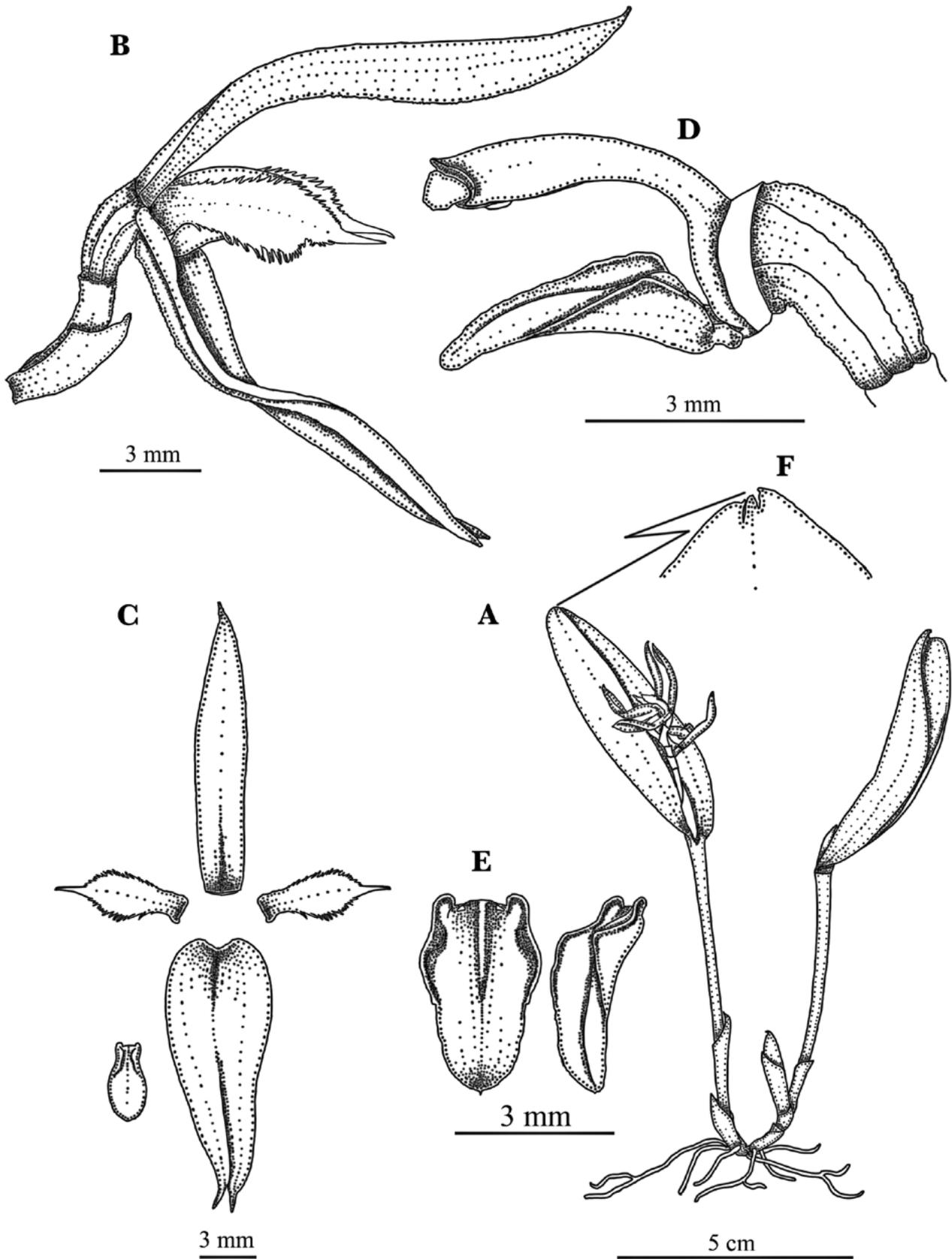
**Taxonomy:** *Acianthera equatoriana* H.Medina, J.Portilla *sp. nov.*

**Type:** ECUADOR. Morona Santiago: Macas canton, along the road from Macas to Guamote, near the Abanico river, 2°16'24.20" S 78°12'32.05" W, ca. 1600 m. grows in primary forest, cultivated in the collection of Ecuagenera Gualaceo 2024 EG 0424 (holotype: HA). Fig. 1–3. Fig. 2 A–B.

**Diagnosis:** *Species nova similis est Acianthera geminicaulina* (Ames) Pridgeon & M.W.Chase. *sed fundamentaliter differt planta foliis viridibus floribusque luteis*

### DESCRIPTION

**Epiphytic plant**, rhizomatous, stems erect to semi-horizontal, 9.0-13.0 cm long; **roots** branched, filiform, slender, greenish-white, 8.0-10.0 cm long, 0.07-0.09 cm diameter; **rhizomes** short 0.4-0.6 cm long, 0.25-0.3 cm diameter, covered by a translucent bract with purple macules, 0.74 cm long, 0.6 cm diameter; **ramicaules** green turning brown when old, erect to horizontal, terete, trichete, canaliculate, slightly thickened towards the apex, 3.5-6.5 cm long, 0.2-0.3 cm diameter, covered by two



**Figure. 1.** *Acianthera equatoriana* H.Medina et al. **A.** Habit. **B.** Three quarter profile of the flower. **C.** Dissected perianth. **D.** Detail of the column and lip profile view. **E.** Lip front and profile view. **F.** Detail of leaf apex, drawing by Hugo Medina.

translucent spathaceous sheaths with purple macules when young, 1.4-3 cm long, 0.6-1.0 cm wide, apex acuminate, base truncate; **yellowish-green leaf** color, marked with brownish hue, noticeable on the margin and underside, sessile, coriaceous, fleshy, elliptic, entire margin, slightly convex, acute apex, emarginate-mucronate, cuneate base, 4.8-7.3 cm long, 1.2-3.2 cm wide; **racemose inflorescence** on the leaf producing up to five floral branches, appearing at the apical part of the ramicaule, with 3 flowers opening simultaneously, 2.5 cm long including the peduncle without taking into account the flowers, 3.64 cm long including the flowers; **peduncle** cylindrical pubescent, 1.4-1.7 cm long, 0.08-0.1 cm diameter, covered especially the base by two bracts hyaline, 0.58 cm long, 0.45 cm wide, which in turn are covered by another bract hyaline, with purple maculae, 1.2 cm long, 0.5 cm wide; **pedicel** cylindrical pubescent, 0.34-0.4 long, 0.08 cm diameter, with campanulate floral bracts, translucent, 0.34 cm long, 0.3 cm wide, apex acuminate, base truncate; **ovary** pubescent, green to reddish, hexamerous, 0.3 cm long, 0.15 cm diameter; **flowers** pale yellow, odorless, appearing in clusters of three, 2-0.6 cm diam; **dorsal sepal** pale yellow, slightly concave, ensiform, margin entire, narrowly pubescent at base posteriorly acuminate apex, base truncate 1.5 cm long, 0.3 cm wide; **lateral sepals** pale yellow, oblanceolate, margin entire, barely pubescent at the posterior base, abruptly connate, barely separated at the apex, 1.4 cm long, 0.5 cm wide near the base, 0.15 cm wide near the apex, caudae, 0.14 cm long, 0.03 cm wide; **petals** translucent pale yellow, positioned abraded on lip and column until joined at apex with each other, transversely divided by a yellowish rib, lanceolate, slightly concave toward apex, margin fimbriate distally, 0.6 cm, long, 0.2 cm wide at center, 0.14 cm at base forming a 0.1 cm collar, apex caudate, base truncate;

**lip** ovate, yellow turning orange at the base, slightly fleshy semi-glossy, margin entire, apex rounded with a central apiculus, base truncate, 0.4 cm long, 0.18 cm wide, with wings 0.03 cm wide appearing from the base widening at the hypocotyl; **column**: greenish-white, slender, arched towards the base, apex winged-toothed 0.4 cm long, 0.08, foot 0.14 cm long, 0.14 cm wide; unseen **seed**

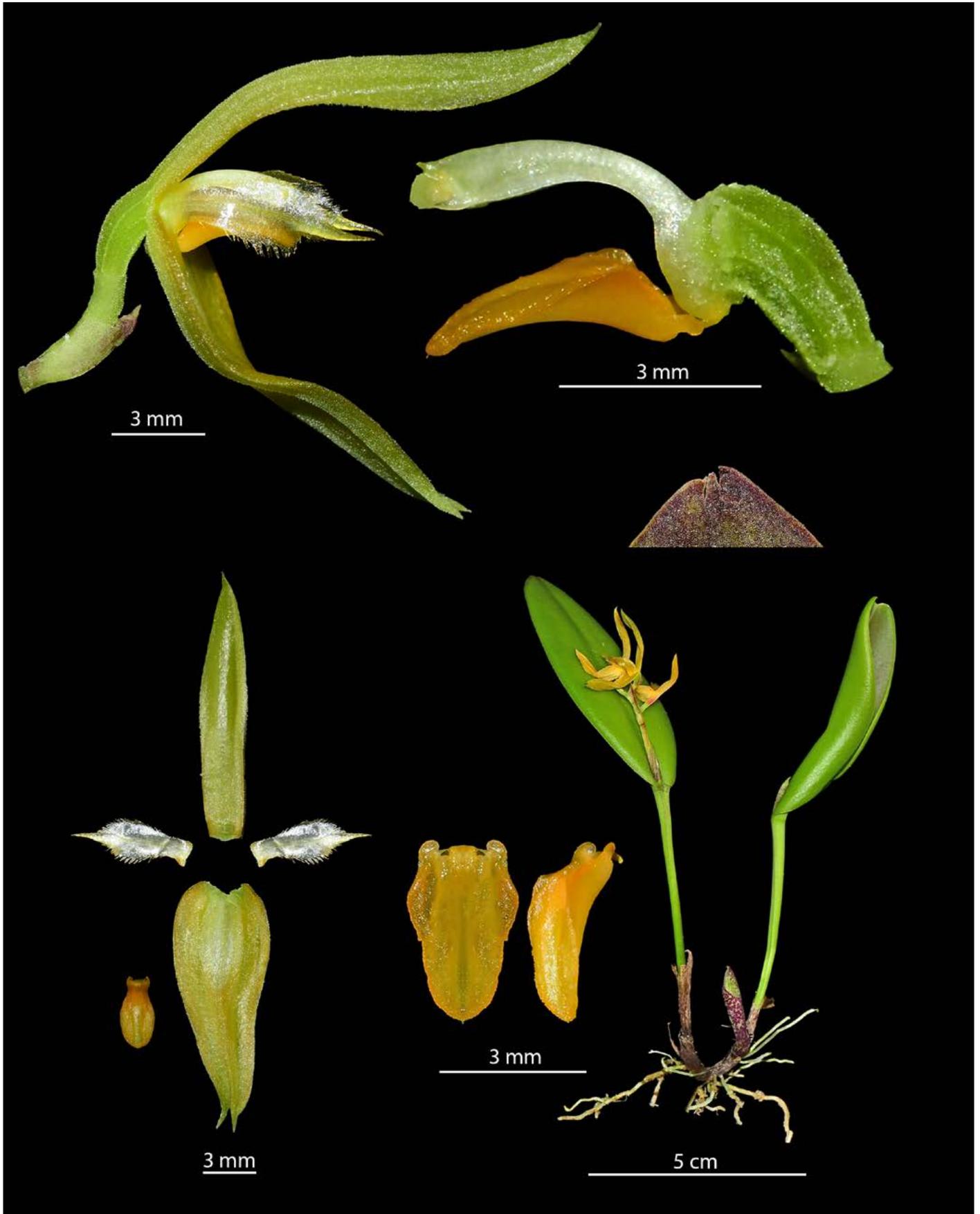
**Etymology:** named after Ecuador, country of origin of this species.

**Distribution:** Known from Ecuador, Morona Santiago province, Macas canton.

**Phenology:** bloom sporadically from May to August.



**Figure 2.** Comparison of the new species. **A.** *Acianthera equatoriana*, **B.** *Acianthera geminicaulina* (Ames) Pridgeon & M.W. Chase. photographed by H. Medina.



**Figure. 3.** *Acianthera equatoriana* Medina et al. Prepared sheet of the plant that server as holotype, by Hugo Medina.

**Habitat and ecology:** It grows epiphytic in primary, tropical forests, under the canopy of trees on

**Discussion:** The new species resembles *A. geminicaulina* (Ames) Pridgeon & M.W.Chase. basically, differs in coloration of flowers entirely yellow, lip dark yellow, (vs yellowish to light brown flowers, lip brown), dorsal sepal noticeably longer 1.5 cm long (vs. shorter dorsal sepal 1 cm long), yellow petals barely translucent, longer than broad fimbriate margin, apex narrowly acuminate, with a small wing at base, (vs. broad yellow-brown petals, margin with short fimbriae acuminate apex non-winged base, in *Acianthera geminicaulina*).

**Taxonomy:** *Acianthera medinae* J.Portilla & H.Medina *sp. nov.*

**Type:** ECUADOR. Morona Santiago, Macas canton, left bank of the Upano river, 2°10'41.09" S 78°05'45.16" O, ca. 1100 m. flourished in cultivation in Ecuagenera Gualaceo 2024, EG 0430 holotype: HA). Fig. 4–5. Fig. 6 A–B.

**Diagnosis:** Species nova similis *Acianthera sandaliorum*, floribus viridibus-luteis maculis brunneis ornatis, sepalo dorsali aperto, columna ala apicali et labello alato, petalis ellipticis paene concavis.

**Description:** **herb;** epiphytic, rhizomatous, erect, 10.0–15 cm long; **rhizome** short cylindrical, 0.33–1.0 cm long, 0.27 cm diameter, covered by three papyraceous bracts 0.48–0.7 cm long, 0.27–0.3 cm wide, for every three rhizomes arises a new stem; **roots** flexuous, whitish, appearing on each rhizome, 4.0–10.0 cm long, 0.15 cm in diameter; stem, erect, triquetrous semi-flattened, grooved, wider towards the leaves, 3.37–9.18 cm long, 0.26–0.35 cm diameter, covered by two papyraceous sheaths, tubular narrower at the base, 1.3–2.58 cm long, 0.8–1.16 cm in diameter; **leaf**, blade, lamina green, suborbicular, coriaceous, glabrous, margin entire, marked with slightly impressed midrib, accompanied by vertical veins, 5.0–7.54 cm long, 3.0–5.16 cm wide, apex emarginate, base cordate abrading petiole; **inflorescence**, successively developing racemose, reclining on the adaxial surface of the lamina, developing from the apex of the petiole, ca. 3.0 cm long, surrounded at the base by a semi-campanulate green bract 0.9 cm long, 0.7 cm wide; **peduncle** cylindrical, 0.85 cm long, 0.01 cm diameter; **pedicels**, short, 0.4 cm long, 0.1, covered by a bract 0.50–0.56 cm long, 0.52–0.54 cm wide; **ovary**, green, cylindrical, hexamerous, in cross section, slightly thickened towards the column 0.14 cm long, 0.09 cm diameter, **flowers**, greenish-yellow with

brown macules, odorless, produces eight appressed to the raceme, two open simultaneously, ca. 0.12–0.4 cm diameter; **dorsal sepal**, green, yellowish with brown macules at base, fleshy, thickened at apex, linear spatulate, narrowly concave proximally, apex, obtuse, base truncate, with a conspicuous midrib on underside, margin entire, 0.9 cm long, 0.3 cm wide; **lateral sepals**, green with narrow brown mottling, narrowly maculate, accentuated at base, connate proximally, forming a concave synsepal and convex distally, fleshy, elliptic-ovate, bipartite, divided by a conspicuous midrib on the underside, apex apiculate, ca. 0.7 cm long, 0.3 cm wide; **petals**, yellowish green with spaced brown macules, elliptic, slightly concave towards the apex abrading the column, margin crenulate, distally, divided in the middle with a greenish rib, 0.5 long, 0.03 cm wide; **labellum**, reddish-brown, brown on discal part towards apex, turning almost black at base, slightly fleshy, ovate conduplicate, obtuse apex, base truncate, margin winged, narrowly deflexed towards base, 0.3 cm long, 0.16 cm wide; **column** yellowish-green, slender, arching toward base, narrowly crenulate 0.34 cm long, 0.054 cm diameter, 0.1 cm on winged part, foot brown 0.1 cm long, 0.09 cm wide, with winged apex 0.05 cm wide; **capsule**: not seen.

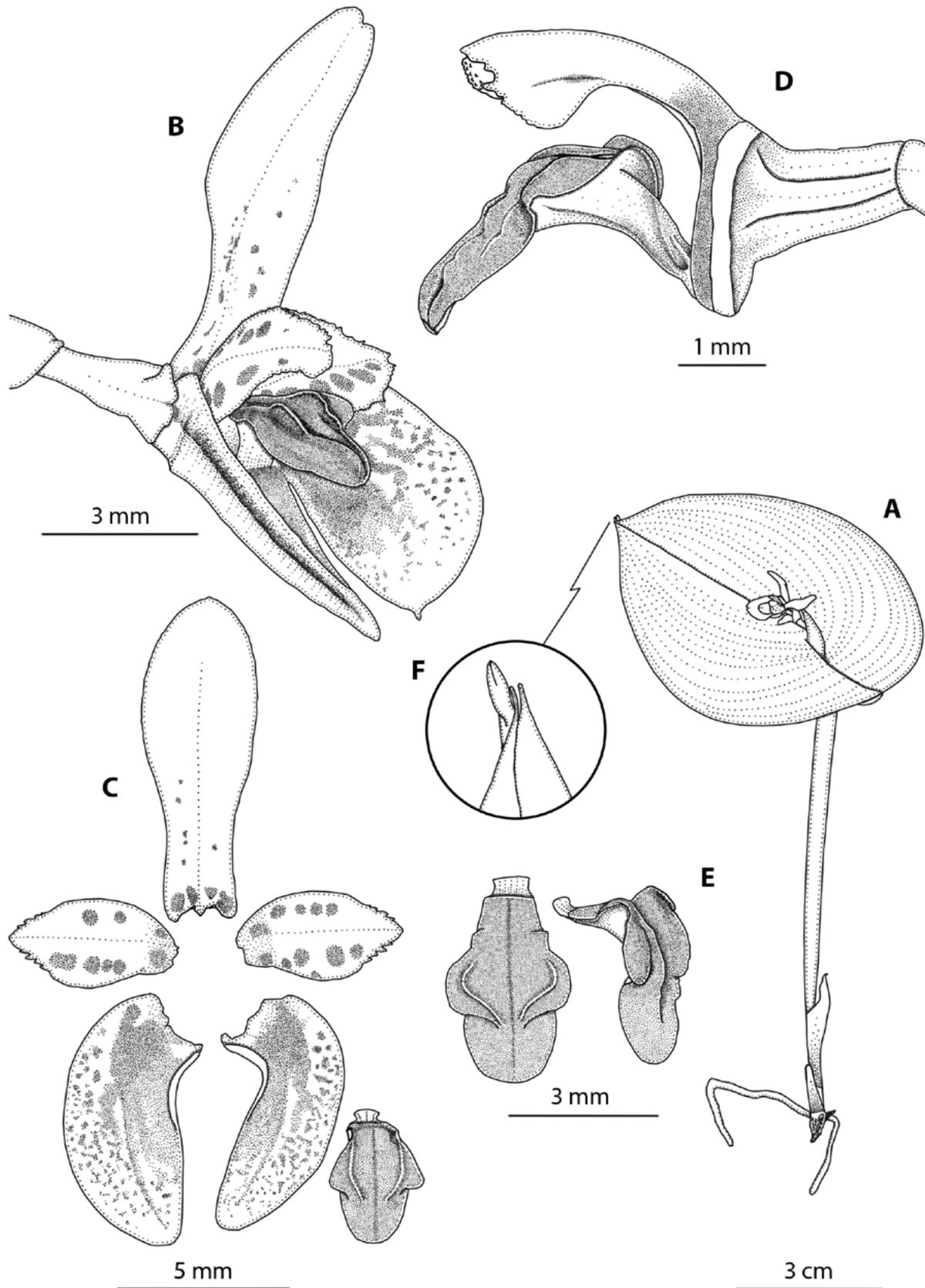
**Etymology:** Named to honor Hugo Medina of Ecuador, a botanist and researcher at Ecuagenera.

**Distribution:** Known from Ecuador, Morona Santiago province, Macas canton, left bank of the Upano river.

**Phenology:** bloom sporadically from May to July.

**Habitat and ecology:** It grows epiphytic in secondary, tropical forests, under the canopy of small trees on.

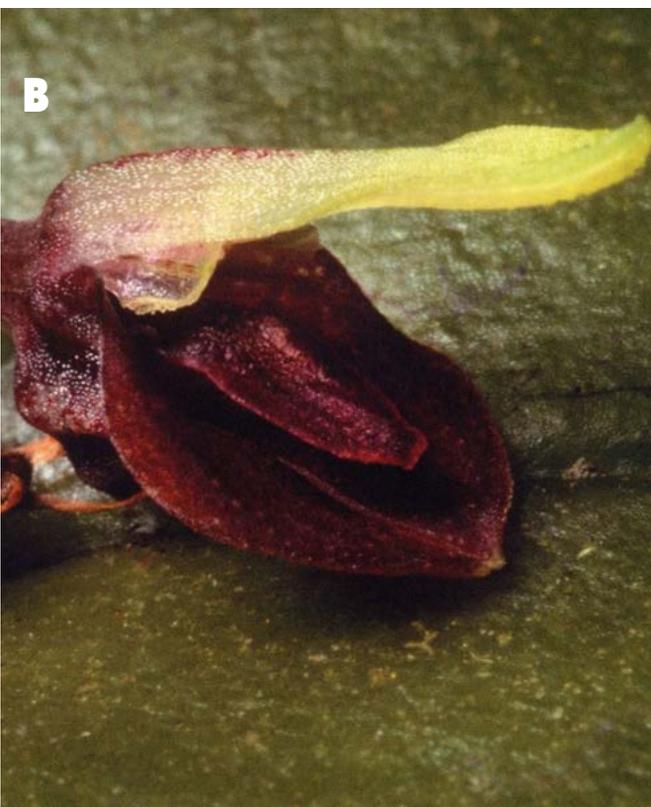
**Discussion:** The new species is similar to *Acianthera sandaliorum* (G.A.Romero & Carnevali) Luer, but differs by yellowish green flowers with brownish maculae, (vs. reddish flowers), open dorsal sepal, column with apical wing and winged lip, elliptic petals just concave, vs. semiserrate dorsal sepal, column without wing at the apical, lip just winged at the base, petals blunt.



**Figure. 4.** *Acianthera medinae* J.Portilla et al. **A.** Habit. **B.** Three quarter profile of the flower. **C.** Dissected perianth. **D.** Detail of the column and lip profile view. **E.** front and profile view of the lip. **F.** Detail of leaf apex, drawing by Daniela Tacuri.



**Figure. 5.** *Acianthera medinae* Portilla et al. Prepared sheet of the plant that served as holotype, by Daniela Tacuri.



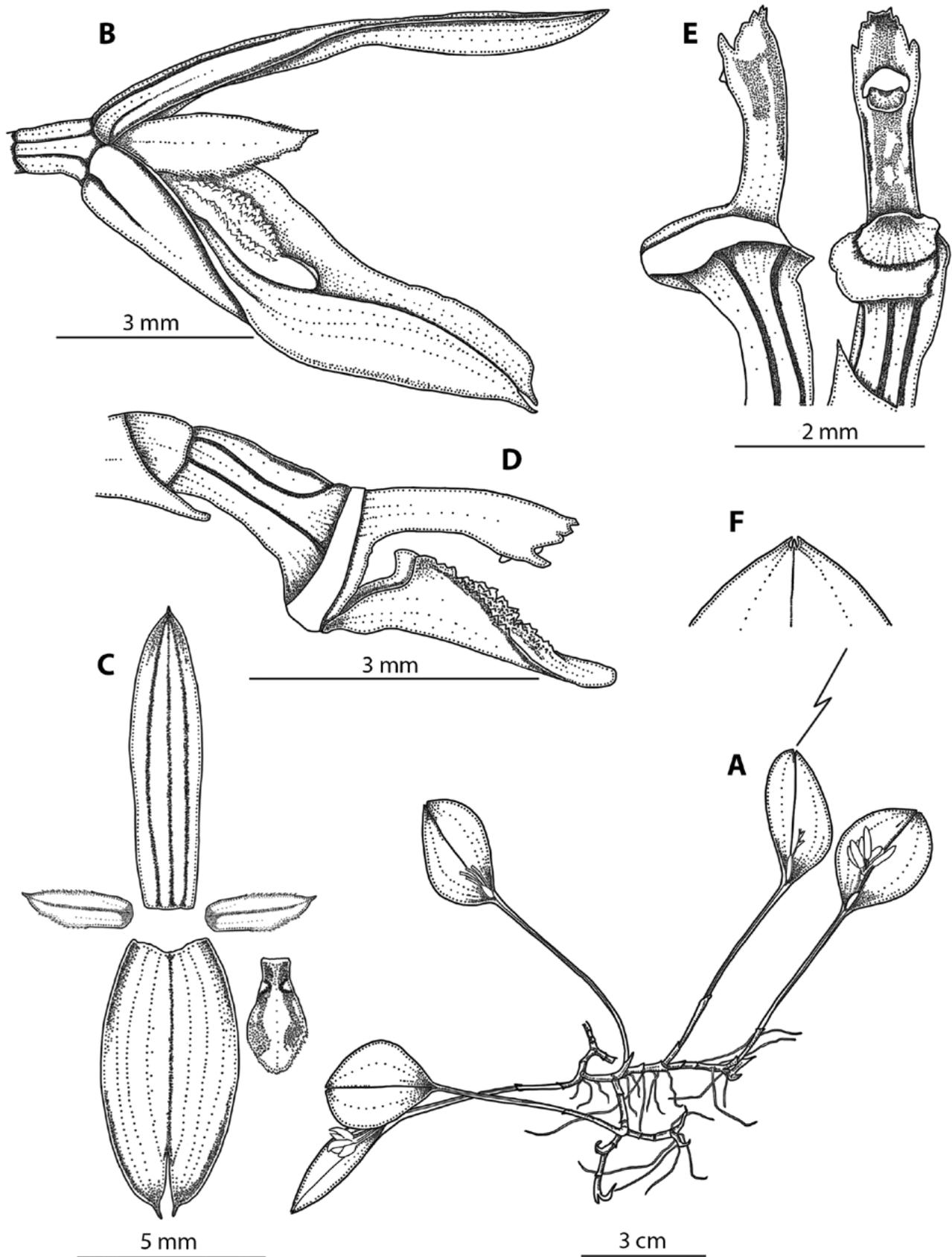
**Figure 6.** Comparison of the new species. **A.** *Acianthera medinae*, photographed by H. Medina. **B.** *Acianthera sandaliorum* (G.A.Romero & Carnevali) Luer. Photo obtained from the KEW, courtesy of Gustavo Romero.

**Taxonomy:** *Acianthera mirendana* H.Medina, J.Portilla *sp. nov.*

**Type:** ECUADOR. Morona Santiago, Macas canton, left bank of the Upano river, 2°10'41.09" S 78°05'45.16" O, ca. 1100 m. flourished in cultivation in Ecuagenera Gualaceo 2024, EG 0430 holotype: HA). Fig. 7–9. Fig. 8 A–B.

**Diagnosis:** *Species nova similis* *Acianthera litensis*, *sed colore florum multo obscurior in racemis trifloris, foliis ellipticis rubescentibus, ab Acianthera litensis foliis ovatis acutis differt.*

**Descripción:** **hierba:** herb: epiphytic, suddenly, erect 8–11 cm long; **rhizome** cylindrical, 0.2–0.6 cm long, 0.18 cm in diameter, covered by a papyraceous bract of 0.2–0.6 cm long, 0.36 cm diameter, for every two rhizomes a new stem emerges; whitish, flexuous roots that appear on each rhizome, 6–10.0 cm long, 0.4 cm in diameter; **Stem,** erect to horizontal, tricheter semi-flattened, ribbed, wider towards the leaves, 3.4–6.4 cm long, 0.15–0.2 cm diameter, covered by two narrower tubular sheaths at the base, 0.6–1.6 cm long, 0.3–0.4 cm diameter; **leaf,** blade, lamina green to reddish, elliptic, coriaceous-carnose, glabrous, margin entire, marked with slightly impressed midrib, 3.3–4.2 cm long, 2.0–2.6 cm wide, apex emarginate, base cuneate completely covering petiole; **inflorescence,** successively developing racemose, reclining on the adaxial surface of the lamina, developing from the apex of the petiole, ca. 2.0 cm long, surrounded at the base by a semi-campanulate bract 0.6 cm long, 0.46 cm wide; **peduncle** cylindrical, 0.65 cm long, 0.01 cm diameter; **pedicels,** very short, about 0.3 cm long, 0.06, diameter, covered by a bract 0.25–0.3 cm long, 0.2–0.24 cm wide; **ovario,** brown, cylindrical, hexamerous, in cross section, slightly thickened towards the column, 0.15 cm long, 0.08 cm diameter, **flowers,** brown, odorless, producing up to 8 appressed to raceme, ca. 0.6 cm long, 0.3 cm diameter lateral view, 0.5 cm front view; **dorsal sepal,** brown, accentuated at apex, fleshy, thickened at apex, linear spatulate, concave distally, apex, apiculate, base truncate, 3-nerved, margin entire, 0.8 cm long, 0.2 cm wide; **lateral sepals,** brownish, accentuated at apex, connate proximally and medially, forming a concave synsepal concave proximally and convex distally, fleshy, elliptic-ovate, bipartite, 7-nerved, not carinate, with apices apiculate, ca. 0.7 cm long, 0.3 cm wide; **petals,** translucent pinkish, lanceolate, slightly concave toward apex margin serrate, toward distal part, divided in the middle with a pinkish rib, 0.3 long, 0.08 cm wide, **labellum,** brown, yellow on the discal part towards the apex, slightly fleshy, oblong conduplicate, obtuse apex, truncate base, slightly toothed discal margin, prominent



**Figure 7.** *Acianthera mirendana* H.Medina et al. **A.** Habit. **B.** Three quarter profile of the flower. **C.** Dissected perianth. **D.** Detail of the column and lip profile view. **E.** Colum front and profile view. **F.** Detail of leaf apex, drawn by Hugo Medina

glands arranged from the margin of the mesochile, disappearing from the base towards the apex, 0.3 cm long, 0.16 cm wide; **column**: white-pinkish, slender, slightly arched, with winged-crenulate apex 0.23 cm long, 0.05 cm diam, foot 0.1 cm long, 0.08 cm wide; **capsule**: not seen.

**Etymology**: Named in honor of Marine Biologist, Tom Miranda, among the most relevant positions; curator at the Brooklyn Botanic Garden, curator at the Smithsonian Institution in Washington, D.C. For the past 14 years, Tom has contributed to ORCHIDS magazine and the Bulletin of the American Orchid Society, co-authored, along with two Kew scientists, The Book of Orchids.

**Distribution**: Known from Ecuador, Morona Santiago province, Along the Upano River

**Phenology**: bloom sporadically from January to May.



**Figure 8.** Comparison of the new species. **A.** *Acianthera miredana* photographed by H. Medina. **B.** *Acianthera litensis* (Luer & Hirtz) Luer. Photo obtained from the KEW, courtesy of Andreas Kaye.

**Habitat and ecology**: It grows epiphytic in secondary, tropical forests, under the canopy of the small trees

**Discussion**: The new species is similar to *Acianthera litensis* (Luer & Hirtz) Luer, it is distinguished by the plant with reddish elliptic leaves (vs plant with dark green oval leaves), dark reddish to almost black flowers (vs brown flowers), brownish brown oval elliptic sepals (vs translucent sepals with reddish lines in *Acianthera litensis*).

#### Literature Cited

Karremans, A. P., Bogarín, D., DíazMorales, M., Fernández, M., Osés, L., & Pupulin, F. 2016. Phylogenetic reassessment of *Acianthera* (Orchidaceae: Pleurothallidinae). *Harvard Papers in Botany*, 21(2), 171–187

Luer, C. A. 2002. A systematic method of classification of the Pleurothallidinae versus a strictly phylogenetic method. *Selbyana*, 23(1), 57–110.

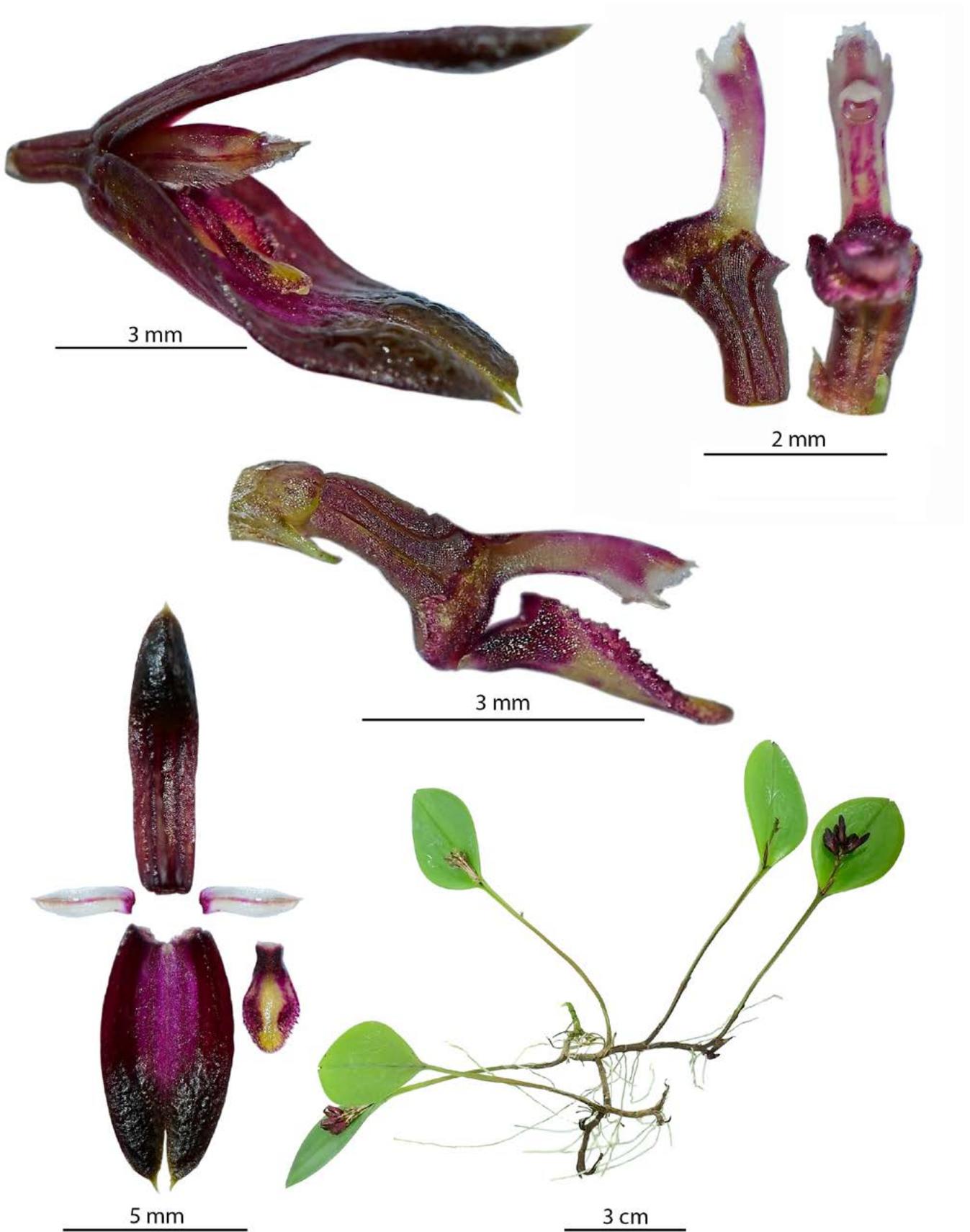
Luer, C. A. 2004. *Icones pleurothallidarum XXVI. Systematics of Pleurothallis subgenus Acianthera* (Orchidaceae); a second century of new species of *Stelis*; *Epibator*, *Ophidion*, *Zootrophion*. *Monographs in Systematic Botany from the Missouri Botanical Garden*, 95, p. 37 - p. 44-45 - p. 44-97 - p. 63

Otto, F., & Dietrich, A. 1856. *Allgemeine gartenzeitung*. Verlag der Nauck'sche Buchhandlung. vol. 24, p. 292-293

Pridgeon, A., Solano & R. Chase, M. (2001) phylogenetic relationships in pleurothallidinae (orchidaceae): combined evidence from nuclear and plastid DNA sequences. *American Journal of Botany*, vol 88(12) 2286-2308.

Pridgeon, A. M. 2005. *Acianthera*. En: Pridgeon, A. M.; Cribb, P. J.; Chase, M. W.; Rasmussen, F. N. (Eds.), *Genera Orchidacearum*. Vol. 4: Epidendroideae (Part One). Oxford University Press, pp. 328–331.

Zambrano Romero, B. J., & Solano, R. 2019. Two new pleurothallidinae (Orchidaceae) from southwestern Ecuador: I and *Lepanthes marioi*. *Phytotaxa* 422(3):255-272



**Figure 9.** *Acianthera mirendana* Medina et al. Prepared sheet of the plant its server as holotype, by Hugo Medina.

## Karma, Orchidaceae Pleurothaliidinae, One new species from southern Ecuador

Hugo Medina<sup>1</sup> & José Portilla<sup>1</sup>

**ABSTRACT;** A new species of *Karma*, (*Pleurothallidinae* Orchidaceae), *karma globosae* collected for the first time in the province of Loja, Ecuador, from material collected under the research permit "Rescue, conservation, reproduction and ex situ management of the flora of Ecuador," No. 004-2016-IC-FLO-FLO-DNB/MA, authorized by the Ministry of Environment of Ecuador under The Codification to the Forestry and Conservation of Natural Areas and Wildlife Law, granted to Ecuagenera Cia. Ltda.

**Keyword:** Ecuador, new specie, *Pleurothallidinae*, *Karma*, pendent plants, species described by Ecuagenera.

**INTRODUCTION:** Recent phylogenetic studies demonstrated the polyphyly of the genus *Trichosalpinx* as defined by Luer (1997) and Pridgeon (2005), evidencing the need to redefine generic concepts within this group (Bogarín et al., 2018, 2019). In particular, *Trichosalpinx subgen. Tubella* Luer turned out to be composed of species not directly related to *Trichosalpinx sensu stricto* (Bogarín et al., 2019). The type species, *Trichosalpinx acremona*, and other members of the genus, form a clade more closely related to *Anathallis*, although clearly distinguishable morphologically (Karremans, 2014; Pérez-Escobar et al., 2017; Bogarín et al., 2018). For this reason, *Tubella* (Luer) Archila was elevated to the generic level.

The taxonomic history of the genus *Tubella* has been problematic, especially due to editorial irregularities in the *Revista Guatemalensis* (Govaerts et al., 2022). Originally published as *Tubella* Archila (2000 [2009]:46), it explicitly cited as basonym *Trichosalpinx subgen. Tubella* Luer, which correctly established authority as *Tubella* (Luer) Archila. However, Archila subsequently republished the genus in 2014 [2015] without indicating basonym, citing the need to avoid previous misinterpretations and meet valid editorial criteria. In addition, irregularities in the actual dating of these publications were identified, further complicating their validity (Govaerts et al., 2022).

Additional generic names published in *Revista Guatemalensis*, such as *Xenia* Archila (2006), were found to be illegitimate because of homonymy with *Xenia* Gerbaulet (1992). Likewise, *Pseudolepanthes* Archila (2006) was invalidated because it lacked an explicitly designated type species. In addition, *Tubella* Archila (2006), despite meeting valid publication criteria according to the International

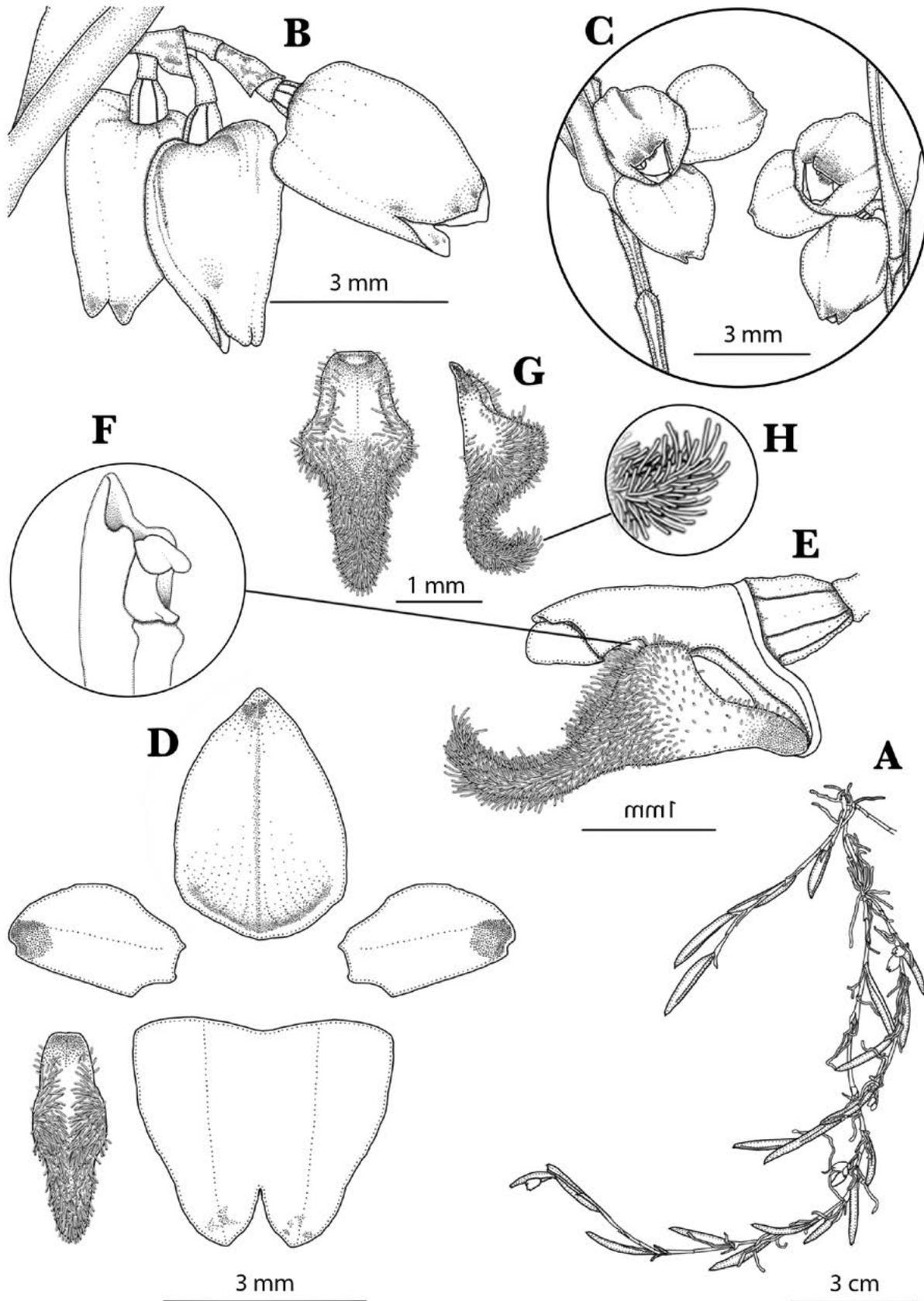
Code of Nomenclature (ICN), was already occupied for a genus of Gentianaceae since 2006, precluding its further use in Orchidaceae. Karremans A. proposes a new generic name (*Karma*), (First published in *Harvard Pap. Bot.* 28: 64 (2023), to replace the illegitimate name *Tubella* (Luer) Archila [2009].

**TAXONOMY:** *Karma globosae* H. Medina & J. Portilla sp.nov.

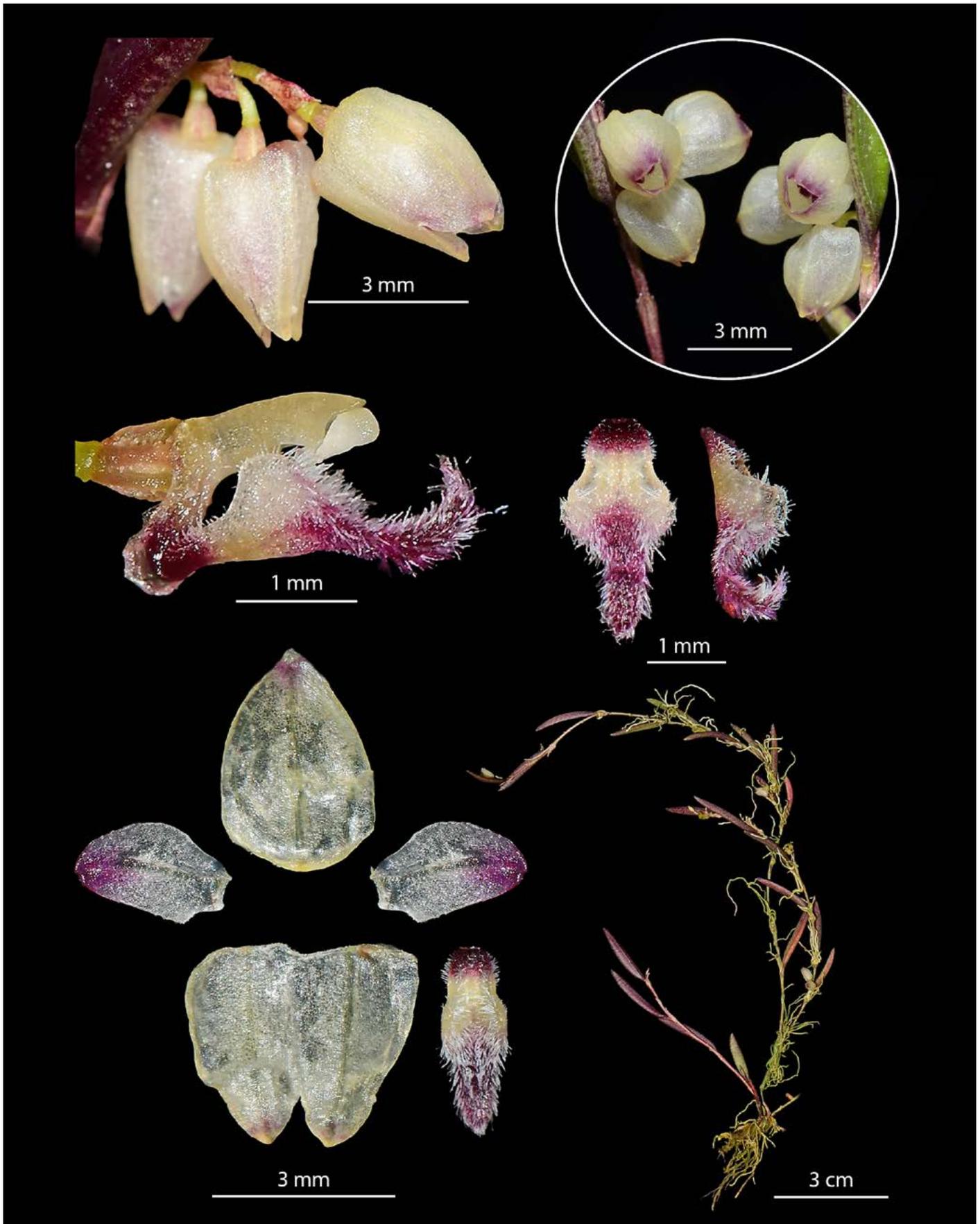
**TYPE: Ecuador.** Loja, Saraguro canton, along the road leading to the antennas 3°49'23.80" S 79°17'58.82" O, ca. 2850 m. flourished in cultivation in Ecuagenera Gualaceo, EG-0449, (holotipo: HA). 1-2. Fig. 3 A-B.

**DIAGNOSIS:** *Species nova characterizatur planta repente, floribus roseis globosis longioribus quam latioribus, labello piloso.*

**DESCRIPTION: Plant** small epiphyte, pendent, suddenly, rhizomatous, from 5.0–24.0 cm long; thin white **roots**, 0.4–10.0 cm long, 0.03 cm diameter; **ramicaules** pendent, slender, 1.0–4.0 cm long, 0.07 cm diameter, divided by 3 rings, covered by spathaceous sheaths, ciliate, narrow, cylindrical, apex acuminate, base truncate, 0.4–1.0 cm long, 0.2 cm diameter, from these appear up to 6 floating roots; **leaves**, linear, brown, glabrous, fleshy, leathery, apex acuminate, apiculate, 1.0–2.0 cm long including petiole, 0.2–0.3 cm wide, covered by a lepartiform, cylindrical bract 0.5–1.0 cm long, 0.2 cm diameter; **inflorescence** appears on leaf rachis, 0.6–1.0 cm long including peduncle, occurring at leaf base, 2–3 flowers open simultaneously, peduncle divided by two rings covered by a globose bract, brown spotted, 0.08–0.1 cm long, 0.08 cm diameter, apex acuminate, base truncate; **flower pedicels**, persistent, 0.13 cm long, 0.03 cm diameter with a basal bract acuminate apex truncate base 0.08 cm long, 0.04 cm wide; **flowers**, whitish, small, globose, odorless, longer than wide, 0.7–0.3 cm diameter; **dorsal sepal** pinkish white more colorful at apex, fused almost entirely with laterals, lanceolate, apex acute, base obtuse, margin entire, concave, glabrous, apex, 0.4 cm long, 0.3 cm wide; **lateral sepals** fused lanceolate, apex acute, base truncate, pinkish more marked at apex, 0.3 cm long, 0.4 cm wide; **petals** pinkish-purple apex, elliptic, elliptic, glabrous, asymmetrical, obtuse apex, base truncate, 0.25 cm long, 0.15 cm wide; **lip** rhomboid, purpure, winged whitish mesocylid, 0.3 cm long, 0.15 cm wide fully pilose; margin fimbriate, apex acuminate, deflexed towards column, base truncate; hypocotyl 0.06 cm wide, mesocotyl, 0.15 cm wide, epicotyl 0.04 wide; **column** slender,



**Figure. 1.** *Karma globosae* H.Medina et al. **A** Habit. **B - C.** profile and front view of the flowers. **D.** Dissected perianth. **E.** Detail of the column and lip profile view. **F.** column apex prolifere view. **G.** lip front and prolifere view **H.** lip apex detail. Illustration based on the plant that served as holotype, by Daniela Tacuri.



**Figure. 2.** *Karma globosae* Medina et al. Preparation of a botanical plate of the new species, which was used as a Holotype, by Daniela Tacuri.

pinkish white, cylindrical, semi-winged, 0.15 cm long, 0.05 cm wide, provided with a foot 0.1 cm long; **ovary** pinkish, cylindrical, without basal bract, markedly hexamerous, narrow at base 0.07 cm long, 0.06 cm diameter; **seed** not seen.

**ETYMOLOGY:** Named from the Latin word *globosus*, in reference to the balloon-shaped flowers.

**DISTRIBUTION:** *Karma globosae*, known only from southern Ecuador in the province of Loja.

**PHENOLOGY:** In cultivation this species has been seen in flower in the months of February, March to August.

**HABITAT AND ECOLOGY:** found growing as epiphytes on the thin branches of shrubs, especially in undergrowth forests, with high presence of fog and excellent air circulation, at an altitudinal range of 2850 meters above sea level.

**DISCUSSION:** The new species is similar to *Karma hirtzii* Luer, easily distinguished by green-brown leaf coloration, pinkish-white globe-shaped flowers, three-flowered raceme, whitish sepals narrowly pinkish apex, hyaline petals purple apex, rhomboid labellum deeply hairy fimbriate margin, (vs. semi-open red flowers, raceme with few flowers, sepals and petals simple, lip trilobate glabrous, The anterior lobe is ovate, constricted at the base and cellular-granular, while the lateral lobes are obtuse and extend above the middle).

#### LITERATURE CITED

Bogarín, D., Karremans, A. P., & Fernández, M. 2018. Notes on Neotropical Pleurothallidinae (Orchidaceae): A new genus and nine new combinations. *Phytotaxa*, 340(2), 101-115.

Fernández, M. 2013. *Tubella* - die etwas anderen Trichosalpinx. *Tubella: Those other Trichosalpinx*. *Die Orchidee* 64(4): 310-317.

Karremans, A. P., Bogarín, D., & Pupulin, F. 2016. Phylogenetic comparative methods improve the selection of characters for generic delimitations in a hyperdiverse Neotropical orchid clade. *Molecular Phylogenetics and Evolution*, 95, 182-198.

Karremans, A., 2023. *Karma*, a New Genus in the Pleurothallidinae (Orchidaceae). in *Harvard Papers in Botany*. 28 (1)



**Figure 3.** Comparison of the new species, **A** *Karma globosae*, **B**. *Karma hirtzii* Luer. Photographed by Hugo Medina

Karremans, A. P. 2014. *Lankesteriana*, a new genus in the Pleurothallidinae (Orchidaceae). *Lankesteriana: International Journal on Orchidology*, 13(3), 319-332.

Luer, C. A. 1997. *Icones Pleurothallidarum XV: Systematics of Trichosalpinx*. *Monogr. Syst. Bot. Missouri Bot. Gard.* 64: 1-136.

Pérez-Escobar, O. A., Gottschling, M., Chomicki, G., Condamine, F. L., Klitgård, B., et al. 2017. Recent origin and rapid speciation of Neotropical orchids in the world's richest plant biodiversity hotspot. *New Phytologist*, 215(2), 891-905.

World Checklist of Selected Plant Families (WCSP). Facilitated by the Royal Botanic Gardens, Kew. [wcp.science.kew.org](http://wcp.science.kew.org). Accessed June 25, 2025.

## ***Porroglossum guachisacae* (Orchidaceae: Pleurothallidinae), a new species from the Andean cloud forests of Ecuador**

Alfonso Doucette<sup>1</sup>, Hugo Medina<sup>2</sup>, & José Portilla<sup>2</sup>

**ABSTRACT:** A new species of *Porroglossum* is described from cultivated material originating in the Andean cloud forests of Ecuador. *Porroglossum guachisacae* differs from the most similar species in its floral morphology. Here, the new species is formally described and illustrated for the first time.

**KEY WORDS:** new species, Andean flora, orchid taxonomy, epiphyte diversity

**INTRODUCTION:** The genus *Porroglossum* Schltr. comprises approximately 50 species distributed primarily in the montane cloud forests of the Andes, with a center of diversity in Ecuador (POWO 2025). The genus is notable for its remarkable floral morphology, especially the mobile lip, which is hinged and touch-sensitive, a characteristic that has evolved a small number of times among the lineages of Pleurothallidinae. Species of *Porroglossum* typically inhabit humid, moss-laden forests between 1,500 and 3,200 meters in elevation, though some taxa extend beyond these limits (Luer 1987).

Recent efforts to document the diversity of Pleurothallidinae in Ecuador, has led to the recognition of several undescribed species (e.g., Merino et al. 2010; Doucette et al. 2015; Baquero & Fierro-Minda 2020; Doucette et al. 2025). One such species, here described as *Porroglossum guachisacae*, was discovered among cultivated plants originally sourced from the Nangaritza region of Zamora-Chinchipe province, an area known for its exceptionally rich orchid flora. This region, located at the interface between the Andean foothills and the Amazonian lowlands, continues to yield new and surprising elements of orchid diversity.

*Porroglossum guachisacae* is most similar morphologically to *P. andreettae* Luer, but differs in key aspects of floral morphology, including the shape of the sepals and lip. Its discovery not only adds to the growing number of narrowly distributed *Porroglossum* species endemic to southern Ecuador but also underscores the value of integrating fieldwork, cultivation, and taxonomic research in documenting the region's unique plant diversity.

### **Taxonomy:**

*Porroglossum guachisacae* A.Doucette, H.Medina & J.Portilla, *sp. nov.*

**Etymology:** The new species name is for Angel Guachisaca.

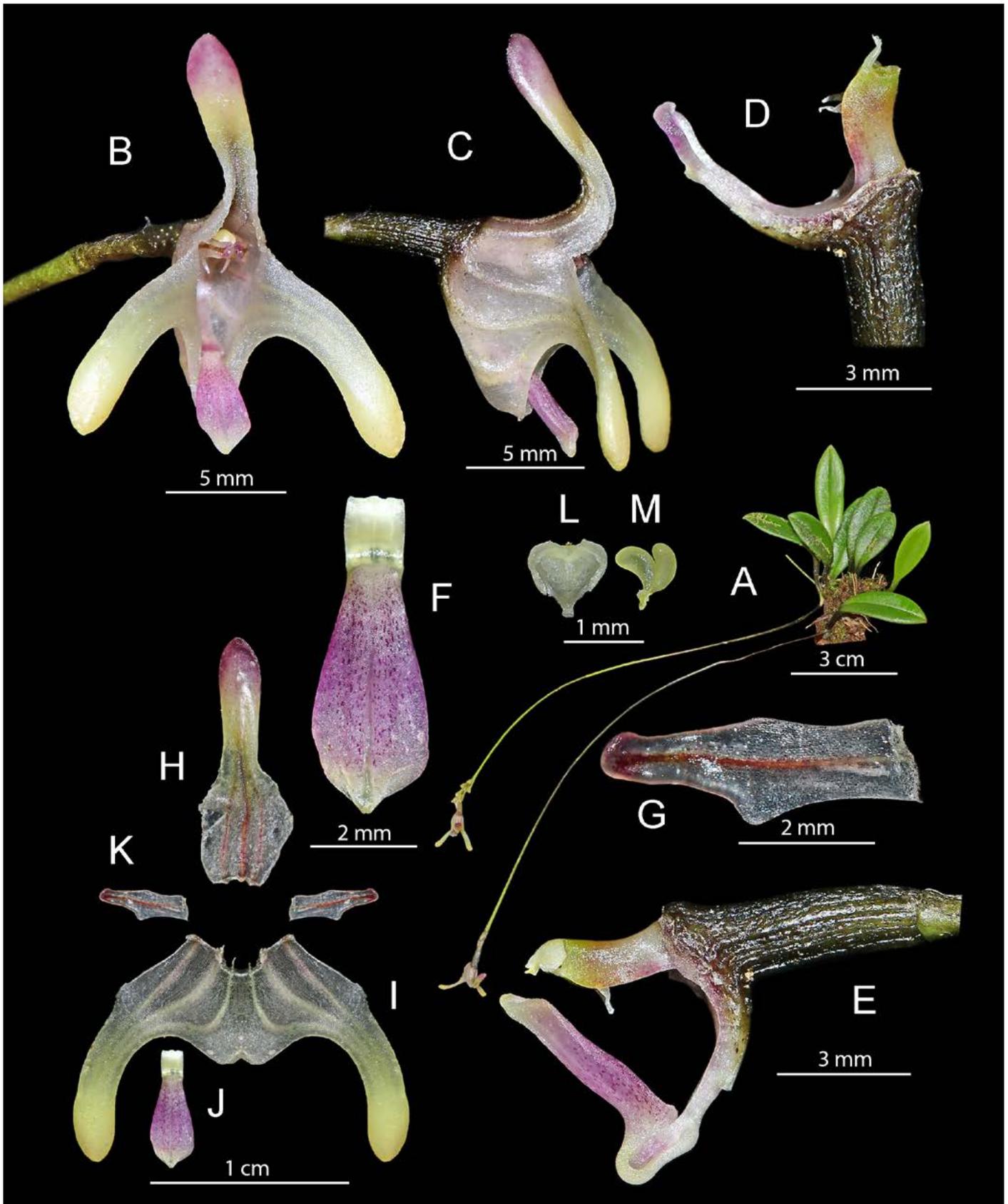
**Type:** ECUADOR. Zamora-Chinchipe: cantón Nangaritza, parroquia Zurmi, near the Jua bridge, ca. 1000 m, 4°15'16.52"S, 78°39'37.32"W, flowered in cultivation at Ecuagenera, Gualaceo, 2024, EG-0408 (holotype: HA). Figure 1.

**Diagnosis:** *Porroglossum guachisacae* is distinguished from *P. merinoi* Pupulin & A.Doucette by the glabrous sepals (vs. pubescent), petals with an angular process on both sides of the petal (vs. lower margin only), the shape of the lip (spatulate vs. obcuneate-spatulate), and the width of the lip (2.1 mm wide vs. 3.0 mm wide).

**Description:** Plants erect, herbaceous, epiphytes under 7 cm tall; roots whitish, with a yellow-green tip, filiform, 1.0 mm in diameter; stems semiterete, erect, 5.0–7.0 mm long, 1.0 mm wide, enveloped by two to three papery, tubular sheaths, 1.5–3.0 mm long, 1.0–1.5 mm wide; leaf coriaceous, subverrucose, elliptical to ovate, petiolate, entire, 23.7–40.6 mm long, 8.3–9.3 mm wide; inflorescence a successively flowered raceme, peduncle terete, 113.9–137.4 mm long, 0.5 mm in diameter, enveloped by membranous, tubular bracts, 2.0–6.3 mm long, 0.5–1.7 mm wide; rachis terete, 1.2–1.8 mm long, 1.0 mm in diam; pedicel terete, 2.5–3.6 mm long, 0.7–0.9 in diameter; ovary terete, subverrucose, 4.4–5.6 mm long, 1.4–1.7 mm wide; fruit not seen; flowers without a detectable odor; dorsal sepal cream, with three purple veins, glabrous, ovate, 5.9 mm long, 4.6 mm wide, contracted into a broad, thick, oblong, yellow tail suffused with purple toward the apex, 6.3 mm long, 2.0 mm wide, lateral sepals cream, rhomboid, 4.9 mm long, 6.0 mm wide, contracted into a broad, oblong-subfalcate, yellow tail, 7.8 mm long, 1.9 mm wide; petals translucent with a purple-brown midvein, narrowly oblong, angled along the upper and lower margin near the middle, 4.4 mm long, 1.5 mm wide; lip cream, suffused and spotted rose, spatulate, sulcate, low transverse callus, 5.6 mm long, 2.1 mm wide; column cream suffused with olive and spotted rose, semiterete, with two toothlike processes, 3.1 mm long, 1.0 mm wide, with a dorsal, cream, subcordate, cucullate anther cap, 0.9 mm long, 1.0 mm wide, housing two ovoid, laterally compressed, yellow pollinia terminating in short caudae, 0.7 mm long, 0.3 mm wide.

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**Figure 1.** *Porroglossum guachisacae* Preparation of a botanical plate of the new species. **A.** Habit to 3 cm scale. **B.** Flower to 5mm scale. **C.** Flower in profile to 5 mm scale. **D.** Column with lip removed in profile to 3 mm scale. **E.** Detail of the column and lip in profile with sepals and petals removed, to 3 mm scale. **F.** Lip detail to 2 mm scale. **G.** Petal detail to 2 mm scale. **H-K** to 1 cm scale. **H.** Dorsal sepal. **I.** Lateral sepals. **J.** Lip. **K.** Petal. **L-M** to 1 mm scale. **L.** Anther cap. **M.** Pollinia.



**Figure 3.** Comparison of the new species, **A** *Porroglossum guachisacae*, **B**. *P. andreettae*. Photographed by Hugo Medina

**Notes:** the new species keys out to *Porroglossum schramii* Luer in the key to the species (Luer 1987). It is easily distinguished from *P. schramii* by the cream colored sepals (vs. translucent white with rose dots) contracted into oblong tails (vs. acuminate tails), petals angled along the upper and lower margin near the middle (vs. entire), a spathulate lip (vs. obovate), and a toothed column (vs. entire).

**ACKNOWLEDGEMENTS:** Generative AI (ChatGPT, OpenAI) was used as a tool to assist in drafting and refining portions of this manuscript, including structuring the diagnosis and improving clarity. The final content, scientific interpretations, and taxonomic conclusions remain the responsibility of the authors.

### REFERENCES

Baquero, L.E., Fierro Minda, A., & Yeager, J. 2020. A new species of Pleurothallidinae (Orchidaceae) from the south-east of Ecuador. *Lankesteriana* 20: 129-136.

Doucette, A., McDaniels, J., Merino, G., Portilla, J., & Cameron, K. 2015. New Pleurothallidinae: Two new *Masdevalia* species and a new *Porroglossum* (Orchidaceae: Pleurothallidinae) from Zamora-Chinchipe, Ecuador. *Orchids* 84(8): 52-58.

Doucette, A., Medina, H., & Portilla, J. 2025. New Pleurothallidinae from Ecuador, Pt. 1. *Andreettana* 1: 6-11.

Luer, C.A. 1987. Icones Pleurothallidarum IV: Systematics of *Porroglossum*. *Monographs in Systematic Botany* 24: 25-91.

Merino, G., Doucette, A., & Pupulin, F. 2010. New species of *Porroglossum* (Orchidaceae: Pleurothallidinae) from Ecuador. *Lankesteriana* 9: 459-466.

POWO. 2025. *Plants of the World Online*. Facilitated by the Royal Botanic Gardens, Kew. Published on the Internet; <https://powo.science.kew.org/> (Retrieved 31 May 2025).

## ***Sphyrospermum buxifolium* var. *albo-roseus* (Ericaceae: Vaccinieae), a new epiphytic shrub from the Andean cloud forests of Ecuador**

Alfonso Doucette<sup>1</sup>, Hugo Medina<sup>2</sup>, & José Portilla<sup>2</sup>

### **ABSTRACT**

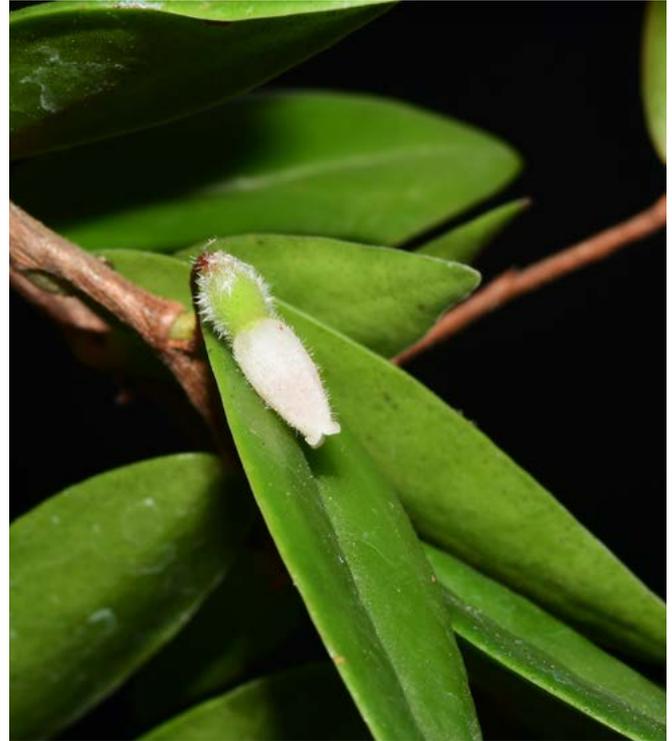
A new variety of *Sphyrospermum buxifolium* is described from the Andean cloud forests of Ecuador. This epiphytic shrub was discovered in cultivation at Ecuagenera, originating from collections made in Morona Santiago Province. Morphologically similar to the typical variety, it differs notably in its vegetative characters. Here, the new variety is formally described and illustrated for the first time.

**KEYWORDS:** Andean cloud forests; epiphytic shrubs; neotropical blueberries; cultivated material; Ecuagenera collections

**INTRODUCTION:** *Sphyrospermum buxifolium* Poepp. & Endl. was originally described from material collected in Peru. The protologue (Poeppig & Endlicher 1835) characterizes it as a small, trailing shrub with shoots that root adventitiously along older growth, brown striate bark, and glabrate branches and leaves. The leaves are alternate, distichous, and shortly petiolate, with broadly ovate blades bearing an obtuse apex and an obtuse to subcordate base.

Since its initial description, *S. buxifolium* has been recorded across Central and South America, exhibiting significant variation in both floral and vegetative morphology. Sixteen heterotypic synonyms at the rank of species and one at the rank of variety have been assigned to *S. buxifolium* (Luteyn & Pedraza-Peñalosa 2013). The only heterotypic synonym at varietal rank, *Sophoclesia cordifolia* var. *oophylla* Kuntze, described from Costa Rica, is distinguished from the typical variety by its leaves, which have an obtuse base and an acute apex.

Two additional varieties were published by Kuntze (1891): *Sophoclesia cordifolia* var. *musciola* and *S. cordifolia* var. *normalis*. The former is now treated as *Sphyrospermum musciola* (Hook.) A.C. Sm. (POWO 2025), whereas the latter, characterized by leaves with a cordate base and an acute apex, remains without a designated lectotype.



**Figure 2.** *Sphyrospermum buxifolium* var. *albo-rosea* in cultivation

The flowers of the new variety described herein are relatively unremarkable compared to the typical variety; instead, the most distinctive differences lie in vegetative morphology. Luteyn & Pedraza-Peñalosa (2013) described the leaves of *S. buxifolium* as varying from broadly elliptic, suborbicular, ovate, to ovate-lanceolate, with the base ranging from rounded, subcordate, obtusely cuneate, to broadly obtuse, and the apex from obtuse or rounded to acute, occasionally shortly but bluntly acuminate, and rarely sharply long-acuminate. Despite this variation, the species is consistently glabrate on both leaf surfaces. In contrast, the new variety is notable for its entirely glabrous leaves and stems.

### **TAXONOMY**

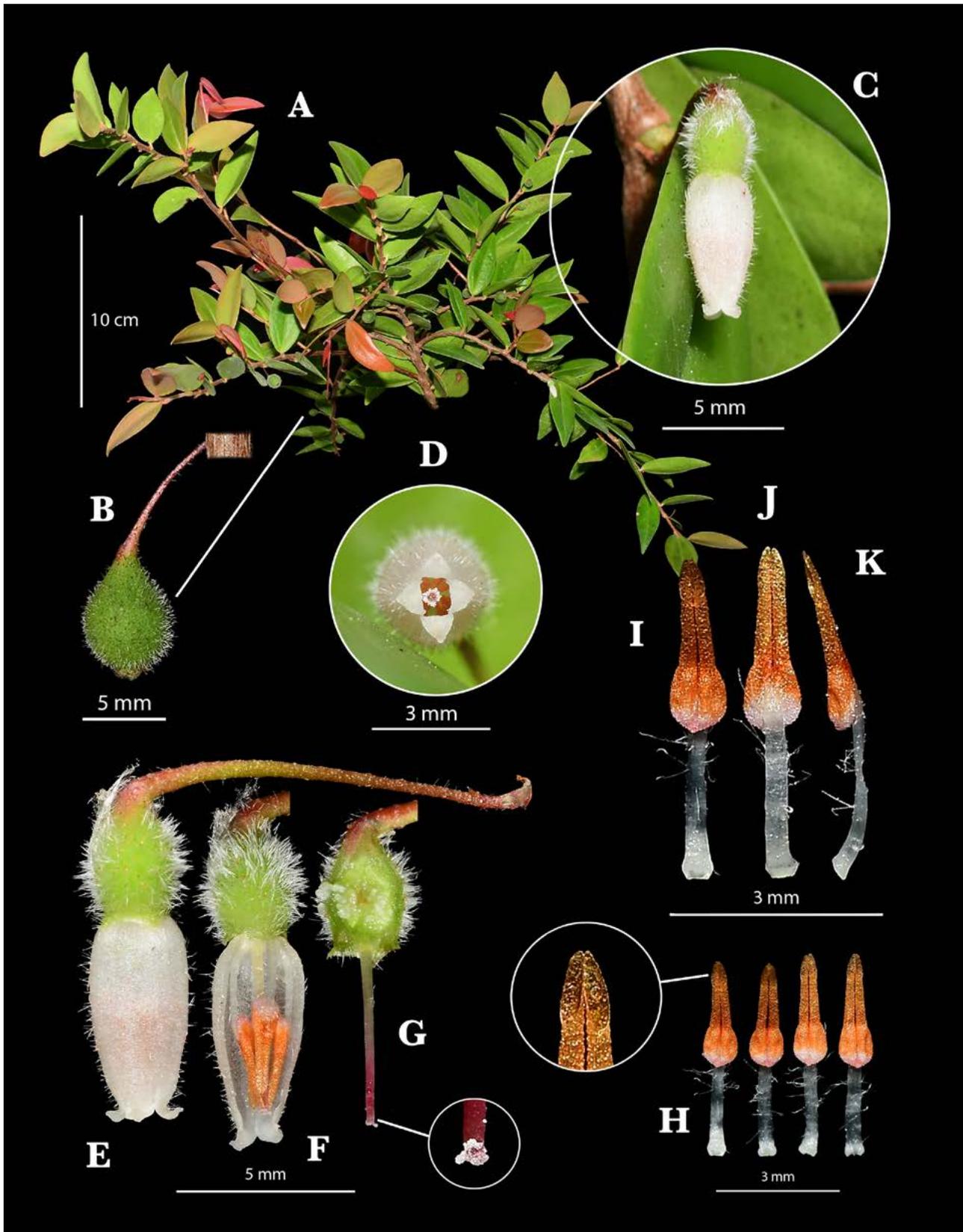
*Sphyrospermum buxifolium* var. *albo-roseus* A.Doucette, H.Medina & J.Portilla, var. nov.

**Etymology:** The varietal epithet combines the Latin *album* ("white") and *roseus* ("pink") to refer to the white or pink coloration of the flowers.

**Type:** ECUADOR. Morona Santiago: cantón El Limón, sector El Pescado, ca. 1100 m, 2°54'46.16"S, 78°18'03.96"W, flowered in cultivation at Ecuagenera, Gualaceo, 2024, EG-0544 (holotype: HA). Figure 2.

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**FIGURE 1:** *Sphrospermum buxifolium* var. *albo-rosea*. **A.** Habit to 10 cm scale. **B.** Fruit detail to 5 mm scale. **C.** Flower detail, in profile, to 5mm scale. **D.** Flower detail, from front, to 3 mm scale. **E-G** to 5 mm scale. **E.** Flower in profile. **F.** Flower with portion of corolla removed to illustrate habit of the stamens. **G.** Portion of hypanthium removed to illustrate the lobe and style. **H.** Stamens to 3 mm scale, detail of anther dehiscence. **I-K** to 3 mm scale. **I.** Stamen, inner surface. **J.** Stamen, outer surface. **K.** Stamen, profile.

**Diagnosis:** *Sphyrospermum buxifolium* var. *albo-roseus* is distinguished from *S. buxifolium* var. *buxifolium* by its glabrous (vs. glabrate) leaves, which possess a subacute (vs. obtuse) apex. Table 1.

**Description:** Epiphytic shrubs; young branches erect to ascending. Stems terete, glabrous, 0.2–0.6 cm in diameter; bark brown, becoming striate upon exfoliation. Leaves alternate; blades coriaceous, elliptic, with a subacute apex and obtuse base; margins entire; 2.7–4.0 cm long, 1.4–1.7 cm wide; young leaves reddish and glabrous. Inflorescences solitary-flowered. Floral bracts reduced, ovate, papery, brown, 0.4 mm long × 0.2 mm wide. Pedicel weakly curved, broadest toward the apex, sparsely pubescent, 8.3–11.6 mm long × 0.3–0.9 mm in diameter. Flowers 4-merous, nutant. Calyx hypanthium green, densely pubescent, spheroid, 3.2 mm long × 2.4 mm wide; calyx limb abbreviated, 0.4 mm long × 2.0 mm wide; lobes green, pubescent, broadly deltoid, with rounded sinuses and obtuse apices, 0.3 mm long × 1.0 mm wide. Corolla white to pink, sparsely pubescent, terete, urceolate, 5.5 mm long (excluding lobes) × 2.8 mm wide; lobes four, deltoid, recurved, glabrous, spreading, with acute sinuses and subacute apices, 0.6 mm long × 0.8 mm wide. Stamens four, 4.2–4.6 mm long. Filaments whitish, translucent, sparsely pubescent, free, 2.2 mm long × 0.3 mm wide. Anthers 2.5–2.6 mm long × 0.8 mm wide; thecae orange-brown, smooth-textured, 1.0 mm long × 0.9 mm wide, connate for their length; tubules free,

orange-brown, 1.5 mm long × 0.2 mm wide, dehiscing by terminal pores. Style greenish, suffused with red toward the apex, glabrous, 5.0 mm long × 0.3 mm in diameter; stigma truncate. Fruit a berry.

**ACKNOWLEDGEMENTS:** Generative AI (ChatGPT, OpenAI) was used as a tool to assist in drafting and refining portions of this manuscript, including structuring the diagnosis and improving clarity. The final content, scientific interpretations, and taxonomic conclusions remain the responsibility of the authors.

#### REFERENCES:

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Luteyn, J.L., & Pedraza-Peñalosa, P. 2013. Nomenclature, taxonomy, and conservation of the neotropical genus *Sphyrospermum* (Ericaceae: Vaccinieae), including five new species for Colombia, Ecuador, and Peru. *Phytotaxa* 79(1): 1–29.

Poeppig, E., & Endlicher, S. 1835. *Sphyrospermum*. *Nova Genera ac Species Plantarum* 1: 4–5.

POWO. 2025. *Plants of the World Online*. Facilitated by the Royal Botanic Gardens, Kew. Published on the Internet; <https://powo.science.kew.org/> (Retrieved 27 April 2025).

Characteristic	<i>S. buxifolium</i> var. <i>buxifolium</i>	<i>S. buxifolium</i> var. <i>albo-roseus</i>
Leaf indumentum	Glabrate	Glabrous
Leaf apex	Typically obtuse	Subacute
Leaf blade shape	Broadly elliptic to suborbicular, ovate, or ovate-lanceolate	Elliptic
Flower color	Typically white to reddish	White to pink
Origin	Widespread across Central and South America	Morona Santiago, Ecuador (cultivated material)

**Table 1.** Comparison of *Sphyrospermum buxifolium* var. *buxifolium* and var. *albo-roseus*

## ***Sphyrospermum buxifolium* var. *chlorinus*** (Ericaceae: Vaccinieae), a second new epiphytic variety from the Andean cloud forests of Ecuador

Alfonso Doucette<sup>1</sup>, Hugo Medina<sup>2</sup>, & José Portilla<sup>2</sup>

**ABSTRACT:** A second new variety of *Sphyrospermum buxifolium* is described from cultivated material originating in the Andean cloud forests of Ecuador. *Sphyrospermum buxifolium* var. *chlorinus* differs from the typical variety by its pendent habit and the more developed lobes of the calyx hypanthium. Here, the new variety is formally described and illustrated for the first time.

**KEY WORDS:** Andean cloud forests; Vaccinieae; pendent epiphytes; calyx morphology; cultivated material

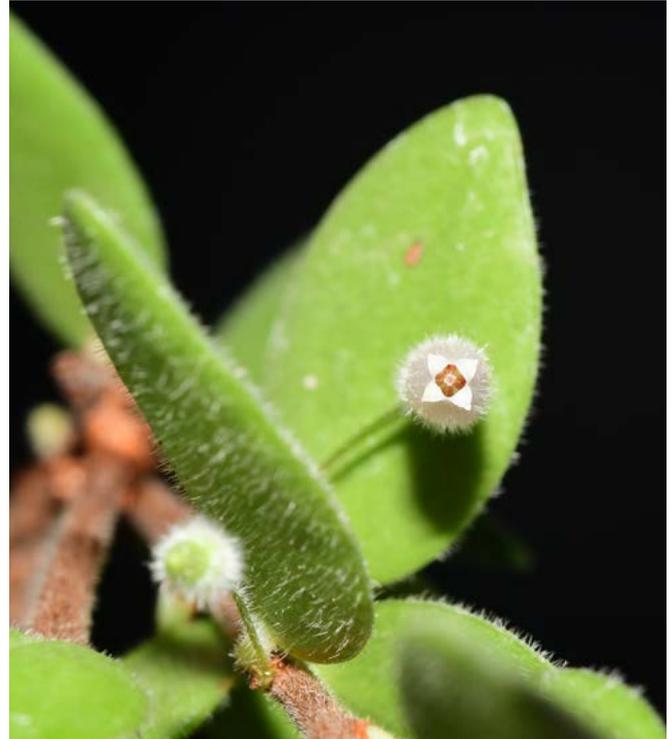
**INTRODUCTION:** During the course of ongoing investigations into the diversity of neotropical Vaccinieae in cultivation, additional variation within *Sphyrospermum buxifolium* Poepp. & Endl. has been observed. Following the recent description of *S. buxifolium* var. *albo-roseus*, a second distinctive variety was identified among collections originating from Zamora Chinchipe province, Ecuador. While *S. buxifolium* is noted for its considerable morphological variability, this new entity is remarkable for its strongly pendent habit and the pronounced development of the lobes of the calyx hypanthium—characters that readily distinguish it from both the typical variety and from var. *albo-roseus*.

The new variety, here named *Sphyrospermum buxifolium* var. *chlorinus*, is based on plants cultivated at Ecuagenera and represents a further example of the hidden diversity in Vaccinieae that may be brought to light through careful study of cultivated material.

### **TAXONOMY**

*Sphyrospermum buxifolium* var. *chlorinus* A.Doucette, H.Medina & J.Portilla, *var. nov.*

**Etymology:** The varietal epithet *chlorinus* is derived from the Latin *chlorinus*, meaning “greenish,” in reference to the pale green coloration of the flowers.



**Figure 2.** *Sphyrospermum buxifolium* var. *chlorinus* in cultivation

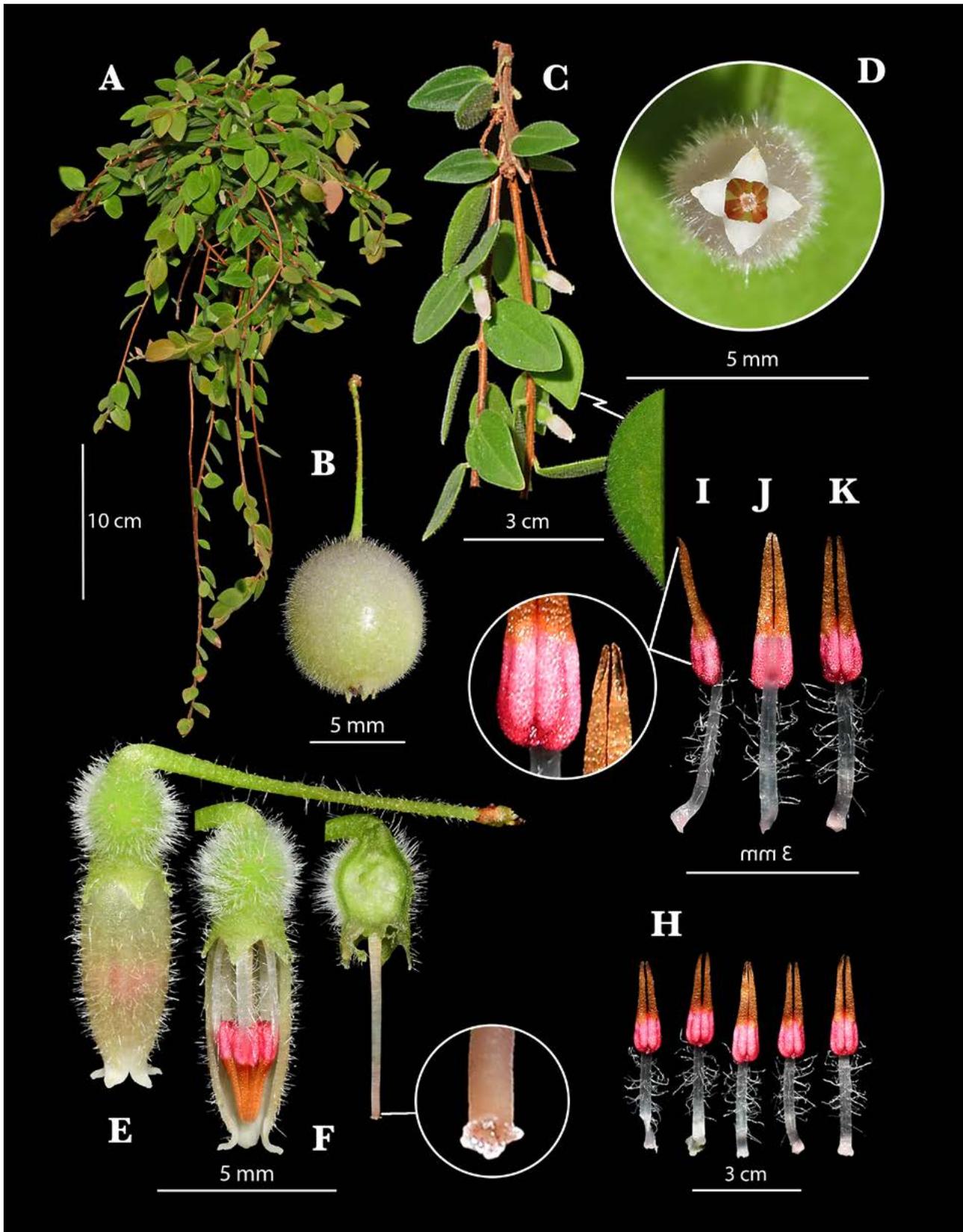
**Type:** ECUADOR. Zamora Chinchipe: cantón Zamora, parroquia San Carlos de las Minas, sector Campanillas, ca. 1700 m, 4°03'07.46"S, 78°46'51.09"W, flowered in cultivation at Ecuagenera, Gualaceo, 2024, EG-0546 (holotype: HA). Figure 2.

**Diagnosis:** *Sphyrospermum buxifolium* var. *chlorinus* is distinguished from *S. buxifolium* var. *buxifolium* by its greenish corollas, pendent habit, and larger lobes of the calyx hypanthium. Table 1.

**Description:** Epiphytic shrubs; young branches erect to ascending. Stems terete, glabrate, 1.9–3.1 mm in diameter; bark brown, becoming striate upon exfoliation. Leaves alternate; blades coriaceous, elliptic, with an obtuse apex and obtuse base, shortly pubescent; margins entire; 16.05–20.8 cm long, 8.4–13.1 cm wide; young leaves reddish. Inflorescences solitary-flowered. Floral bracts reduced, ovate, papery, brown, 0.7 mm long × 0.6 mm wide. Pedicel straight, broadest toward the apex, sparsely pubescent, 10.9 mm long × 0.3–0.7 mm in diameter. Flowers 4-merous, nutant. Calyx hypanthium green, densely pubescent, spheroid, 3.8 mm long × 2.4 mm wide; calyx limb erect, 1.5 mm long × 2.5 mm wide; lobes green, pubescent, triangular, with rounded sinuses and acute apices, 1.3–1.5 mm long × 1.3 mm wide. Corolla

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**FIGURE 2:** *Sphyraspermum buxifolium* var. *chlorinus*. **A.** Habit to 10 cm scale. **B.** Fruit detail to 5 mm scale. **C.** Flowering habit detail to 3 cm scale. **D.** Flower detail, from front, to 5 mm scale. **E-G** to 5 mm scale. **E.** Flower in profile. **F.** Flower with portion of corolla removed to illustrate habit of the stamens. **G.** Portion of hypanthium removed to illustrate the hypanthium and style. **H.** Stamens to 3 mm scale. **I-K** to 3 mm scale. **I.** Stamen, profile; detail of anther dehiscence. **J.** Stamen, outer surface. **K.** Stamen, inner surface.

greenish or white, pubescent, terete, urceolate, 5.7 mm long (excluding lobes) × 2.7 mm wide; lobes four, white, deltoid, recurved, glabrous, spreading, with acute sinuses and subacute apices, 0.7 mm long × 0.6 mm wide. Stamens four, 5.2 mm long. Filaments whitish, translucent, pilose, free, 2.7 mm long × 0.3 mm wide. Anthers 2.5 mm long × 0.8 mm wide; thecae red, smooth, 1.0 mm long × 0.8 mm wide, connate for their length; tubules free, orange-brown, 1.5 mm long × 0.3 mm wide, dehiscent by terminal pores. Style greenish, suffused with light brown toward the apex, glabrous, 5.0 mm long × 0.3 mm in diameter; stigma truncate. Fruit a berry.

**ACKNOWLEDGEMENTS:** Generative AI (ChatGPT, OpenAI) was used as a tool to assist in drafting and refining portions of this manuscript, including structuring the diagnosis and improving clarity. The final content, scientific interpretations, and taxonomic conclusions remain the responsibility of the authors.

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Luteyn, J.L., & Pedraza-Peñalosa, P. 2013. Nomenclature, taxonomy, and conservation of the neotropical genus *Sphrospermum* (Ericaceae: Vaccinieae), including five new species for Colombia, Ecuador, and Peru. *Phytotaxa* 79(1): 1-29.

Poeppig, E., & Endlicher, S. 1835. *Sphrospermum*. *Nova Genera ac Species Plantarum* 1: 4-5.

POWO. 2025. *Plants of the World Online*. Facilitated by the Royal Botanic Gardens, Kew. Published on the Internet; <https://powo.science.kew.org/> (Retrieved 27 April 2025).

Characteristic	<i>S. buxifolium</i> var. <i>buxifolium</i>	<i>S. buxifolium</i> var. <i>albo-roseus</i>	<i>S. buxifolium</i> var. <i>chlorinus</i>
Leaf indumentum	Glabrate	Glabrous	Shortly pubescent
Leaf apex	Typically obtuse	Subacute	Obtuse
Young stem indumentum	Glabrate	Glabrous	Glabrate
Leaf blade shape	Broadly elliptic to suborbicular, ovate, or ovate-lanceolate	Elliptic	Elliptic
Leaf blade size	Typically smaller (not well documented)	2.7-4.0 cm long, 1.4-1.7 cm wide	16.05-20.8 cm long, 8.4-13.1 cm wide
Habit	Erect to trailing	Erect to ascending	Strongly pendent
Flower color	Typically pinkish to reddish	White to pink	Greenish or white
Calyx limb development	Abbreviated	Abbreviated	Prominent, erect
Origin	Widespread across Central and South America	Morona Santiago, Ecuador (cultivated material)	Zamora Chinchipe, Ecuador (cultivated material)

**Table 1.** Comparison of *Sphrospermum buxifolium* var. *buxifolium* var. *albo-roseus* and var. *chlorinus*

## ***Sphyrospermum buxifolium* var. *ecuagenera* (Ericaceae: Vaccinieae), a third new epiphytic variety from the Andean cloud forests of Ecuador**

Alfonso Doucette<sup>1</sup>, Hugo Medina<sup>2</sup>, & José Portilla<sup>2</sup>

**ABSTRACT:** A second new variety of *Sphyrospermum buxifolium* is described from cultivated material originating in the Andean cloud forests of Ecuador. *Sphyrospermum buxifolium* var. *ecuagenera* differs from the typical variety by its glabrous leaves. Here, the new variety is formally described and illustrated for the first time.

**KEY WORDS:** Andean cloud forests; Vaccinieae; pendent epiphytes; calyx morphology; cultivated material

**INTRODUCTION:** Continuing investigations into the diversity of *Sphyrospermum buxifolium* Poepp. & Endl. have revealed yet another distinct morphological variant among cultivated material sourced from Morona Santiago province, Ecuador. Building upon the recent descriptions of *S. buxifolium* var. *albo-roseus* A.Doucette, H.Medina & J.Portilla and *S. buxifolium* var. *chlorinus* A.Doucette, H.Medina & J.Portilla, a third variety is recognized that is distinguished primarily by the vegetative morphology.

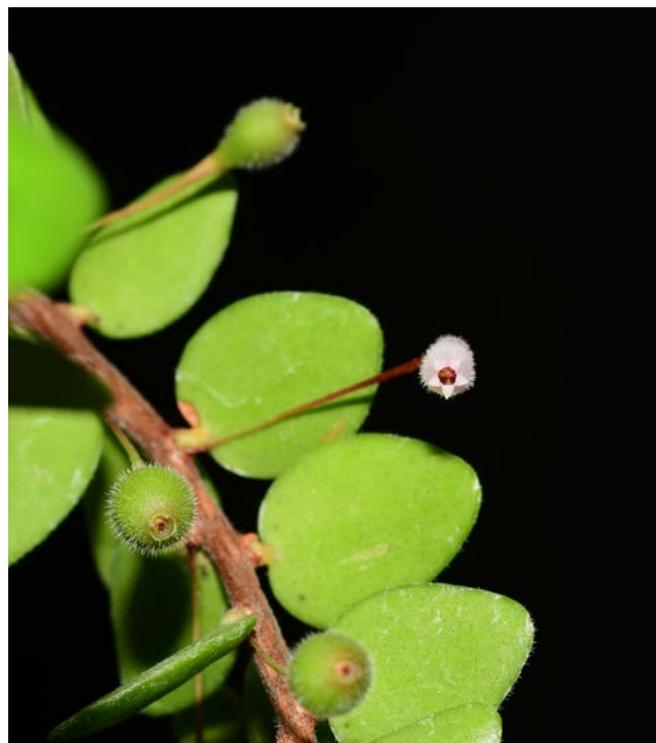
### **TAXONOMY**

*Sphyrospermum buxifolium* var. *ecuagenera* A.Doucette, H.Medina & J.Portilla, *var. nov.*

**Etymology:** The varietal epithet *ecuagenera* honors Ecuagenera, the Ecuadorian nursery that collected and cultivated the type material, and whose ongoing work has significantly advanced the knowledge of Andean Vaccinieae diversity.

**Type:** ECUADOR. Morona Santiago: cantón San Juan Bosco, road that leads from Santiago to Pananza, ca. 1500 m, 3°09'22.04"S, 78°32'13.02"W, flowered in cultivation at Ecuagenera, Gualaceo, 2024, EG-0545 (holotype: HA). Figure 2.

**Diagnosis:** *Sphyrospermum buxifolium* var. *ecuagenera* is distinguished from *S. buxifolium* var. *buxifolium* by its entirely glabrous leaves and young stems—a feature contrasting with the glabrate indumentum typical of the species. Table 1.



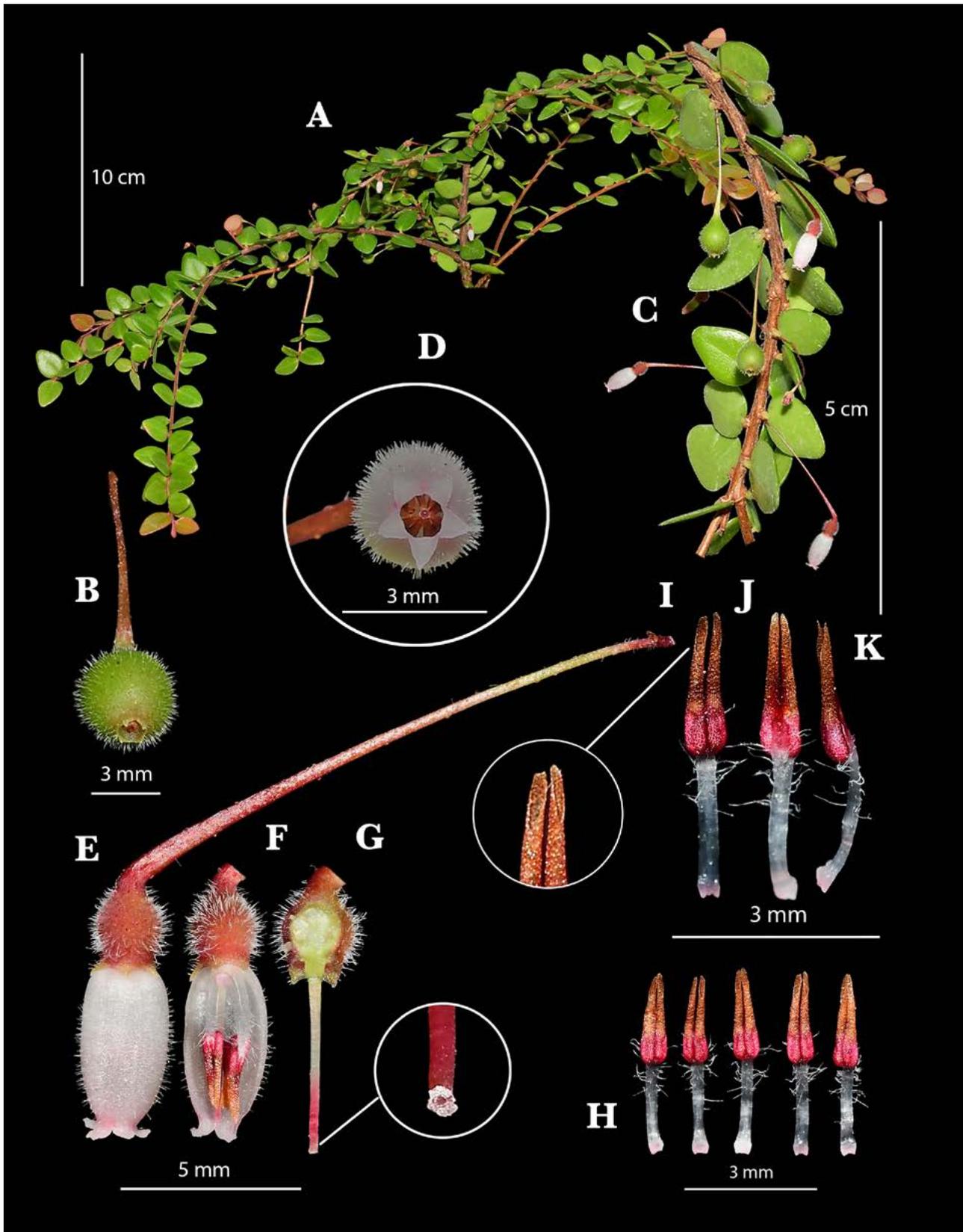
**Figure 2.** *Sphyrospermum buxifolium* var. *ecuagenera* in cultivation

**Description:** Epiphytic shrubs; young branches horizontal to ascending. Stems terete, 1.6–4.7 mm in diameter; bark brown, becoming striate upon exfoliation. Leaves alternate; blades coriaceous, elliptic, with an obtuse apex and obtuse base, glabrous; margins entire; 6.1–13.7 cm long, 5.7–10.2 cm wide; young leaves dull reddish. Inflorescences solitary-flowered. Floral bracts reduced, ovate, papery, brown, 0.4 mm long × 0.3 mm wide. Pedicel straight, broadest toward the apex, essentially glabrous, with a few scattered trichomes, 16.7 mm long × 0.3–0.6 mm in diameter. Flowers 4(5)-merous, nutant. Calyx hypanthium reddish brown, densely pubescent, spheroid, 2.3 mm long × 1.8 mm wide; calyx limb erect, 0.7 mm long × 1.9 mm wide; lobes tan, sparsely pubescent, broadly triangular, with rounded sinuses and acute apices, 0.7 mm long × 0.7 mm wide. Corolla white suffused with pink, pubescent, terete, urceolate, 4.7 mm long (excluding lobes) × 2.4 mm wide; lobes four to five, white suffused with pink, deltoid, recurved, glabrous, spreading, with acute sinuses and subacute apices, 0.7 mm long × 0.6 mm wide. Stamens four or five,

5.2 mm long. Filaments whitish, translucent, pilose, free, 2.1 mm long × 0.3 mm wide. Anthers 2.1 mm long × 0.6 mm wide; thecae red, smooth, 0.7 mm long × 0.6 mm wide, connate for their length; tubules free, orange-brown,

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**FIGURE 1:** *Sphrospermum buxifolium* var. *ecuagenera*. **A.** Habit to 10 cm scale. **B.** Fruit detail to 3 mm scale. **C.** Flowering habit detail to 5 cm scale. **D.** Flower detail, from front, to 3 mm scale. **E-G** to 5 mm scale. **E.** Flower in profile. **F.** Flower with portion of corolla removed to illustrate habit of the stamens. **G.** Portion of hypanthium removed to illustrate the hypanthium and style. **H.** Stamens to 3 mm scale. **I-K** to 3 mm scale. **I.** Stamen, inner surface; detail of anther dehiscence. **J.** Stamen, outer surface. **K.** Stamen, inner surface

1.4 mm long × 0.2 mm wide, dehiscent by terminal pores. Style greenish, suffused with light brown toward the apex, glabrous, 5.0 mm long × 0.3 mm in diameter; stigma truncate. Fruit a berry.

**ACKNOWLEDGEMENTS:** Generative AI (ChatGPT, OpenAI) was used as a tool to assist in drafting and refining portions of this manuscript, including structuring the diagnosis and improving clarity. The final content, scientific interpretations, and taxonomic conclusions remain the responsibility of the authors.

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*nomenclarum in itinero mundi collectarum*, 2. Felix et al., Leipzig, pp. 375-1011.

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Characteristic	<i>var. buxifolium</i>	<i>var. albo-roseus</i>	<i>var. chlorinus</i>	<i>var. ecuagenera</i>
Leaf surface	Glabrate	Glabrous	Shortly pubescent	Glabrous
Leaf apex	Variable (rounded to acute)	Subacute	Obtuse	Obtuse
Pedicle pubescence	Variable	Sparse	Sparse	Essentially glabrous
Calyx limb	Abbreviated	Abbreviated	Erect, developed	Abbreviated
Calyx lobes	Broadly deltoid	Broadly deltoid	Triangular	Broadly deltoid
Corolla size	4.5-6 mm long	5.5 mm long	5.7 mm long	4.7 mm long
Number of floral parts	4	4	4	4-5
Stamen count	4	4	4	4-5
Filament pubescence	Sparse	Sparse	Pilose	Pilose
Anther thecae color	Orange-brown	Orange-brown	Red	Red
Habit	Erect to ascending	Erect to ascending	Pendent	Horizontal to ascending

**Table 1.** Comparison of *Sphrospermum buxifolium* var. *buxifolium* var. *albo-roseus* and var. *chlorinus*



**ANDRETTANA**  
TROPICAL ANDES BIODIVERSITY AND CONSERVATION

# Horticultura Horticulture

# 24<sup>th</sup> WOC



## Germany 2026

24<sup>th</sup> World Orchid Conference  
26-29 March 2026 Dresden

<https://www.woc-2026.com/>

## LA COLUMNA DE TOM

### *Cycnoches*

#### Los Cisnes Desconcertantes

Thomas Mirenda<sup>1</sup>

Alguna vez ha tenido esa sensación inquietante de que las orquídeas podrían estar riéndose de nosotros, quizás conspirando de alguna manera para engañarnos, confundirnos y desconcertarnos para su propia diversión o propósito nefasto? Aunque tales antropomorfismos molestan a los biólogos, a menudo es difícil evitar atribuir características lúdicas o incluso maliciosas a ciertos tipos de orquídeas. En el caso del género *Cycnoches* y la historia temprana de estas plantas en cultivo, ciertamente parecía como si estuvieran gastando bromas pesadas a los principales cultivadores de la época. R.A. Rolfe en su revisión de *Cycnoches* (1909) relata algunas experiencias hilarantes, aunque algo frustrantes, que los cultivadores tuvieron con el género en las décadas de 1830 y 1840. *Cycnoches loddigesii*, la primera especie descrita e importada a Inglaterra desde Guyana, impresionó a todos

los que contemplaron sus grandes y exóticas flores con una columna alargada y curvada como el cuello de un cisne (de donde deriva el nombre *Cycnoches*), así como su encantador aroma avainillado. Otra especie, *Cycnoches cucullata*, fue descrita a partir de una planta aparentemente idéntica, pero, con su columna corta y falta de fragancia, era claramente algo completamente distinto. No obstante, cuando las flores de ambas supuestas especies aparecieron en la misma planta, tanto cultivadores como botánicos quedaron perplejos.

De manera similar, y quizás aún más frustrante, *Cycnoches ventricosum* demostró ser errático en su comportamiento de crecimiento. Esta especie era bien conocida en cultivo en la década de 1840, con sus grandes flores verdosas. Una nueva planta diferente de Guatemala fue promocionada por G.U. Skinner, un comerciante y distribuidor de plantas británico radicado en Guatemala, como una planta que poseía el "hábito de un *Cycnoches* unido [a] los largos tallos péndulos de una *gongora*" (Rolfe 1909). Tal extraña novedad de planta fue importada con avidez y cultivada con gran esmero, pero al florecer demostró ser más plantas de *Cyc. ventricosum*. Suponiendo que se había cometido



Figura 1. *Cycnoches cooperi*, en cultivo en Ecuagenera. Foto Hugo Medina



Figura 2. *Cycnoches* Ecuagenera, (Híbrido de *C. farnsworthianum* x *C. lehmannii*) en cultivo en Ecuagenera. Foto Hugo Medina

un error, se importaron más plantas, pero con el mismo resultado decepcionante. Finalmente, Skinner decidió escoltar personalmente una planta de regreso a Inglaterra en barco. Al florecer con la larga inflorescencia péndula durante el tránsito, estaba seguro de que esta "nueva especie" finalmente sería reconocida y cultivada. Sin embargo, cuando volvió a florecer la temporada siguiente, produjo la inflorescencia más corta del tipo *ventricosum*, para gran consternación de su propietario. Pero poco después, produjo un tallo completamente diferente que sí portaba las codiciadas flores péndulas. Este comportamiento pudo haber desconcertado totalmente a los botánicos de la época, incluso a Charles Darwin, pero poco después se comprendió que el género crea inflorescencias separadas que pueden portar flores sorprendentemente diferentes y con dimorfismo sexual.

*Cycnoches* es un género de 34 especies de epífitas de baja altitud, de crecimiento en climas de cálidos a calurosos, procedentes de bosques estacionalmente secos que se extienden desde el sur de México hasta el norte

de Argentina. Las plantas crecen rápidamente durante su temporada de crecimiento en verano y requieren temperaturas cálidas –días de 80–90 F (27–32 C) y noches de 65–70 F (18–21 C)–, abundante fertilizante y un medio con buen drenaje pero que retenga la humedad. Sus pseudobulbos alargados, frondosos y en forma de cigarro pueden crecer considerablemente en una sola temporada y generalmente continuarán creciendo mientras se les proporcionen temperaturas cálidas. Las varas florales suelen aparecer en otoño cerca del ápice de estos grandes pseudobulbos, justo antes de que las plantas entren en su período de letargo a medida que se acercan el clima más frío y los días más cortos. Los pseudobulbos son caducifolios durante la estación seca y los cultivadores deben ser vigilantes para mantenerlos lo más secos posible mientras están en letargo. Algunos cultivadores incluso retiran los pseudobulbos sin hojas de sus macetas, e incluso desprenden las raíces de años anteriores para evitar que se pudran durante el letargo. Se debe tener



**Figura 3.** *Cycnoches barthiorum*, en cultivo en Ecuagenera. Foto Hugo Medina



**Figura 4.** *Cycnoches farnsworthianum*, Cultivada en Ecuagenera. Foto Hugo Medina



**Figura 5.** *Cycnoches haagii*, en cultivo en Ecuagenera. Foto Hugo Medina

cuidado cuando estas plantas reanudan el crecimiento activo, generalmente en febrero o marzo, ya que se pudren fácilmente si se riegan en exceso antes de que se hayan formado nuevas raíces extensas. Usualmente es mejor esperar hasta finales de marzo o abril antes de trasplantar, regar y fertilizar los pseudobulbos en brotación.

Aparte de las especies importadas originalmente durante los primeros años de descubrimiento y exploraciones de orquídeas en el Nuevo Mundo, como *Cycnoches maculatum*, *Cycnoches chlorochilon* y *Cycnoches pentadactylon*, algunas especies fascinantes han entrado más recientemente en cultivo. Algunas de las más notables son *Cycnoches cooperi*, con su color y aroma a chocolate, la asombrosa *Cycnoches barthiorum* con sus flores de 3 pulgadas (7.5 cm) y la *Cycnoches herrenhusanum* de flores amarillas. Todas ellas han cautivado los corazones de cultivadores e hibridadores de orquídeas. Estas especies son una maravilla para la vista cuando están bien cultivadas y en flor. La primera vez que vi *Cyc. barthiorum* con sus grandes y fragantes flores de tonos tierra dispuestas en una inflorescencia de disposición cilíndrica en la Exposición Internacional de Orquídeas del Gran Nueva York en la década de 1990, finalmente comprendí lo que era la "fiebre de las orquídeas". Todavía siento esa maravillosa sensación de asombro cada vez que veo esta especie en flor. Aunque sospecho que se está "riendo" de mí, realmente no me importa. Así de extraordinarias son.

### Referencias

Rolfe, R.A. 1909. A Revision of the Genus *Cycnoches*. *Bulletin of Miscellaneous Information (Kew Bulletin)* XXXIV:268-277.



**Figura 6.** *Cycnoches* Gräfin Bettina (*C. herrenhusanum* x *C. peruvianum*), en cultivo en Ecuagenera. Foto Hugo Medina

**Figura 7.** *Cycnoches peruvianum*, en cultivo en Ecuagenera. Foto Hugo Medina

## El género *Dendrobium* y la especie *Dendrobium cuthbertsonii*



**Figura 1.** La propagación in vitro de *Dendrobium cuthbertsonii* ha sido exitosa en los laboratorios de Ecuagenera, donde se han producido miles de plantas. También puede reproducirse de forma vegetativa.

Hugo Medina<sup>1</sup>

El género *Dendrobium*, en su mayoría, es originario del continente asiático, aunque también se encuentra en Australia y Nueva Zelanda. Es el segundo género más numeroso dentro de la familia Orchidaceae, solo superado por *Bulbophyllum*. Actualmente se reconocen alrededor de 3137 especies, de las cuales 1913 son considerados nombres válidos. Esta duplicidad en la nomenclatura es común en el estudio de las orquídeas, ya que muchas especies fueron descritas más de una vez por distintos taxónomos, en diferentes lugares y épocas.

El nombre *Dendrobium* fue propuesto por Olof Swartz en 1799. Proviene de las palabras griegas *dendron* ('árbol') y *bios* ('vida'), en referencia a su hábito epífita. No obstante,

a pesar del significado de su nombre, muchas especies también crecen como litófitas o incluso como terrestres. Estas orquídeas se encuentran en altitudes que van desde los 50 hasta los 3200 msnm, principalmente en bosques nubosos y húmedos, y en climas que van desde cálidos hasta fríos, dependiendo de la especie.

La diversidad de *Dendrobium* es impresionante tanto en el tamaño de las plantas (que puede variar desde 5 cm hasta más de un metro) como en la duración de sus flores, que va desde un solo día hasta más de seis meses. Además de su belleza, algunas especies tienen usos medicinales. Por ejemplo, el *Dendrobium* tipo *nobile* es una de las 50 hierbas fundamentales en la medicina tradicional china, donde se lo conoce como "**Shi Hu**" y se emplea como antipirético y regulador inmunológico.

En el libro *Las plantas nativas útiles de Australia* (1889),

1. Ecuagenera "Orchids from Ecuador" producciongye@ecuagenera.com



Figura 2. *Dendrobium unicum*, cultivado en Ecuagenera

se menciona que *Dendrobium canaliculatum* era conocido como "yamberin" por los pueblos indígenas de Queensland, quienes consumían sus tallos después de retirar las hojas viejas.

Con el objetivo de facilitar su cultivo, los *Dendrobium* se han clasificado en dos grandes grupos:

### 1. *Dendrobium* tipo nobile

Incluye especies de hojas caducas, crecimiento colgante o semicolgante. Se caracterizan por florecer en las axilas de las hojas a lo largo del pseudobulbo. Estas especies prefieren temperaturas intermedias a frías (14 °C a 18 °C), aunque requieren climas cálidos para desarrollar los pseudobulbos. Una vez maduros, es necesario moverlos a un ambiente más fresco para inducir la floración. Se recomienda cultivarlos en cestas para favorecer su crecimiento natural colgante.



Figura 3. *Dendrobium* Spring Dream, inmerso en el grupo tipo nobile, cultivado en Ecuagenera

### 2. *Dendrobium* tipo phalaenopsis

Este grupo incluye especies originarias de climas cálidos. Sus pseudobulbos son erectos y las inflorescencias aparecen en el ápice. Estas especies han sido ampliamente hibridadas para mejorar sus características ornamentales, obteniéndose ejemplares de gran valor comercial.



Figura 4. *Dendrobium* Oshin Pink, del tipo phalaenopsis cultivado en Ecuagenera

## ***Dendrobium cuthbertsonii*: el “rey de los *Dendrobium*”**

Esta espectacular especie fue descrita por Ferdinand von Mueller en 1887, quien le dio el nombre en honor a su amigo y recolector Walter Cuthbertson. Es originaria de Nueva Guinea y crece en hábitats con alta humedad ambiental, desde los 800 hasta los 3000 msnm. Aunque es principalmente epífita, también puede crecer sobre rocas cubiertas de musgo (litófita) e incluso en el suelo, en condiciones adecuadas.

Es considerada por muchos como el “rey” del género *Dendrobium*, principalmente por la duración de sus flores, que pueden mantenerse durante más de seis meses. Las flores presentan una amplia gama de colores llamativos: rojo, anaranjado, rosa, blanco amarillento y combinaciones bicolors.

Estudios indican que *Dendrobium cuthbertsonii* es probablemente polinizado por aves nectarívoras, como los mieleros (familia Meliphagidae) y los pájaros sol (familia Nectariniidae), atraídos por sus flores tubulares y de colores vivos. Esta especie ha desarrollado un complejo mecanismo de polinización basado en el **engaño floral**: sus flores imitan a las del género *Rhododendron*, atrayendo a las aves sin ofrecerles néctar como recompensa. Sin embargo, este método le ha permitido asegurar su polinización y supervivencia.

En lugares como la Bahía de San Francisco, colibríes locales han sido observados visitando y ocasionalmente polinizando esta especie, incluso en cultivos al aire libre, lo que demuestra su atractivo visual para las aves, incluso fuera de su hábitat nativo.

La propagación **in vitro** de *Dendrobium cuthbertsonii* ha sido exitosa en los laboratorios de Ecuagenera, donde se han producido miles de plantas. También puede reproducirse de forma vegetativa.

### **Pautas básicas para el cultivo de *Dendrobium cuthbertsonii***

*Dendrobium cuthbertsonii* es una especie que, bajo condiciones adecuadas, puede cultivarse con relativa facilidad. Para garantizar su óptimo desarrollo, es fundamental replicar lo más posible las condiciones de su hábitat natural. A continuación, se presentan algunas recomendaciones esenciales para su cultivo:

**Sustrato:** Se recomienda utilizar una mezcla compuesta por un 80% de musgo sphagnum y un 20% de roca pómez

o perlita. Este sustrato permite una adecuada retención de humedad sin comprometer la aireación de las raíces. Es importante reemplazarlo cada 7 meses para evitar la descomposición del musgo y la acumulación de sales.

**Riego:** Debe realizarse preferentemente en horas de la mañana, antes de que los rayos solares se intensifiquen. Es crucial mantener un ambiente húmedo, lo cual puede lograrse colocando recipientes con agua cerca de las plantas. La frecuencia del riego dependerá de las condiciones climáticas, pero generalmente se recomienda regar entre dos y tres veces por semana.

**Ventilación:** Una buena circulación de aire es esencial, ya que ayuda a evaporar el exceso de humedad, especialmente la que se acumula en los brotes jóvenes y en el sistema radicular. Esto previene problemas como la pudrición de raíces y tejidos.

**Luminosidad:** La planta requiere de una luz moderada, aproximadamente un 50% de sombra. Este nivel de iluminación favorece un crecimiento saludable y permite que la planta realice eficientemente la fotosíntesis.

**Fertilización:** La fertilización debe aplicarse con regularidad, pero utilizando concentraciones bajas. Es preferible abonar con menor cantidad pero de forma constante, para evitar daños en las raíces y favorecer un desarrollo equilibrado.

**Reproducción:** Aunque la reproducción más común se realiza a partir de semillas en condiciones controladas, también es posible propagarla de forma vegetativa. Para ello, se pueden separar de 4 a 5 brotes de una planta madre y colocarlos en una nueva maceta con el sustrato recomendado.



*Dendrobium cuthbertsonii* red-orange  
x white Japon



*Dendrobium cuthbertsonii*  
rosado 002929



*Dendrobium cuthbertsonii* white  
x bicolor red yellow



*Dendrobium cuthbertsonii* alba



*Dendrobium cuthbertsonii* white  
x var Pepe 002927



*Dendrobium cuthbertsonii* xanthinum

**Figura 5.** *Dendrobium cuthbertsonii*, de la gama blancos, algunos son el resultado del cruce entre la misma especie, todos reproducidos y cultivados en Ecuagenera



*Dendrobium cuthbertsonii*  
pink



*Dendrobium cuthbertsonii* pink x  
purple and white



*Dendrobium cuthbertsonii* bicolor



*Dendrobium cuthbertsonii* popow  
GG2343 var. orange x yellow bicolor



*Dendrobium cuthbertsonii* pink x  
purple and white



*Dendrobium cuthbertsonii* pink

**Figura 6.** Variación de la gama de color rosa en *Dendrobium cuthbertsonii*, todos estos especímenes son el resultado de la reproducción in vitro en Ecuagenera



*Dendrobium cuthbertsonii*  
var Pepe 002927



*Dendrobium cuthbertsonii*  
orange



*Dendrobium cuthbertsonii* orange  
x red yellow bicolor



*Dendrobium cuthbertsonii* popow  
GG2343 var. orange x yellow bicolor



*Dendrobium cuthbertsonii* red



*Dendrobium cuthbertsonii* orange x pink

**Figura 7.** En Ecuagenera, con el objetivo de preservar la diversidad de especies de orquídeas, se ha llevado a cabo la reproducción de *Dendrobium cuthbertsonii*, obteniendo resultados sobresalientes. En este proceso se han desarrollado diversas variantes dentro de la gama del color rojo. Todos los ejemplares presentados corresponden a individuos obtenidos mediante reproducción selectiva y cruzamientos entre diferentes tonalidades de la misma especie.

## Instructions for authors

### Scope of the Journal

"Andreettana" is a scientific journal dedicated to publishing original research on the biodiversity of the Neotropical region, with an emphasis on the Tropical Andes. The journal welcomes submissions in the areas of taxonomy (species description and revision), biodiversity, ecology, biogeography, ecological restoration, cultural uses of biodiversity, and tropical plant horticulture, with a special focus on orchids. Manuscripts offering relevant contributions to taxonomic and ecological knowledge, as well as to the conservation and sustainable management of Andean biodiversity, will be prioritized.

Both empirical studies and reviews, essays, and short communications presenting new methods, conceptual approaches, or practical applications are published. Contributions that transcend specific cases and propose solutions or reflections applicable to other regions and contexts are valued.

"Andreettana"'s primary publication language is English. However, manuscripts in Spanish are also accepted, provided they meet the standards of scientific quality and clarity.

### Pre-Submission Inquiries

Authors are encouraged to direct inquiries to the Editorial Committee of "Andreettana" before submitting a manuscript to assess thematic relevance and suitability to the journal's scope.

### Free Format in the Initial Submission

The journal adopts a relatively free format for the initial manuscript submission, with some minimum requirements (see "Manuscript Specifications" below). Once the manuscript is accepted with revisions, strict adherence to the final style guidelines will be required.

### Authorship

All authors are expected to comply with ethical authorship criteria, which include having contributed substantially to the conception, design, data collection, analysis or interpretation, and/or the drafting or critical revision of the manuscript. All authors must approve the final accepted version before publication. Including as co-authors those who have contributed substantially, including personnel who have collected data, especially if they are from the regions where the research was conducted, is suggested to

promote inclusion and local representation.

### Article Categories and Word Limits

Word counts include the text from the Abstract to the Acknowledgments, excluding references, table and figure captions, and the table body.

Research Article (7000 words): Original and complete studies on biodiversity, taxonomy, ecology, biogeography, restoration, cultural uses, and tropical horticulture, with emphasis on the Andean-Neotropical context.

Review (8000 words): Comprehensive and critical syntheses of the literature, providing new theoretical or methodological perspectives, or identifying relevant trends at local and global levels.

Essay (5000 words): Conceptual reflections, policy analyses, or novel approaches to biodiversity conservation and management, based on documentary evidence and relevance beyond a local case.

Note (3500 words): Brief reports of preliminary results, specific findings, methodological advances, or horticultural curiosities.

Commentary (1000 words): Critical responses or comments on material previously published in "Andreettana."

Short Communication / Letter (500-1000 words): Short opinions, correspondence, or statements on urgent issues in Andean conservation, diversity, and ecology.

The journal does not have fixed sections for book reviews but may consider their publication at the request of the editorial team.

### Submission Requirements

Manuscripts must be submitted via the official "Andreettana" email ([editorial@faaec.org](mailto:editorial@faaec.org)). In case of access problems, contact the general editor.

Double-Blind Peer Review: Neither the authors nor the reviewers will know each other's identities. Therefore, any identifying information should be removed from the manuscript (except on a separate cover page).

Suggested Reviewers: Authors are requested to suggest 4-6 potential reviewers with expertise in the subject, without conflicts of interest with the authors, and ensuring geographical, gender, and academic background diversity.

### Transparency, Data Access, and Reproducibility

Authors must comply with transparency standards in data analysis and presentation. The use of data repositories and the inclusion of supplementary information (online appendices) to facilitate reproducibility are recommended. A brief statement on data access, analytical code, and funding sources should be included.

### **Pre-Publication (Preprints)**

Manuscripts previously available as preprints in recognized repositories are accepted. If the work is accepted, the authors must ensure the granting of the corresponding license to the journal. If a preprint was used, it should not be identifiably cited in the text during the double-blind review process. After acceptance, the link between the final version and the preprint can be established.

### **Policies on Duplicate Publications**

Manuscripts that have been published in whole or in part in other media, or that are under simultaneous consideration in another journal, will not be accepted. Authors must declare any prior overlap in the cover letter.

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All manuscripts will be subjected to similarity checks with other sources. Submission implies acceptance of this condition.

### **Conflict of Interest**

Authors must declare any conflict of interest, financial or otherwise, in the manuscript submission process.

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All authors are required to provide their ORCID identifier (<http://orcid.org/>) at the time of submission, unless there are duly justified reasons against it.

### **Use of Artificial Intelligence**

If artificial intelligence (AI) tools were used for text generation or manuscript analysis, the mode of use must be explicitly declared in the document. Authors are responsible for reviewing the accuracy and absence of bias in AI-generated content.

### **Manuscript Specifications**

Format:

Number all lines of the main text.

Sections are usually ordered as Introduction, Methods, Results, and Discussion for Research Articles. Essays,

Commentaries, and Letters may have a more flexible structure.

Include a concise and descriptive title.

Include an Abstract (max. 250 words) in the manuscript's primary language (Spanish or English) and a set of 5-8 keywords.

Provide an "Impact Statement" ( $\leq 140$  characters) summarizing the key finding or practical application of the study.

Include a separate cover page (not included in the manuscript) with:

Full title

Impact statement

Keywords

Word count

Affiliations of all authors (with full address and email of the corresponding author)

Acknowledgments

Link to the preprint, if applicable.

Tables and Figures:

Place tables and figures after the references.

Provide brief and clear captions; additional clarifications are placed as footnotes in the tables.

Figures containing maps do not imply endorsement of political or jurisdictional boundaries.

Ensure that images, graphics, or maps comply with ethical standards in data collection (e.g., avoid violating privacy if data have been obtained with drones or camera traps).

### **Ethics in Research with Humans and Animals**

If the study involves humans or biodiversity, specify the ethical regulations and permits (including permit numbers) followed, as well as compliance with local and international codes of conduct.

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The editor-in-chief will initially evaluate the manuscript. If relevant, it will be assigned to a thematic editor, who will decide whether to send the manuscript for peer review. Authors must respond point by point to the reviewers' comments if revisions are requested. The final decision

rests with the editor-in-chief.

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Appeals to editorial decisions are accepted within 3 months of notification. They should be addressed to the editor-in-chief, who will evaluate the request

### **Publication Costs**

"Andreettana" is a free academic publication, both for its dissemination and for the acceptance of publications.

### **Equity, Diversity, and Inclusion**

The journal promotes the participation of authors, reviewers, and editors from diverse backgrounds, orientations, and levels of experience, thus fostering inclusion and respect for local knowledge, and promoting interdisciplinary and multicultural dialogue.

## Instrucciones para Autores

### Alcance de la Revista

Andreettana es una revista científica dedicada a la publicación de investigaciones originales sobre la biodiversidad de la región neotropical, con énfasis en los Andes tropicales. La revista recibe trabajos en las áreas de taxonomía (descripción y revisión de especies), biodiversidad, ecología, biogeografía, restauración ecológica, usos culturales de la biodiversidad, así como horticultura de plantas tropicales, haciendo especial énfasis en orquídeas. Los manuscritos que ofrezcan aportes relevantes al conocimiento taxonómico y ecológico, así como a la conservación y el manejo sostenible de la biodiversidad andina, tendrán prioridad.

Se publican tanto estudios empíricos como revisiones, ensayos y comunicaciones breves que presenten nuevos métodos, enfoques conceptuales o aplicaciones prácticas. Se valoran contribuciones que trasciendan casos específicos y planteen soluciones o reflexiones aplicables a otras regiones y contextos.

Andreettana tiene como idioma principal de publicación el inglés. Sin embargo, se aceptan también manuscritos en español, siempre y cuando cumplan con los estándares de calidad científica y claridad. Una vez aceptados, la revista puede ofrecer servicios de edición sustantiva en inglés sin costo adicional, en especial para autores no nativos angloparlantes.

### Consultas Previas a la Presentación

Los autores pueden dirigir consultas al Comité Editorial de Andreettana antes de someter un manuscrito para evaluar la pertinencia temática y el ajuste al alcance de la revista.

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La revista adopta un formato relativamente libre en la primera presentación del manuscrito, con algunos requisitos mínimos (ver "Especificaciones del Manuscrito" más adelante). Una vez aceptado el manuscrito con revisiones, se requerirá el ajuste estricto a las normas de estilo finales.

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Se espera que todos los autores cumplan con criterios éticos de autoría, lo cual incluye haber contribuido de manera sustancial a la concepción, diseño, recolección de datos, análisis o interpretación, y/o a la redacción o revisión crítica del manuscrito. Todos los autores deben aprobar la

versión final aceptada antes de su publicación. Se sugiere incluir como coautores a quienes hayan contribuido sustancialmente, incluyendo a personal que haya recolectado datos, especialmente si son originarios de las regiones donde se desarrolló la investigación, de manera que se promueva la inclusión y la representación local.

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El conteo de palabras incluye el texto desde el Resumen/ Abstract hasta los Agradecimientos, sin contar las referencias, ni leyendas de tablas y figuras, ni el cuerpo de tablas.

**Artículo de Investigación** (7000 palabras): Estudios originales y completos sobre biodiversidad, taxonomía, ecología, biogeografía, restauración, usos culturales y horticultura tropical, con énfasis en el contexto andino-neotropical.

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**Ensayo** (5000 palabras): Reflexiones conceptuales, análisis de políticas o enfoques novedosos en conservación y manejo de la biodiversidad, con base en evidencia documental y pertinencia más allá de un caso local.

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Propuesta de Revisores: Se solicita sugerir 4-6 posibles revisores con experiencia en el tema, sin conflictos de interés con los autores, y procurando diversidad geográfica, de género y de trayectoria académica.

### **Transparencia, Acceso a Datos y Reproducibilidad**

Los autores deben cumplir con estándares de transparencia en el análisis y la presentación de datos. Se recomienda el uso de repositorios de datos y la inclusión de información complementaria (apéndices en línea) que faciliten la reproducibilidad. Se deberá incluir una breve declaración sobre el acceso a datos, código analítico y fuentes de financiamiento.

### **Prepublicación (Preprints)**

Se aceptan manuscritos previamente disponibles como preprints en repositorios reconocidos. De ser aceptado el trabajo, los autores deberán asegurar el otorgamiento de la licencia correspondiente a la revista. Si se utilizó un preprint, no debe citarse en el texto de manera identificable durante el proceso de evaluación a doble ciego. Luego de la aceptación, se podrá establecer el enlace entre la versión final y el preprint.

### **Políticas sobre Publicaciones Duplicadas**

No se aceptan manuscritos que hayan sido publicados total o parcialmente en otros medios, o que estén bajo consideración simultánea en otra revista. Los autores deberán declarar cualquier solapamiento previo en la carta de presentación.

### **Plagio**

Todos los manuscritos se someterán a revisión de similitud con otras fuentes. El envío implica la aceptación de esta condición.

### **Conflicto de Intereses**

Los autores deben declarar cualquier conflicto de interés, financiero o de otro tipo, en el proceso de envío del manuscrito.

### **ORCID**

Se requiere que todos los autores proporcionen su identificador ORCID (<http://orcid.org/>) al momento de la sumisión, a menos que existan motivos en contra debidamente justificados.

### **Uso de Inteligencia Artificial**

Si se emplearon herramientas de inteligencia artificial (IA) para la generación del texto o análisis del manuscrito, se deberá declarar explícitamente el modo de uso en el documento. Los autores son responsables de revisar la exactitud y la ausencia de sesgos en el contenido generado con IA.

### **Especificaciones del Manuscrito**

Formato:

Numerar todas las líneas del texto principal.

Las secciones suelen ordenarse en Introducción, Métodos, Resultados y Discusión para Artículos de Investigación. Ensayos, Comentarios y Cartas pueden tener una estructura más flexible.

Incluir un título conciso y descriptivo.

Incluya un Resumen (máx. 250 palabras) en el idioma principal del manuscrito (español o inglés) y un conjunto de 5-8 palabras clave.

Proporcionar una "Frase de Impacto" ( $\leq 140$  caracteres) que resuma el hallazgo clave o la aplicación práctica del estudio.

Incluir una página de portada separada (no incluida en el manuscrito) con:

Título completo

Frase de impacto

Palabras clave

Conteo de palabras

Afiliaciones de todos los autores (con dirección completa y correo electrónico del autor de correspondencia)

Agradecimientos

Enlace al preprint si corresponde.

Tablas y Figuras:

Colocar tablas y figuras después de las referencias.

Leyendas breves y claras; las aclaraciones adicionales se colocan como notas al pie en las tablas.

Las figuras que contengan mapas no implican respaldo sobre límites políticos o jurisdiccionales.

Asegurar que las imágenes, gráficos o mapas cumplan estándares éticos en la recolección de datos (ej. evitar violar

privacidad si se han obtenido datos con drones o cámaras trampa).

### **Ética en la Investigación con Seres Humanos y Animales**

Si el estudio involucra seres humanos o biodiversidad, especificar las normativas éticas y permisos (incluyendo números de permisos) seguidos, así como el cumplimiento con códigos de conducta locales e internacionales.

### **Proceso de Revisión**

El editor en jefe evaluará inicialmente el manuscrito. Si es pertinente, se asignará a un editor temático, quien a su vez decidirá si enviar el manuscrito a revisión por pares. Los autores deberán responder punto por punto a los comentarios de los revisores en caso de solicitarse revisiones. La decisión final corresponde al editor en jefe.

### **Apelaciones**

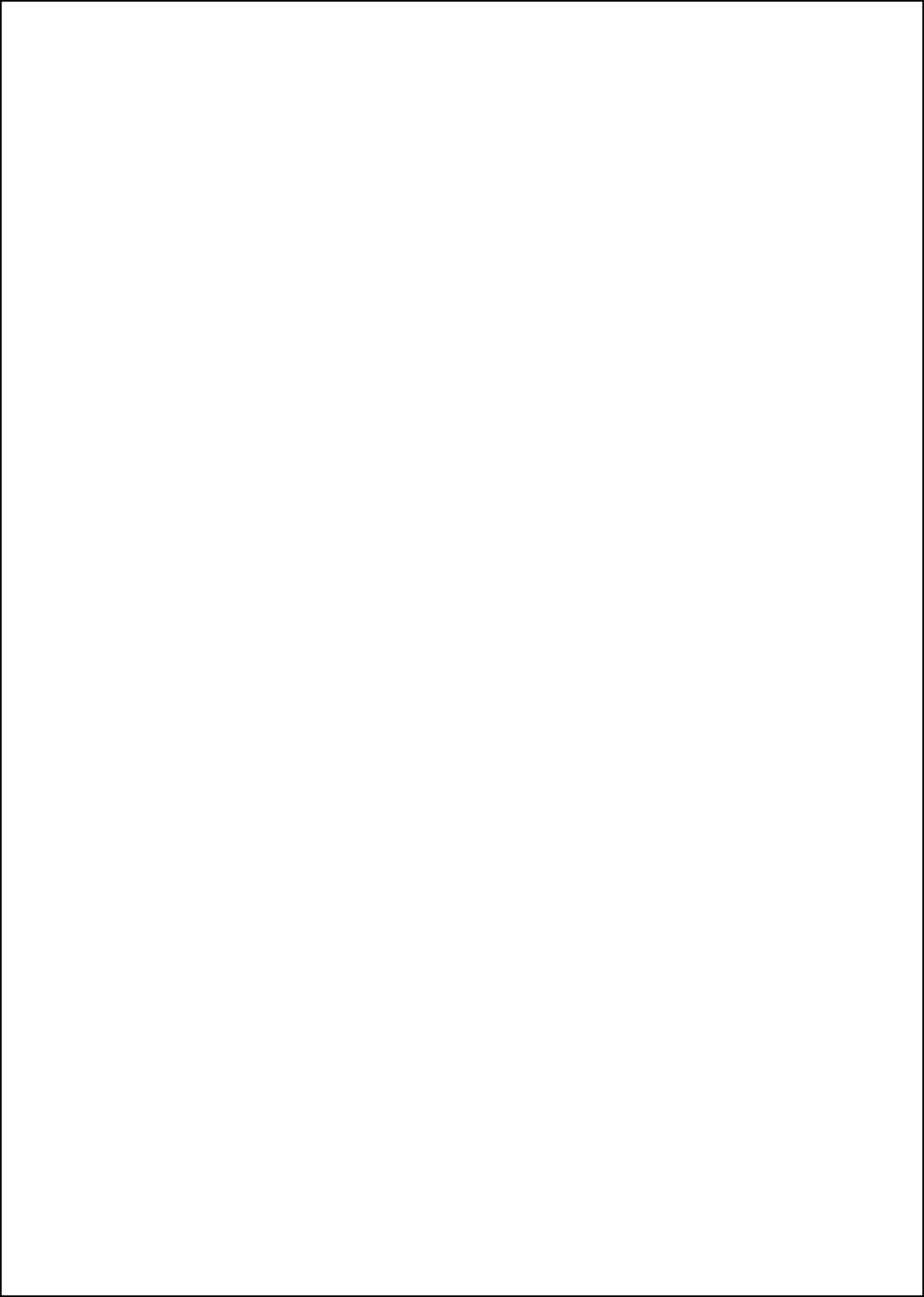
Las apelaciones a las decisiones editoriales se aceptan dentro de los 3 meses posteriores a la notificación. Deben dirigirse al editor en jefe, quien evaluará la solicitud.

### **Costos de Publicación**

Andreettana es una publicación académica sustentada gratuita, tanto para su difusión como para la aceptación de publicaciones.

### **Equidad, Diversidad e Inclusión**

La revista promueve la participación de autores, revisores y editores de diversas procedencias, orientaciones y niveles de experiencia, fomentando así la inclusión y el respeto al conocimiento local, y favoreciendo el diálogo interdisciplinario y multicultural.





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