

ICONES ORCHIDACEARUM

Fascicle 19(2)

Plates 1950-1962

THE GENUS EPIDENDRUM

Part 15

“Species New & Old in Epidendrum”

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AMO**

ICONES ORCHIDACEARUM

Fascicle 19(2), plates 1950 to 1962

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Part 15

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Reference Map

TROPICAL AMERICA

(numbers refer to the portions of the map used in individual plates)



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ICONES ORCHIDACEARUM

Fascicle 19(2), plates 1950 to 1962

THE GENUS *EPIDENDRUM* Part 15

“Species New* & Old in *Epidendrum*”

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ICONES ORCHIDACEARUM

Fascicle 19(2), plates 1950 to 1962

THE GENUS *EPIDENDRUM*

Part 15

Species New & Old in *Epidendrum*

FOREWORD

This short issue of only 13 species is published soon after the previous part to correct several problems with mistakes in previous numbers and present new discoveries which are appearing constantly, especially in the Andes.

Six species are new to science and are mostly from Ecuador and one each from Colombia and Venezuela. Two species from Ecuador are shared by Colombia and Peru. *Epidendrum cuyestachyum* Hágsater & E.Santiago, *E. floreziarum* Hágsater, E.Santiago & Reina-Rodr., *E. monicarmasiae* Cornejo & Hágsater, *E. spiculistachyum* Hágsater & E.Santiago, *E. tamborense* Hágsater, C.J.Jerez & M.Jerez, and *E. viridialpicola* Hágsater & Ordóñez-Blanco.

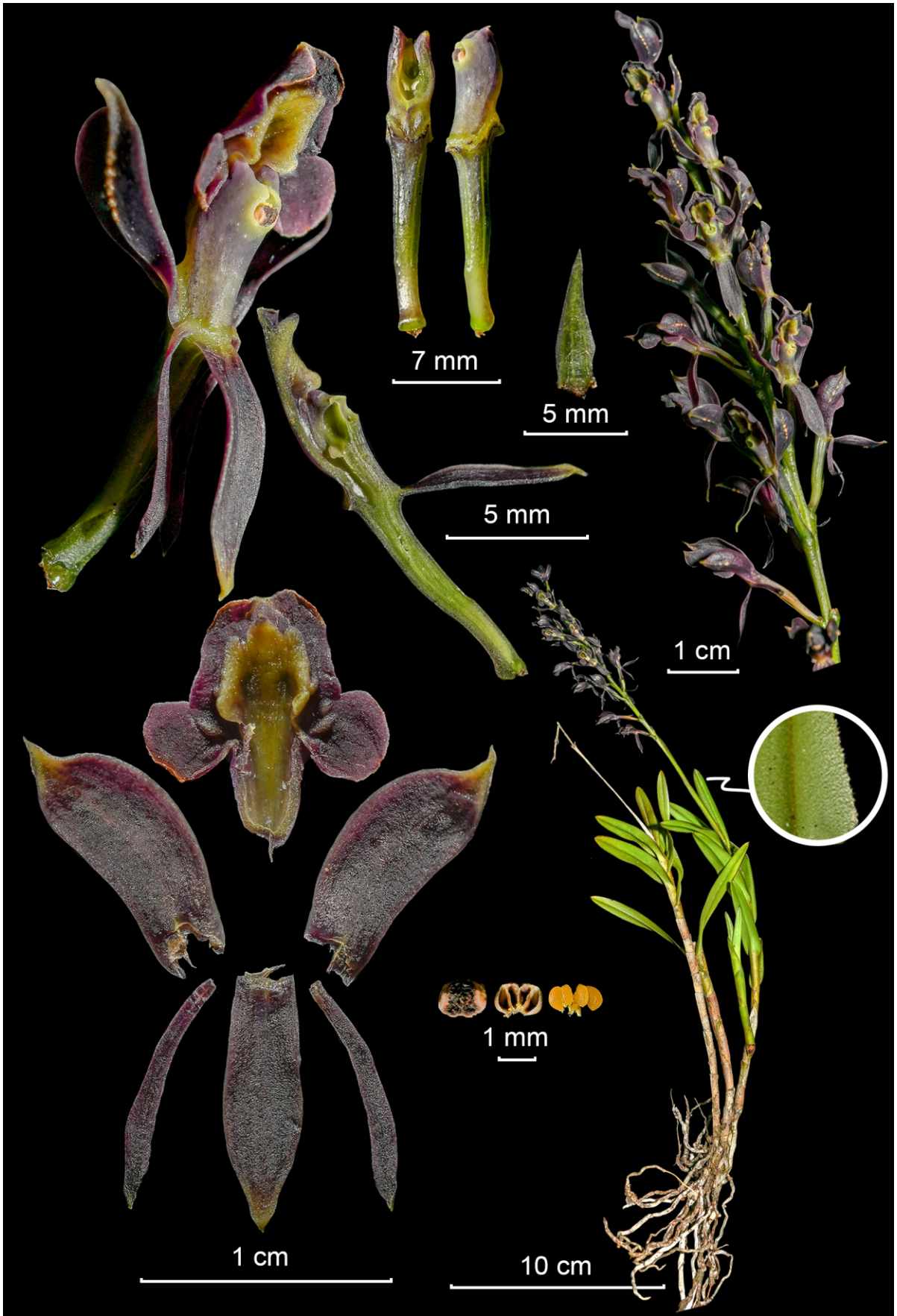
We also include a couple of old species which we have never illustrated in full color, *Epidendrum cupreum* F.Lehm. & Kraenzl. and *E. fritzianum* Hoehne. In addition some not so old species *E. chrisii-sharoniae* L.Valenz. & E.Santiago, recently published in *Phytotaxa*, extends its range to San Martin, *E. notostachyum* Hágsater & E.Santiago also extends its range from Colombia to Bolivia, and the bright orange *E. pseudoglobiflorum* Hágsater & Dodson is illustrated in full color for the first time but remains an endemic from southern Ecuador.

For *Epidendrum microtigriphyllum* Ocupe, Hágsater & E.Santiago, the citation of the type is corrected in accordance with Article 9.2 of the Shenzhen Code.

For *Epidendrum pluricostatum* Hágsater, Reina-Rodr. & J.Duarte the holotype of this species has been lost and therefore a lectotype is designated from the specimens cited in the original publication, the citation of the locality is corrected in accordance with Article 9.2 of the Shenzhen Code and in addition, a new plate prepared from a plant from neighboring Ecuador is provided.

With the shared experience of the specialized taxonomist and the use of high-definition photography by botanists and amateurs in the field, we are now able discover, analyze, and describe new species faster than ever. The use of platforms on the internet like Facebook and iNaturalist has greatly expanded our communication and sharing of information.

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EPIDENDRUM CHRISII-SHARONIAE L.Valenz. & E.Santiago

Plate 1950

EPIDENDRUM CHRISII-SHARONIAE L.Valenz. & E.Santiago, Phytotaxa, 543 (2): 163. 2022.

Type: PERU: Region Pasco: Prov. Oxapampa: Dist. Huancabamba: Peasant Community of Santa Barbara, Yanachaga Chemillén National Park. High montane sclerophyllous forest, on white sand, 3200 m, 8 August 2020. **Luis Valenzuela Gamarra, Thibaud B. Aronson, Roger H. Zehnder, M. Cantalicio 38574.** Holotype: HOXA! Isotypes: USM! MO!

Epiphytic, sub-caespitose, sympodial **herb**, 20–35 cm high. **Roots** 1.5–2.0 mm basal, thick, fleshy, white. **Stems** 12.0–18.0 × 0.4–0.7 cm, simple, cane like, erect, arising from a middle internode of previous stem, terete towards base below first leaf, laterally compressed towards apex. **Leaves** 4–8, distributed along apical half of stem; sheaths 2.0–2.5 × 0.6–1.0 cm, tubular, laterally compressed, striated; blade 2.8–7.5 × 0.7–1.2 cm, dark green tinged purple above, lighter green beneath, oblong-lanceolate, obtuse, apex apiculate, margin entire. **Spathes** 2–3, 2.5–4.0 × 0.7–1.0 cm, covering entire peduncle, tubular, ancipitose, conduplicate, narrow, acute, finely striated. **Inflorescence** 8.0–16 cm long, apical, racemose, erect; peduncle 3.5–5.5 cm long, erect, laterally flattened, not ornamented; rachis 4.0–4.5 cm long, terete, slightly flexuous. **Floral bracts** 4.0–8.0 × 2.0–2.5 mm, half as long to as long as ovary, gradually shorter towards apex of inflorescence, triangular, acuminate, embracing. **Ovary** 7.0–13.0 × 1.0–2.0 mm, terete, thin at base, progressively wider towards apex, not inflated, glabrous, furrowed towards apex. **Flowers** 7–18, deep violet to black, apices of sepals, clinandrium, anther, calli and disc of lip more or less yellow-green, simultaneous, non-resupinate; fragrance sweet. **Sepals** obovate-oblong, acuminate, margin entire, spreading; dorsal sepal 10–12 × 2.3–3.4 mm, free, reflexed, 5-veined; lateral sepals 10.5–13.0 × 3.0–4.2 mm, free, partly spreading, attached obliquely to base of column, twisting basally so that adaxial side faces upward, strongly keeled, 7-veined. **Petals** 9–11 × 0.7–1.6 mm, free, reflexed, linear-oblancoelate, falcate, apex truncate-rounded, 1-veined, margins entire, spreading. **Lip** 7.0–8.0 × 7.0–10.0 mm, adnate to column, cordate at base, 3-lobed, fleshy, slightly concave; bicallose, calli laminar, erect, leaning towards mid-line and producing a channel effect at entrance of cuniculus in young flowers, gradually leaning laterally as flower ages, prolonged at apex to form a obovoid disc covering most of mid-lobe of lip and nearly reaching end of mid-lobe, center slightly striated; lateral lobes 3.8–4.0 × 3.0–3.2 mm, dolabriform, trapezoidal, ornamented with a sinuous thickened lamina at base ending near calli and parallel to them, margins erose, posterior margin involute; mid-lobe 4.0–5.0 × 4.0–6.0 mm, sub-quadrate, wider towards truncate apex, margin somewhat erose. **Column** 7.0–8.0 × 2.0–3.0 mm, slightly dilated towards apex, apex with a wide obtuse tooth on each side. **Clinandrium** reduced, margin entire. **Anther** 1.2 × 0.9 mm, yellow, sub-spherical, blunt keel in front, 4-celled. **Pollinia** 4, sub-equal, obovoid, caudicles almost as long as pollinia, viscarium semi-liquid. **Rostellum**, apical, cleft; lateral lobes of stigma small, occupying 1/4 of length of stigmatic cavity. **Lateral lobes of stigma** small, about 1/5th length of large stigmatic cavity, occupying about half depth of column and nearly entire width. **Nectary** shallow and wide, penetrating as far as perianth, end rounded, unornamented.

OTHER SPECIMENS: None seen.

OTHER RECORDS: PERU: Pasco: Prov. Oxapampa: Dist. Chontabamba: parte alta de Santa Marta, 3489 m, 17 VII 2021, *Edquén 5094*, Digital images, AMO! (Photo voucher) San Martín: Rioja: Pardo Miguel Naranjos: Venceremos, 2108 m, 26 V 2022, *Edquén 5249*, KUELAP! digital images, AMO! (LCDP voucher).

DISTRIBUTION AND ECOLOGY: The species is only known from 3 localities in Peru. The first is the Yanachaga Chemillén National Park, near to Santa Barbara Peasant community, located in the buffer zone of the natural protected area, in the Pasco region, Oxapampa province, Huancabamba in the central jungle of Peru and parte alta de Santa Marta, in the same area. The third one corresponds to Venceremos locality in the San Martin region in the North of Peru. Only a few individuals were found forming small colonies on the branches of several tree species such as *Escallonia myrtilloides* L.f., *Saracha punctata* Ruiz & Pav. and *Symplocos nana* Brand, within a high montane sclerophyllous forest between 2700–3600 m elevation. The species blooms between the months of July and October.

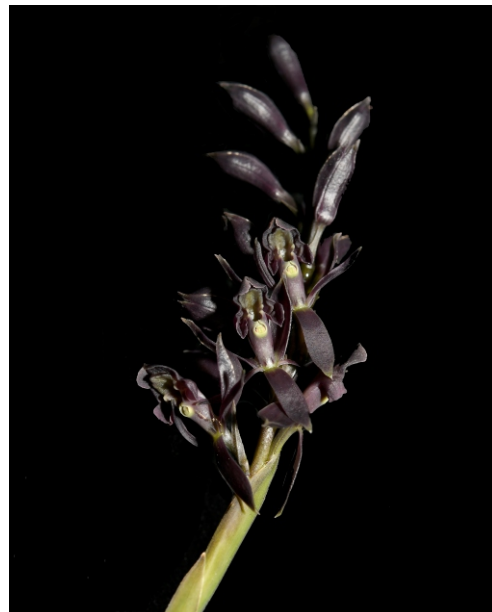
RECOGNITION: *Epidendrum chrisii-sharoniae* belongs to the Pergracile Group, Rhodoides Subgroup, which is characterized by the caespitose habit, the racemose inflorescence with narrow, parallel-sided spathes, the flowers with a wide, rounded mid-lobe and a large fleshy disc. The species has 4-8 leaves, oblong-lanceolate, 2-3 spathes covering the whole length of the peduncle of the strict, erect inflorescence, the flowers deep violet, apices of sepals, clinandrium, anther and calli and disc of the lip more or less yellow-green, simultaneous, non-resupinate, the sepals 10-13 mm long, petals 10-11 × 0.7-1.6 mm, linear-oblong, and the lip 7.0-8.0 × 7.0-9.0 mm, the mid-lobe sub-quadrate, apex truncate, with the calli laminar, erect, leaning towards the mid-line and producing a channel effect at entrance of cuniculus in young flowers, gradually leaning laterally as the flower ages, prolonged at apex to form a obovoid disc covering most of the mid-lobe of the lip and nearly reaching the end. *Epidendrum cyclotylosum* Hágsater has 2-5 leaves, narrowly oblong-elliptic, 2 spathes about half as long as the peduncle of the arching inflorescence, resupinate flowers pale brown-red, the sepals 5.0-6.3 mm long sepals, the petals 4.8-5.5 × 1.0-1.2 mm, linear-oblancoelate, and the lip 3.0-4.0 × 3.5-4.7 mm, the mid-lobe semi-orbicular, and a single callus sub-orbicular, prominent, fleshy, slightly concave and striated at the base. *Epidendrum rhodoides* Hágsater & Dodson has 3-5 oblong-lanceolate leaves, apex unequally bilobed, 2 spathes covering nearly all of the peduncle, resupinate flowers-tinged pink, the lip yellow, sepals 10-11 mm long, petals 9.3 × 3 mm, wide, obovate, acute, and the lip 7.7 × 9.0 mm, with two prominent calli, laminar, erect, parallel, reaching the base of the mid-lobe and the surface in between striated but not thick.

ETYMOLOGY: The species is dedicated to Christopher Davidson and his wife Sharon Christoph, great internationally recognized botanical researchers who, due to their great interest in learning about the world's floristic diversity, have been collaborating in the development and execution of many scientific research and field trips, such as those carried out by the Missouri Botanical Garden in Peru.

ACKNOWLEDGMENTS: Material in the region of San Martin was collected under project "Diversidad de la familia Orchidaceae asociada a gradientes altitudinales en el Bosque de Protección Alto Mayo, Perú" RESOLUCIÓN JEFATURAL DEL BOSQUE PROTECCIÓN ALTO MAYO N°004-2022-SERNANP-BPAM-JBPAM.

CONSERVATION STATUS: DD. Data deficient. Presently known from 3 localities in central and northern Peru, near the summit of the eastern slope of the Andes, a range of some 600 km. The areas are difficult to reach and in nominally in protected parks.

REFERENCES: Hágsater, E., 2004, *Epidendrum cyclotylosum* in E. Hágsater & L. Sánchez S. (Eds.) The Genus *Epidendrum*, Part 4, *Icon. Orchid.* 7: pl. 730. Hágsater, E. & C.H. Dodson, 2001, *Epidendrum rhodoides* in E. Hágsater & L. Sánchez S. (Eds.) The Genus *Epidendrum*, Part 3, *Icon. Orchid.* 4: pl. 480. Valenzuela, L., & E. Santiago, 2022, A new species of *Epidendrum* (Laeliinae: Orchidaceae), in the Yanachaga Chemillén National Park, Pasco – Peru, *Phytotaxa* 543 (2): 163-169.



Authors: E. Santiago, J. D. Edquén O. & E. Hágsater

LCDP: J. D. Edquén O. & A. Cisneros

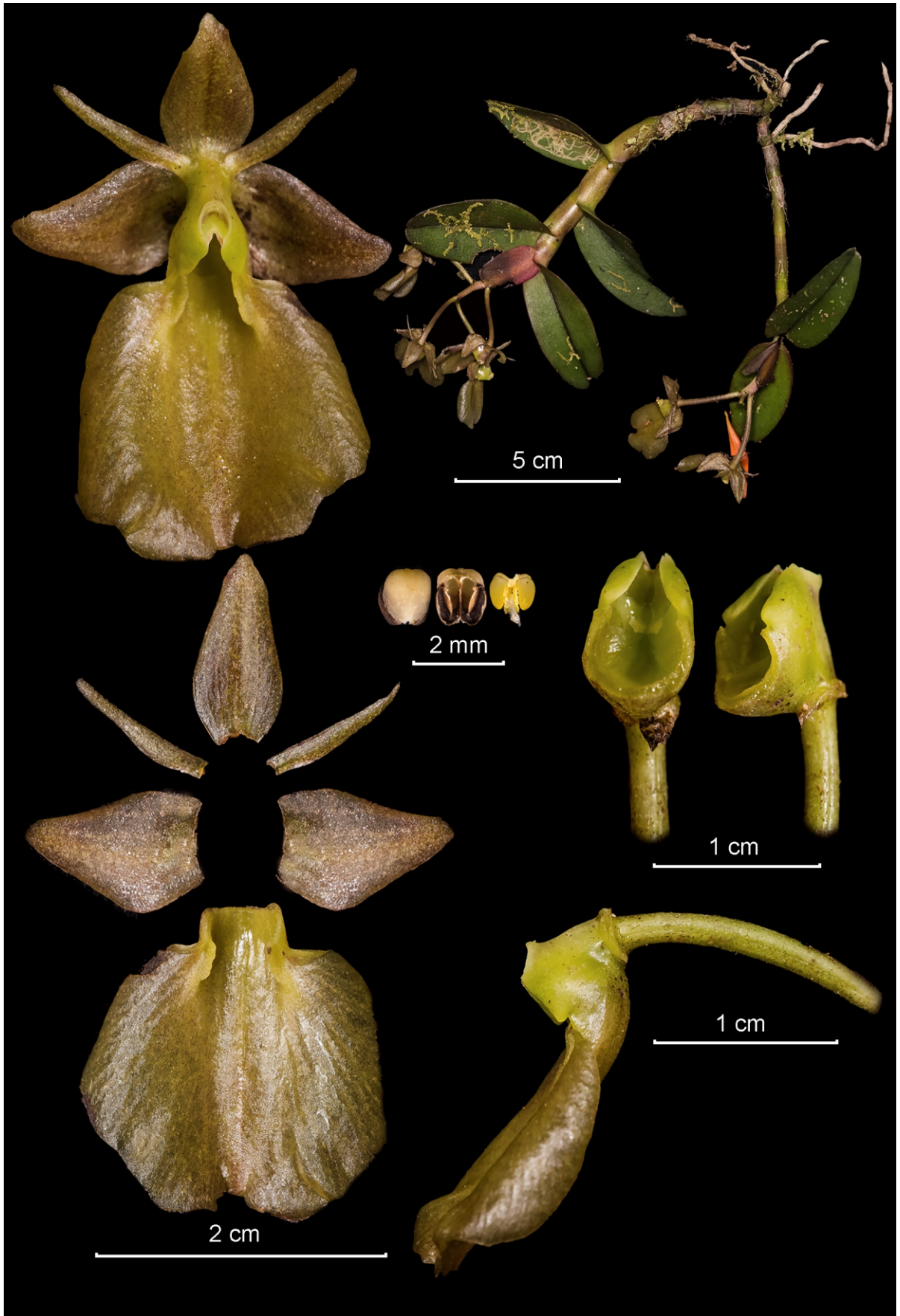
Photo: J. D. Edquén O.

Editors: E. Hágsater & E. Santiago

Herbario AMO

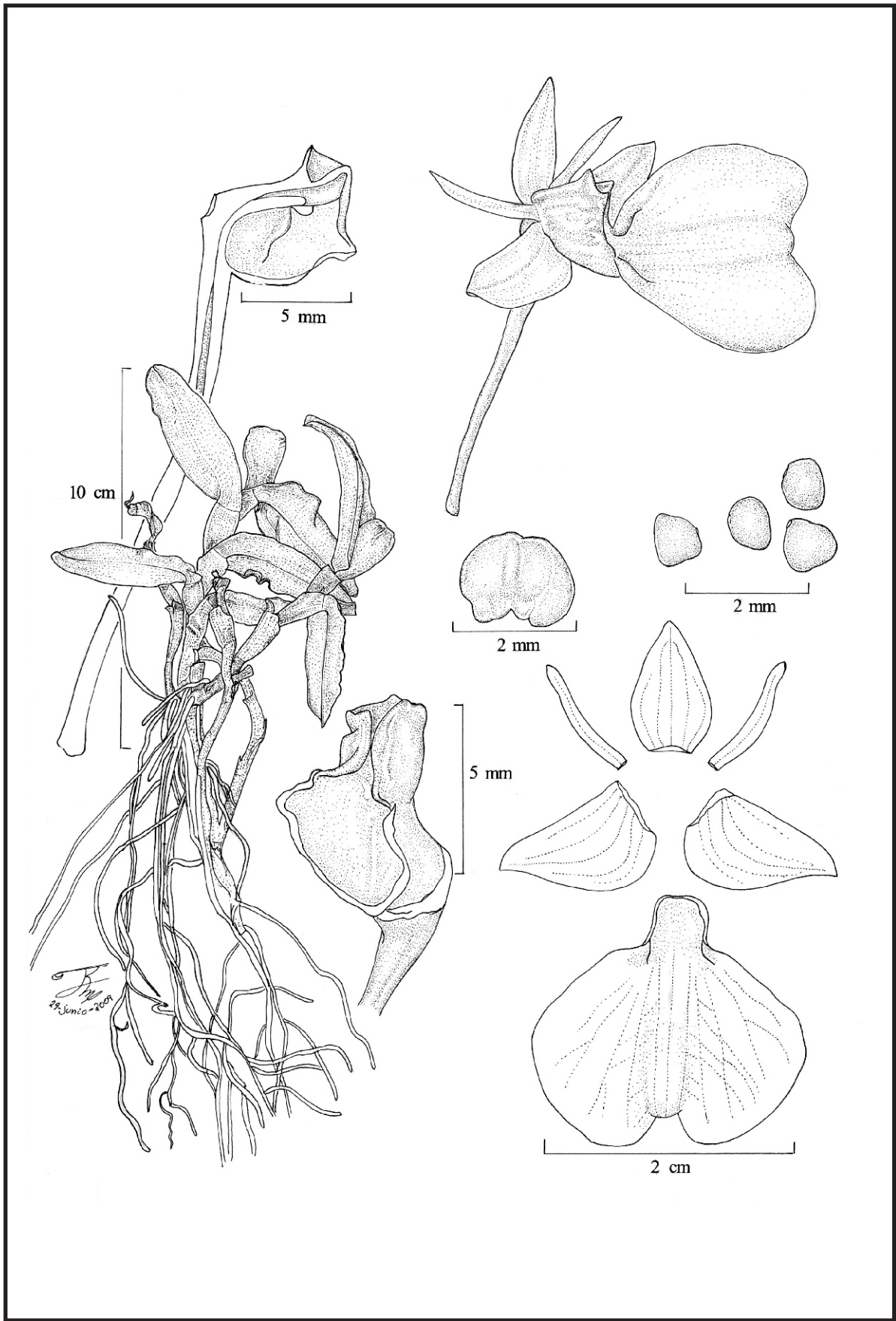
Ciudad de México, MÉXICO

ICONES ORCHIDACEARUM 19(2). 2022. Plate 1950



EPIDENDRUM CUPREUM F.Lehm. & Kraenzl.

Plate 1951a



EPIDENDRUM CUPREUM F. Lehm. & Kraenzl.

Plate 1951b

EPIDENDRUM CUPREUM F.Lehm. & Kraenzl., Bot. Jahrb. Syst. 26: 476. 1899.

Type: ECUADOR: Ad ardua lapidosa circa Agoyan infra Baños ad fluvium Pastaza, 1500-1800 m, **Friedrich Carl Lehmann 8337***. Holotype: K! Isotypes: AMES x3! G! L! NY! W! (illustration voucher).

Lithophytic and epiphytic, sympodial, caespitose **herb**, to 12-17 cm tall including inflorescence. **Roots** 0.5-1.0 mm in diameter, produced from basal internodes of stems, fleshy thin, scarce. **Stems** 6-9 x 0.3-0.7 cm, cane-like, simple, terete at base, ancipitose at apex, erect, provided at base with sheaths 9-12 mm long, tubular, non-foliar, scarious, and becoming fibrous through time. **Leaves** 2-4, distributed along apical half of stems, spreading, coriaceous, medium green concolor; foliar sheath 1.0-1.5 x 3-7 mm, infundibuliform, minutely striated; blade 1.5-7 x 1.1-3.1 cm, oblong to elliptic, apex obtuse, unequally bilobed, margin entire, spreading. **Spathes** 1 (occasionally 2), 2.0-2.8 cm long, obovate, conduplicate, apex rounded. **Inflorescence** 3.5-7.0 cm long including flowers, erect, racemose, laxly few-flowered; peduncle 2.5-3.0 cm long, totally hidden within spathe, terete, thin, straight, without bracts; rachis 0.5-1.5 cm long, terete, thin. **Floral bracts** 1-2 mm long, much shorter than ovary, narrowly triangular, acute, embracing. **Ovary** 15-22 mm long, terete, thin, furrowed. **Flowers** 2-4, resupinate, simultaneous, ochre with lip copper-color; fragrance not registered. **Sepals** free, spreading, acute, 5-veined, margins entire, slightly revolute; dorsal sepal 10-12 x 6.0-7.5 mm, free, widely ovate; lateral sepals 10-12.5 x 7-8.5 mm, semi-ovate, oblique. **Petals** 9-10 x 1.0-1.1 mm, free, spreading, linear to linear-triangular, obtuse to acute, 1-veined, margin entire, spreading. **Lip** 15-20 x 20-31 mm, united to column, concave in center, convex on margins, entire, transversely elliptic, base slightly cuneate, apex retuse, (sometimes slightly 4-lobed), widely mucronate; bicallose, the calli laminar, disc with a prominent mid-rib, wide, reaching apical sinus; margin entire, revolute at sides. **Column** 5-6 mm long, straight, apex strongly arched upwards, apex with pair of truncate wings, forming a wide globose cavity with lip which is nearly saccate at base. **Clinandrium-hood** short, margin entire. **Anther** globose, 4-veined. **Pollinia** 4, lentil-shaped, semi-ovate; caudicles soft and granulose, slightly longer than pollinia; viscarium semi-liquid, transparent. **Rostellum** sub-apical, slit. **Lateral lobes of stigma** small, about 1/3 length of stigmatic cavity. **Nectary** wide, globose, without penetrating ovary. **Capsule** not seen.

OTHER SPECIMENS: COLOMBIA: Caquetá: Mun. San Vicente Caguán, Cuenca del Río Pato, 1500 m, 15 XI 1997, *Mendoza 4807*, FMB x2! Floreació en Santandercito, Cundinamarca, 1 V 1972, *Ortiz 573*, HPUJ! **Santander:** La Belleza, vereda Vista Hermosa, 2380 m, 29 V 2017, *Gutiérrez 38*, JBB! digital image, AMO! **ECUADOR: Loja:** Collected at Cajanuma; cultivated at Ecuagenera, 1800 m, 10 XI 2001, *Hirtz 7918*, SEL! digital image, AMO! **Morona-Santiago:** Pedregal Río Upano, unos 11 km río arriba de Macas hacia Puyo, 1050 m, 23 XI 1988, *Dodson sub Hágsater 9682*, AMO x6! (digital image) Camino Patuca-Méndez-Limón-Gualacéo, abajo de Plan de Milagro, Km 61 desde Gualacéo, 1360 m, 24 XI 1988, *Hernández 9731*, AMO x3! **Pastaza:** Napo-Pastaza: 4 km east of Baños near Río Blanco, 1600 m, 8 X 1961, *Dodson 882*, AAU! QCA x2! SEL! Mera, 15 VII- 15 X 1983, 1000 m, *Hirtz 1202*, QCNE! MO! **Andibus Ecuatoriensis**, IX 1857, *Spruce s.n. "A"*, K x2! W 52014! **Tungurahua:** Collected at Río Negro on road from Baños to Puyo, in the garden of Alfonso Pozo in Cuenca, 1500 m, 20 XI 1989, *Dodson 17721*, MO! Baños-Puyo: Agoyán, entre río Blanco y río Verde, ca 3 km abajo de la salida del túnel, 1580 m, 9 XII 1986, *Hágsater 9190*, AMO x2! Río Negro, rd Baños-Puyo, 1400 m, 13 X 1984, *Hirtz 2027*, SEL! **Zamora-Chinchipe:** Km 42 road Loja to Zamora, 1400 m, 29 IX 1961, *Dodson 820*, SEL! *Ibid.* *Dodson 822*, QCA! **PERU: Amazonas:** Prov. Bongará, Along road Jumbilla-Laguna de Pomacochas, 2133 m, 5 XI 2012, *van der Werff 25104*, HOXA! USM!

OTHER RECORDS: COLOMBIA: Without locality data, *Ortiz Valdivieso s.n.*, flower illustration, AMO! *Ibid.* *Sáenz s.n.*, digital photos, AMO! *Ibid.* *Uribe s.n.* digital photos, AMO! (Photo voucher) *Ibid.* *Uribe 1045*, digital images, AMO! *Ibid.* *Uribe 3466*, digital image, AMO! **Antioquia:** Mun. Sabanalarga, 2542 m, El Oro, 15 VI 2020, *López s.n.*, digital images, AMO! **Cauca:** Santa Rosa, *Moreno s.n.*, digital image, AMO! (LCDP voucher) **Putumayo:** Mun. San Francisco, Zona del Río Sachamates en la vereda Minchoy, 1900 m, 3 XI 2008, *Medina 802*, digital images, AMO! **Quindío:** from Armenia, *Harding s.n.*, digital image, AMO! **ECUADOR:** Without locality data, Cultivated at Equaflor-A, 1700 m, 9 X 2015, *Merino s.n.*, digital image, AMO! **Loja:** Loja-Zamora, camino Viejo, 1800 m, *Werner s.n.*, digital images, AMO! **Zamora-Chinchipe:** Estación Científica San Francisco, road Loja-Zamora, 1800-1900 m, 12 IX 2006, *Werner 2078*, digital images, AMO! **PERU:** Without locality data, *Morón s.n.*, digital image, AMO! **Amazonas:** Prov. Chachapoyas, Distr. Leimebamba, Laurel, 3 VI 2016, *Salas s.n.*, digital image, AMO! **San Martín:** Without locality data, *Edquén s.n.*, digital image, AMO!

DISTRIBUTION AND ECOLOGY: Widespread from northern Colombia in the departments of Antioquia and Santander to northern Peru in the regions of Amazonas and San Martín. Lithophytic at 1000-2380 m elevation. Flowering from May to December.

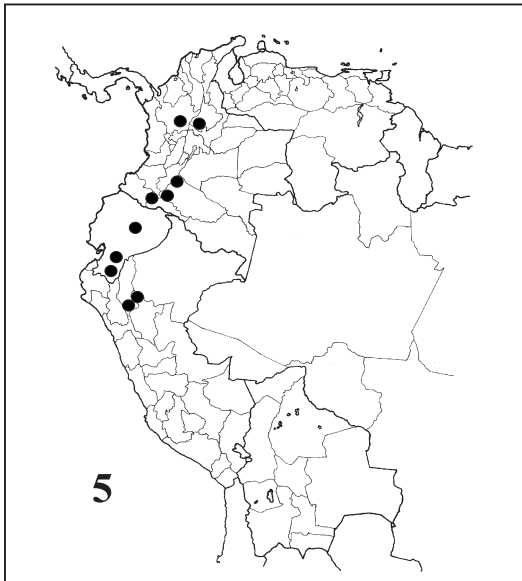
RECONOCIMIENTO: *Epidendrum cupreum* belongs to the Cupreum Subgroup of the Megalospatum Group, characterized by the wide, single, rarely two, semi-ovate spathes, the erect stems with 3-5 coriaceous leaves, and resupinate flowers; the ventral surface of the column with a cavity accessed through a long narrow slit. *Epidendrum cupreum* is recognized by the small stems, 6-9 cm long, with up to 4 oblong to elliptic leaves, apically unequally bilobed, the ochre-colored flowers, copper-colored, with the sepals 10-12.5 mm long, and the lip transversely elliptic, apex widely sinuate and mucronate, concave in the center and the lateral margins revolute. *Epidendrum orbiculatum* C. Schweinf. is vegetatively very similar, but the flowers are green or slightly green-brown, the sepals 15-19.5 mm long and the lip orbicular with the apex slightly emarginate and the petals falcate. *Epidendrum kymatochilum* Hágsater & Dodson generally has green-yellow flowers, sepals 14-20 mm long, and the lip is somewhat 3-lobed, cuneate in general outline, proportionately much longer than wide, with a pair of incipient lateral lobes.

NOTE: The original description of the species cites the type as *Lehmann 5337*.

CONSERVATION STATUS: NT. Not Threatened. This species is found along the Amazon slope of the Andes from Santander in Colombia to San Martín in Peru, and large plants are found on boulders, usually in full sunlight.

ETYMOLOGY: From the Latin *cuprum*, copper, in reference to the color of the lip, and flowers in general.

REFERENCES: Hágsater, E. & C. H. Dodson, 2004, *Epidendrum kymatochilum*, in E. Hágsater & L. Sánchez S. (eds.) *The Genus Epidendrum*, Part 4, *Icon. Orchid.* 7: pl. 750. Santiago, E. & E. Hágsater, 2010, *Epidendrum orbiculatum*, in E. Hágsater & L. Sanchez S. (eds.) *The Genus Epidendrum*, Part 19, *Icon. Orchid.* 13: pl. 1364.



Authors: E. Santiago, J. S. Moreno & E. Hágsater

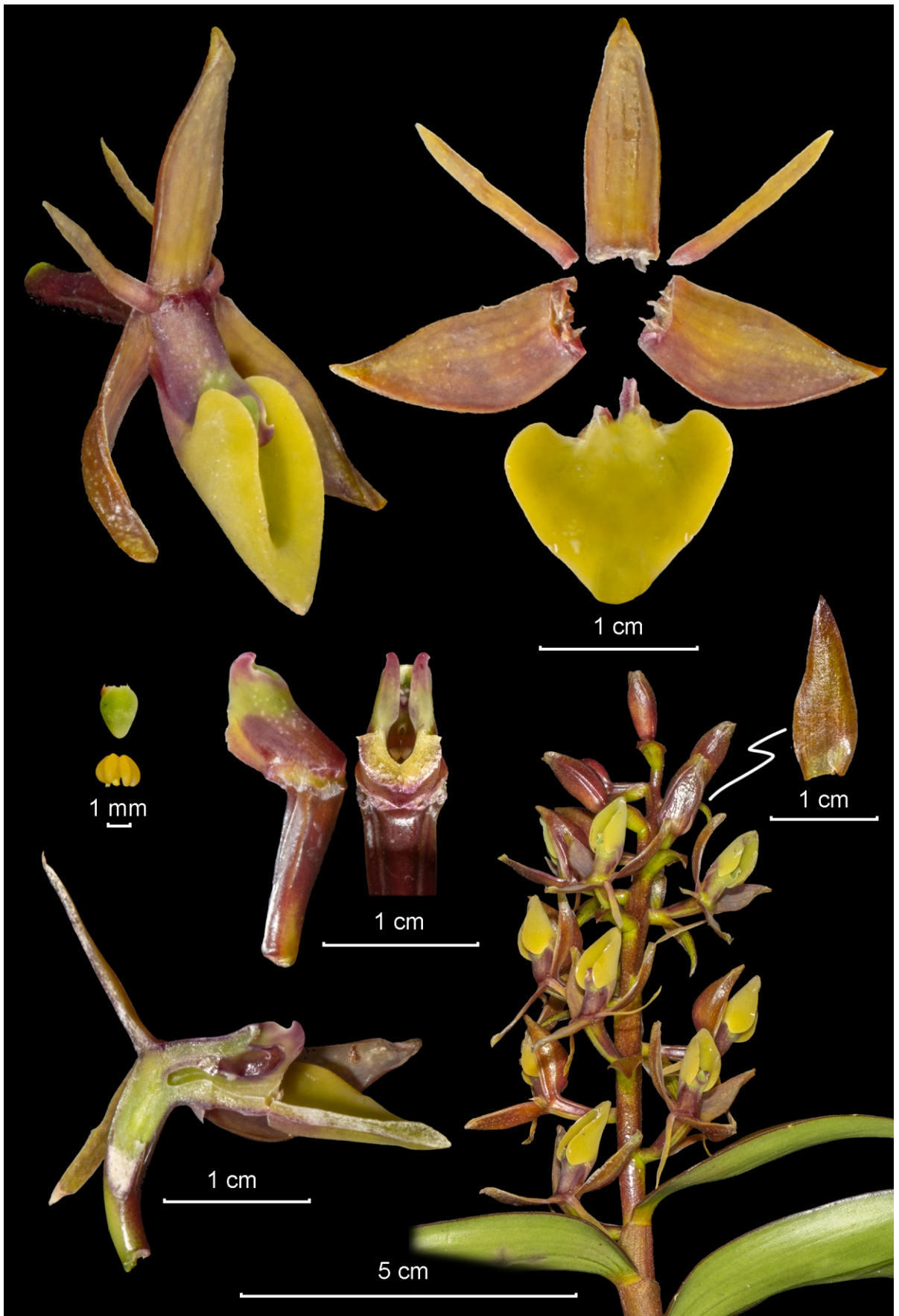
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Illustrator: R. Jiménez M.

Photo: C. Uribe V.

Editors: E. Hágsater & E. Santiago

Empty



EPIDENDRUM CUYESTACHYUM Hágsater & E.Santiago

EPIDENDRUM CUYESTACHYUM Hágsater et E.Santiago, sp. nov.

Type: ECUADOR: Morona Santiago: cantón Gualaquiza, desviación de carretera Cuenca-Loja hacia Jima y Tambillo-San Miguel de Cuyes, 2978 m, 26 abril 2018, **Eric Hágsater, Gerardo A. Salazar, Diego Francisco Tobar Suárez, Itzi Frago Martínez & Marcia Peñañiel 15894**. Holotype: QCNE! (LCDP & photo voucher).

Similar to *Epidendrum grammipetalostachyum* Hágsater & E.Santiago but the flowers dark brown with the lip yellow (vs. flowers yellow-green, concolor), the floral bracts 13-16 x 5-6 mm, longer than the ovary (vs. bracts 5-8 x 3.5-4.5 mm, as long as the ovary), the petals 13 mm long, reflexed (vs. petals 8-10 mm long, spreading), and the base of the lip cordiform (vs. base of the lip truncate).

Terrestrial, monopodial, branching above, erect **herb**, ca. 80 cm tall including the inflorescence. **Roots** basal from primary stem, fleshy, thick. **Stems** ca. 60 x 0.6-0.9 cm, scarcely branching above, cane-like, terete, thick. **Leaves** 14 distributed along primary stem, alternate, articulate, coriaceous, spreading, medium green, adaxial surface lustrous tinged dark brown, especially margins, abaxial surface concolor, glaucous green; sheaths 12-33 x 6-9 mm, tubular, minutely striated, dark brown; blade 5.5-7.2 x 1.2-1.8 cm, lanceolate, acute, margin entire, spreading. **Spathe** lacking. **Inflorescence** 8 cm long, apical, racemose, erect, sub-densely few-flowered; peduncle 1 cm long, straight, terete, thin; rachis 7 cm long, terete, thin, slightly sinuous, dark brown. **Flowers** 15, opening in succession from base, eventually all open simultaneously, non-resupinate, fleshy, tepals dorsally dark brown, ventrally green-brown, column red brown, anther green and lip yellow; without fragrance. **Floral bracts** 13-16 x 5-6 mm, longer than ovary, but shorter than flowers, narrowly triangular, acuminate, embracing. **Ovary** 10-12 mm long, terete, thin, furrowed, dark brown. **Sepals** 15-16 x 5-7 mm, free, spreading, acute, 5-veined, margin entire, spreading, unornamented: dorsal sepal narrowly triangular; lateral sepals narrowly ovate, oblique, with a low dorsal keel. **Petals** 13 x 1.2 mm, free, reflexed, reflexed, linear, apex obtuse, 1-veined, margin entire, spreading. **Lip** 12.5 x 15 mm, united to column, entire, cymbiform in natural position and embracing sides of apex of column in natural position, widely triangular, base cordate, apex rounded, margins entire, spreading; ecallose. **Column** 9 mm long, straight, thick, apex with pair of apical, triangular wings, apically uncinata. **Rostellum** apical, slit. **Lateral lobes of stigma** small, 1/3 length of stigmatic cavity. **Clinandrium-hood** reduced, margin entire. **Anther** narrowly ovoid, apex obtuse, 4-celled. **Pollinia** 4, obovoid, laterally compressed; caudicles soft and granulose, nearly as long as pollinia; viscarium semi-liquid. **Nectary** shallow, without penetrating ovary, pubescent in front of stigmatic cavity. **Capsule** not seen.

OTHER SPECIMENS: Morona-Santiago: Gualaquiza: San Miguel de Cuyes: Area de Bosque Vegetación Protectora Tambillo, 3160 m, 14 III 2001, *Suin 856*, HA! QCNE!

OTHER RECORDS: None seen.

DISTRIBUTION AND ECOLOGY: Presently known from a single locality in central Ecuador in wet forests on eastern slope of the Andes, terrestrial on road bank at 2900-3160 m elevation. Flowering in March-May.

RECOGNITION: *Epidendrum cuyestachyum* belongs to the Macro-stachyum Group, which is characterized by the monopodial plants with sub-apical branching, rugose leaf sheaths, large leaves generally spreading, racemose, erect inflorescence, and fleshy flowers generally green to black (ripe olive colored), as well as yellow to pink to purple, with an entire, conduplicate, generally ecallose and pubescent lip embracing the column, and the nectary pubescent to papillose in front of the stigmatic cavity and at least at the base of the lip. The new species is recognized by the dark brown flowers with yellow lip, the sepals 15-16 mm long, the petals reflexed and linear, the lip 12.5 x 15 mm, widely triangular, base cordate, and the column with a pair of triangular uncinata wings at the apex. *Epidendrum grammipetalostachyum* Hágsater & E.Santiago has yellow-green concolor flowers, the sepals 8-12 mm long, the petals linear-filiform but spreading and the lip deltate, base truncate, the apical wings of the column much reduced. *Epidendrum brachystelestachyum* Hágsater, E.Santiago & Reina-Rodr. has "black" flowers, with the lip olive green, the sepals 10 mm long, the petals linear-triangular, spreading and the lip 8 x 10 mm, triangular with the base truncate. *Epidendrum spiculistachyum* Hágsater & E.Santiago has green flowers blotched brown, the sepals 8-9 mm long the petals oblong, spreading, and the column densely spiculate and pyriform.

ETYMOLOGY: In reference to the locality of San Miguel de Cuyes, and the $\sigma\alpha\upsilon\lambda\iota\varsigma$, a pine cone, in reference to the Macro-stachyum Group to which this species belongs.

CONSERVATION STATUS: DD. Data deficient. Presently known from a single locality with two collections.

ACKNOWLEDGMENT: Collections made under framework contract "Diversidad Genética del Ecuador" MAE-DNB-CM 2016-0045, Instituto Nacional de Biodiversidad, INABIO. "Investigando las causas de la megadiversidad. Factores asociados a la diversificación macroevolutiva de cuatro grupos vegetales neotropicales".

REFERENCES: Hágsater, E., & E. Santiago, 2013, *Epidendrum grammipetalostachyum* in E. Hágsater & L. Sánchez s. (eds.), **Icon. Orchid.** 14: pl. 1433. Hágsater, E., E. Santiago & G. A. Reina-Rodríguez, 2015, *Epidendrum brachystelestachyum* in E. Hágsater & L. Sánchez S. (eds.), **Icon. Orchid.** 15(1): pl. 1509. Hágsater, E., & E. Santiago, 2022, *Epidendrum spiculistachyum* in E. Hágsater & E. Santiago (eds.), **Icon. Orchid.** 19(2): pl. 1960.



Authors: E. Hágsater & E. Santiago

LCDP: E. Hágsater & A. Cisneros

Herbario AMO

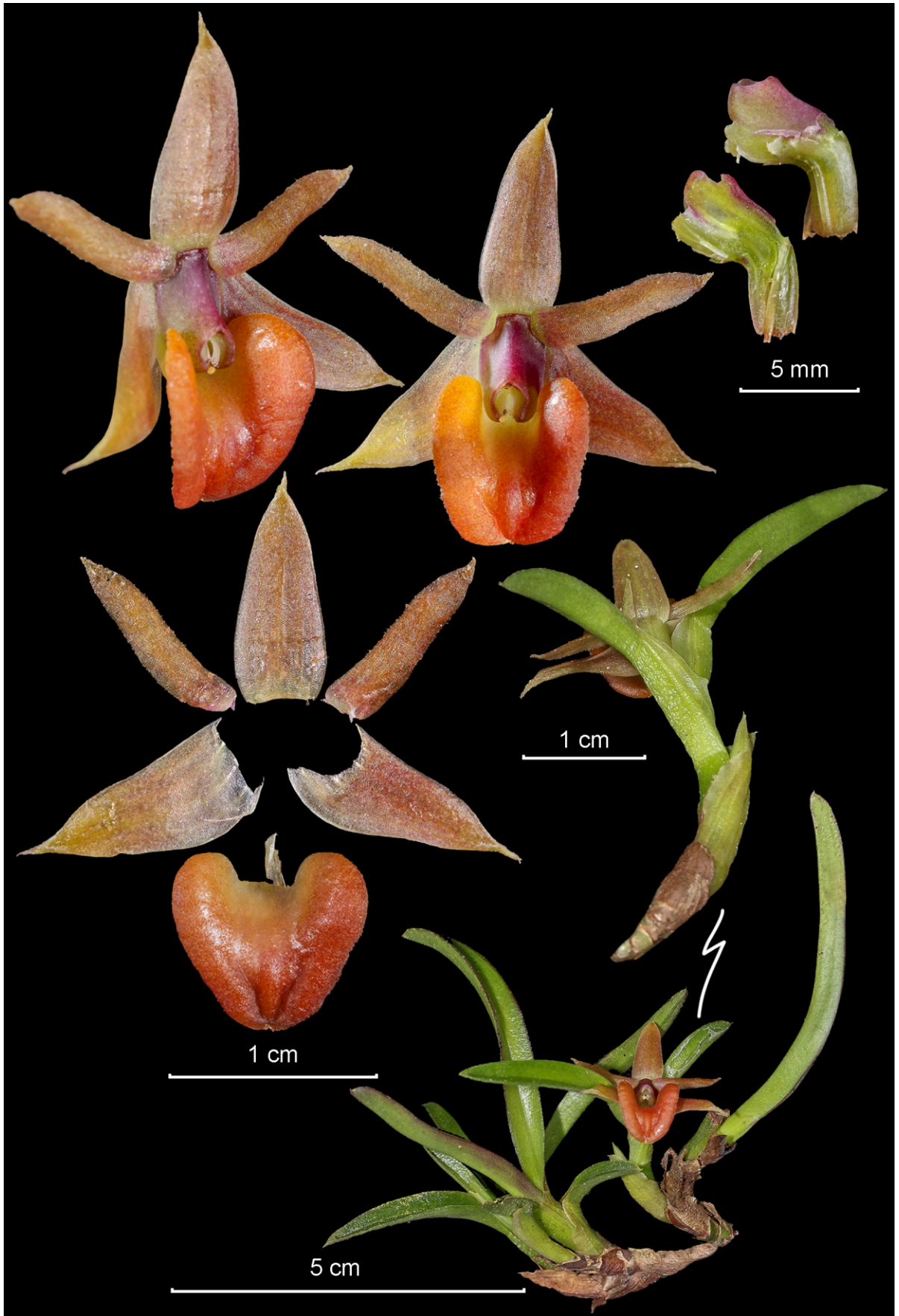
Ciudad de México, MÉXICO



Photo: E. Hágsater

Editors: E. Hágsater & E. Santiago

ICONES ORCHIDACEARUM 19(2). 2022. Plate 1952



EPIDENDRUM FLOREZIARUM Hągsater, E.Santiago & Reina-Rodr.

Plate 1953

EPIDENDRUM FLOREZIARUM Hágsater, E.Santiago et Reina-Rodr., sp. nov.

Type: COLOMBIA: Nariño: Vereda Olaya, 5 km noroeste de Túquerres, 3178 m, 22 mayo 2022, **Guillermo Reina-Rodríguez, Mónica Tobar Flórez & Mariela Flórez 3701**. Holotype: CUVC (flower in spirit)! (LCDP voucher).

Similar to *Epidendrum sophronitoides* F.Lehm. & Kraenzl. but stems short, with distichous canaliculate leaves, flowering from basal inflorescences, the flowers orange-brown with the lip bright orange (vs. sepals and petals green-brown, lip ochre brown), the sepals and petals slightly oblique (vs. sepals and petals falcate), the petals 10 x 2 mm, narrowly oblong (vs. petals 10-11.5 x 2.8-3.3 mm, narrowly lanceolate), and the lip deeply cordate (vs. lip only slightly cordate).

Epiphytic, monopodial, erect, **herb**, 6-7 cm tall. **Roots** basal. **Stems** 2.0-2.5 x 0.3-0.45 cm, simple, cane-like, terete at base and somewhat laterally compressed above; base covered by sheaths 6-16 mm long, non-foliar, tubular, apex acute, imbricating, brown and scarious. **Leaves** 6-10, distributed along upper half of stem, alternate, articulate, sub-spreading, medium green, canaliculate, succulent; sheaths 4.5-11 x 3-4.5 mm, tubular, minutely striated, pale green, slightly rugose; blade 1.2-4.0 x 0.3-0.5 cm, linear-oblong, apex sub-acute, minutely apiculate, apical margin crenulate. **Spathes** lacking. **Inflorescence** basal, producing successive inflorescences and these successive flowers during several years for each inflorescence, with 1-4 leaf-like bracts 1.5-5 cm long, and single flower at a time, sessile; several flowers may be present simultaneously from different inflorescences and successive pedicels. **Flower** usually one to several at a time from different inflorescences, usually non-resupinate, but sometimes oriented in various directions, tepals orange-brown, lip bright orange, column red purple, ventrally green; fragrance none registered. **Floral bracts** 7 mm long, longer than ovary, narrowly triangular, obtuse. **Ovary** 5.3 mm long, terete, thin, furrowed. **Sepals** 10-11 x 4.2-4.5 mm, spreading, ovate-triangular, apex acuminate, prominently apiculate, 3-veined, margins entire, spreading, unornamented; dorsal sepal free, lateral sepals obliquely united to column, oblique at base. **Petals** 10 x 2 mm, spreading, free, narrowly oblong, slightly oblique, apex acuminate, 3-veined, glabrous with margin short ciliate, spreading. **Lip** 9.0 x 9.5 mm, united to column, entire, cordiform, base deeply cordate, apex rounded, concave un middle, sides convex, margins short ciliate, spreading; ecallose, with a short wide mid-rib along apical half. **Column** 5 mm long, thick, straight with apex slightly arched upwards. **Rostellum** apical, slit. **Lateral lobes of stigma** prominent, half as long as stigmatic cavity. **Clinandrium-hood** reduced, margin entire. **Anther** not seen. **Pollinia** 4, obovoid, laterally compressed; viscarium semi-liquid. **Capsule** note seen.

OTHER SPECIMENS: None seen.

OTHER RECORDS: COLOMBIA: Nariño: Mun. Túquerres: Vereda El Espino-Chimangual vía Túquerres-Tumaco, 15 km suroeste de Túquerres, 3150 m, 27 IV 2022, *Tobar-Flórez s.n.*, digital image AMO! *Ibid.*, 23 IV 2022, digital image, AMO! (Photo voucher). ECUADOR: Ecuagenera, via Marni Turkel, received 20 X 2013, photographed 11 III 2014, sub *Hágsater 14551*, Digital images, AMO!

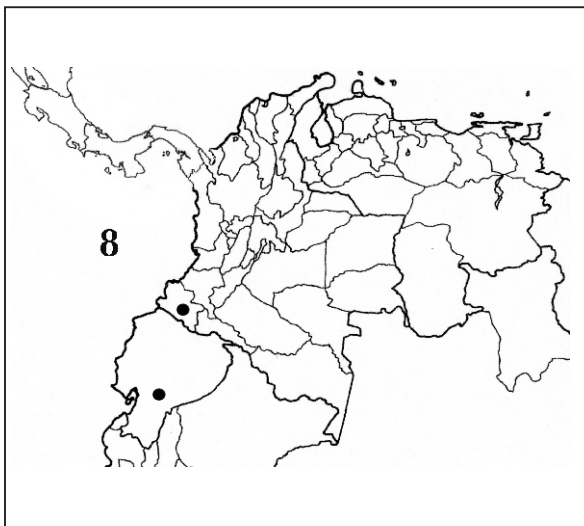
DISTRIBUTION AND ECOLOGY: Known presently from two cultivated plants, one from southern Colombia on the western Andes near Túquerres in the Department of Nariño, epiphytic at around 3000 m elevation. The other from Ecuagenera, data pending. Flowering in March-June.

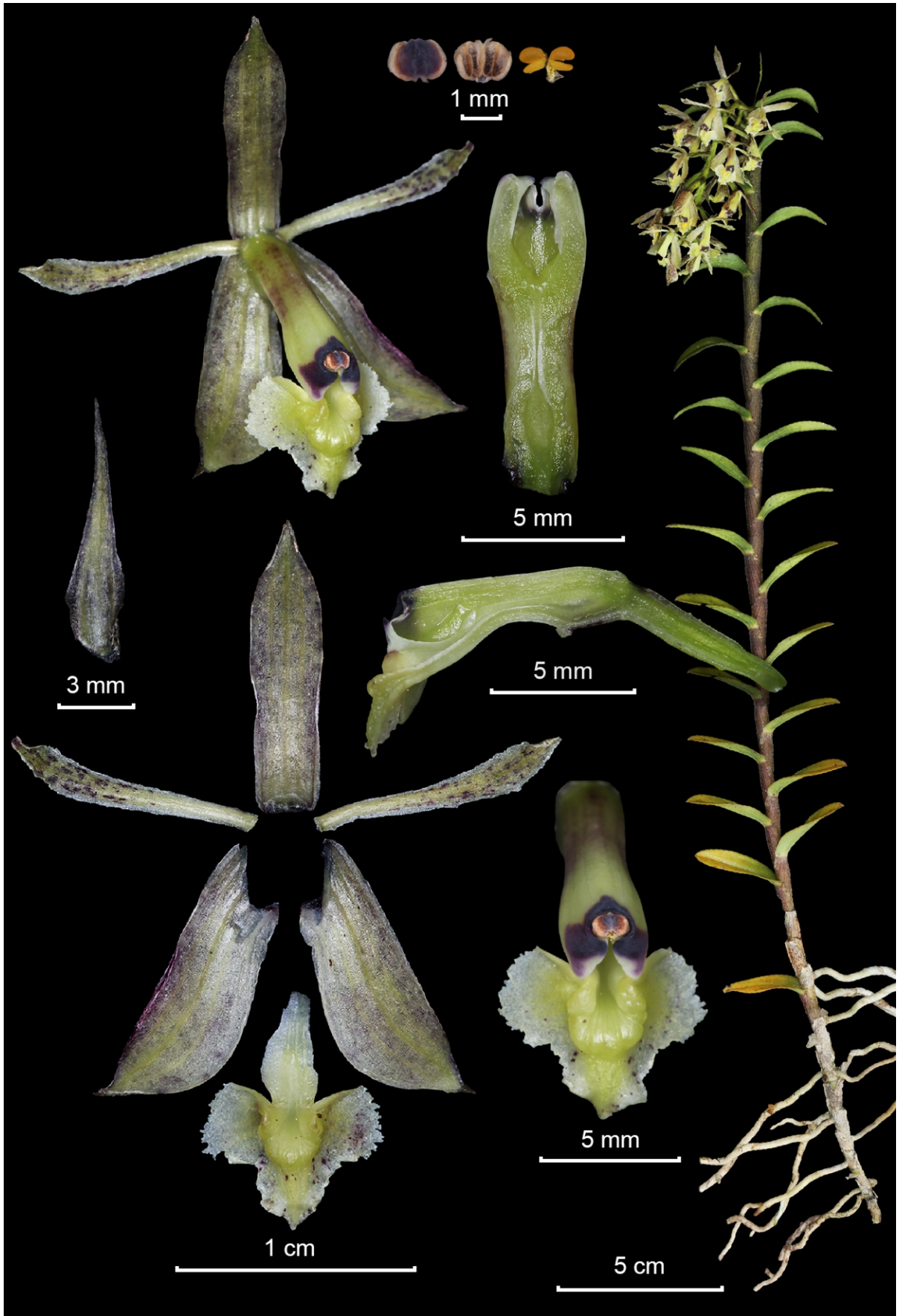
RECOGNITION: *Epidendrum floreziarum* belongs to the Takulumena group, which is recognized by the small, *Vanda*-like plants, with simple, imbricating, distichous leaves and a lateral complicated inflorescence, producing new, single-flowered segments over several years from the base of the stem or with age from the lower internodes of the stem. The new species is recognized by the monopodial, erect stem with 6-10 distichous leaves, the inflorescences several basal to the stem, successive, each producing successive single-flowered pedicel with 1-4 leaf-like bracts and a single apical, usually non-resupinate flower, the orange brown flower with a bright orange lip, the surface of tepals unornamented, slightly oblique but not falcate, the petals 10 x 2 mm, narrowly oblong with the margin short ciliate, and the lip cordiform and deeply cordate, apex rounded. *Epidendrum sophronitoides* has green-brown tepals, lip ochre-brown, the tepals falcate and unornamented, petals 10-11.5 x 2.8-3.3 mm, narrowly lanceolate and the lip ovate-cordiform with the base slightly cordate. *Epidendrum kapuleri* (Szlach. & Kolan.) J.M.H.Shaw has the leaves 1.0-3.5 cm long, much fleshier, the flowers ochre yellow, unornamented, the petals 6.5-7.0 x 2 mm, oblong, and the lip widely cordiform with the base slightly cordate. *Epidendrum tungurahuae* (Szlach. & Mytnik) J.M.H.Shaw has completely glabrous flowers, yellow tinged pink, the petals ovate-lanceolate, strongly reflexed. *Epidendrum wieslawii* has flowers of similar color but the tepals are clearly pubescent, the petals 10 x 2.5 mm, lanceolate, reflexed and falcate, and the lip triangular with the margin spreading and the apex apiculate.

CONSERVATION STATUS: DD. Data deficient. Presently known from two cultivated plants, only one with locality data.

ETYMOLOGY: In honor of Mónica Patricia Tobar Flórez (1985-) and her mother Blanca Mariela Flórez Táquez (1957-), of Túquerres, Nariño, avid orchid collectors who have shared their collections with several orchid specialists and have a live orchid collection at their home. The mother started collecting some 30 years ago while trekking in the forests and paramos of the area, later accompanied by her daughter who started studying them and uploading them to the internet. They supplied the live material which was photographed by Guillermo Reina-Rodríguez, who travelled especially from Pasto and found numerous interesting specimens.

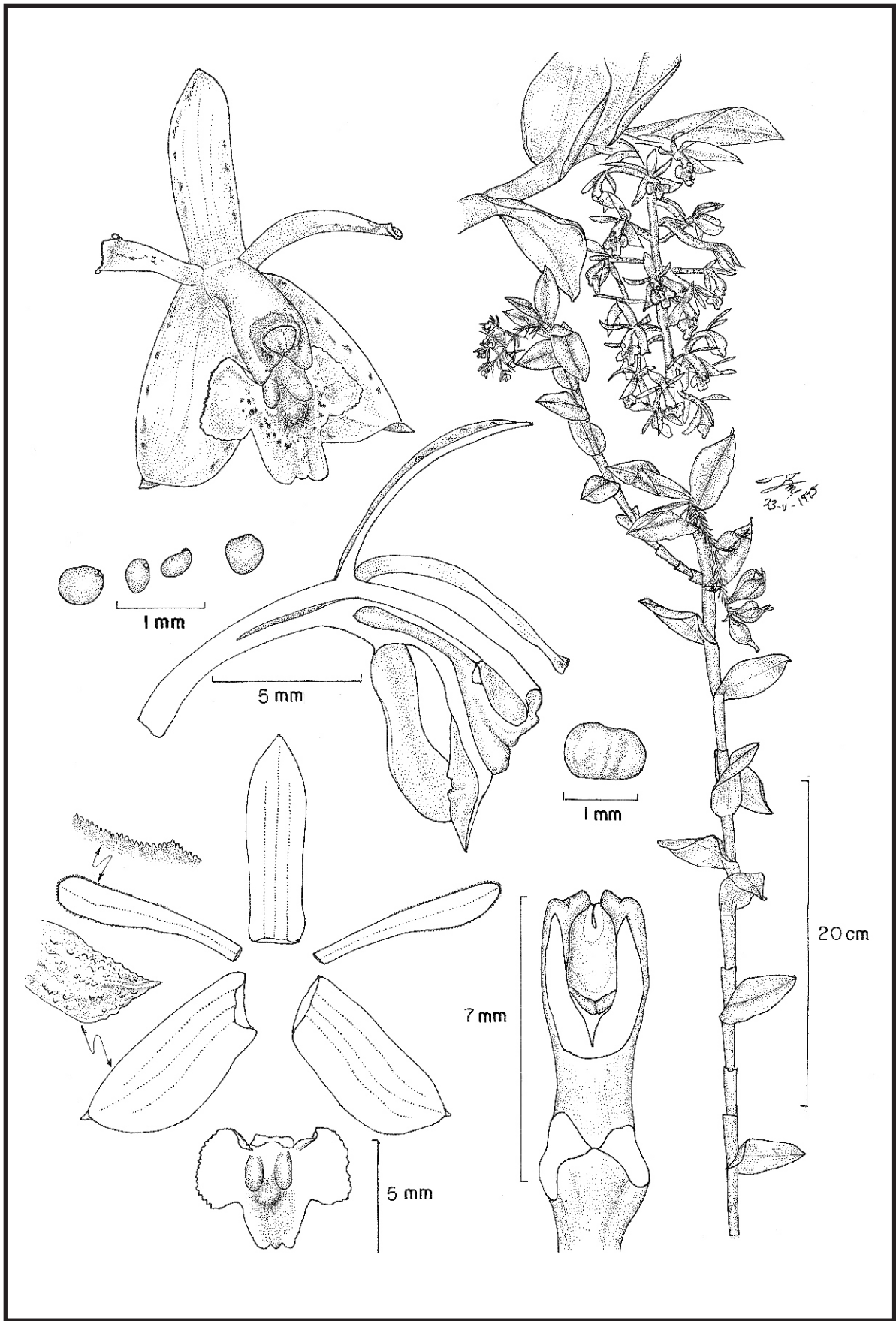
REFERENCES: Hágsater, E. & C. H. Dodson, 2001, *Epidendrum brevivenioides* in Hágsater, E. & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 3, **Icon. Orchid.** 4: pl. 422. Hágsater, E. & A. Karremans, 2018, *Epidendrum falsigarayi* in Hágsater, E. & E. Santiago (eds.), *The Genus Epidendrum*, Part 13, **Icon. Orchid.** 17(1): pl. 1720. Hágsater, E. & E. Santiago, 2008, *Epidendrum sophronitoides* in Hágsater, E. & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 7, **Icon. Orchid.** 11: pl. 1180. Hágsater, E. & E. Santiago, 2018, *Epidendrum kapuleri* in Hágsater, E. & E. Santiago (eds.), *The Genus Epidendrum*, Part 16(2), **Icon. Orchid.** 12: pl. 1676. Szlachetko, D., J. Mytnik, M. Dudek & M. Gorniak, 2011, Three new species of the genus *Takulumena* (Orchidaceae, Epidendrinae) from Ecuador and Peru, **Willdenowia** 41, 298.





EPIDENDRUM FRITZIANUM Hoehne

Plate 1954a



EPIDENDRUM FRITZIANUM Hoehne

Plate 1954b

EPIDENDRUM FRITZIANUM Hoehne, Arq. Bot. Estado São Paulo n.s., form. maior, 2: 143. 1952.

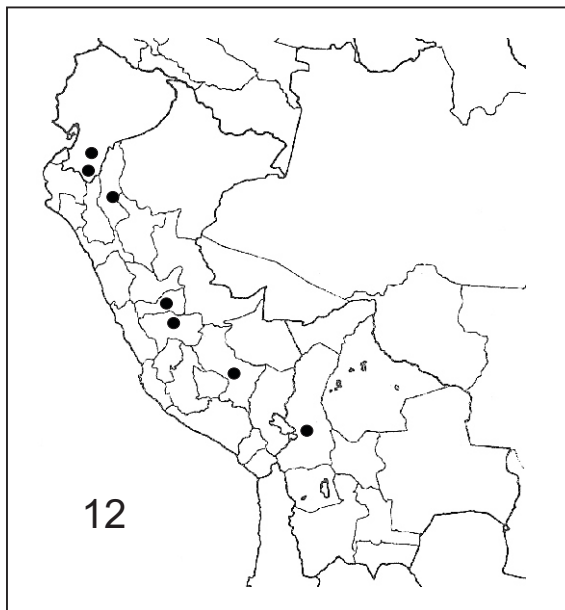
Basionym of *Epidendrum polyphyllum* F.Lehm. & Kraenzl., Bot. Jahrb. Syst. 26(5): 470 (1899). Type: Ecuador: [Azuay] in locis humidis ad declivitates orientales Andium orientalium ditionis Sigsig, 2800-3200 m, **Friedrich Carl Lehmann 8351**. Holotype: K 000583860! Isotype: K-L! (non *Epidendrum polyphyllum* Vellozo, 1829 [1831]).

Synonym: *Epidendrum aurorae* Dodson & D.E.Benn., Icon. Pl. Trop. ser. 2, 1: t. 57. 1989, nom. nov. Neither the text nor the illustration correspond to the species: see *Epidendrum chaoticum* Hágsater & E.Santiago.

Terrestrial, monopodial, branching **herb** 30-150 cm tall. **Roots** 2-3 mm diameter, from base of primary stem, from several basal internodes, thin, fleshy, white. **Stems** cane-like, erect, straight, primary stem 30-70 x 0.6-0.7 cm; branches 5-11 x 0.3-0.4 cm, branching sub-apically when mature, long, branches themselves branching, progressively shorter. **Leaves** 24-30 on primary stem, 6-16 on branches, distributed throughout, alternate, spreading, somewhat arched, sub-coriaceous; sheath 1-2 x 0.3-0.7 cm, tubular, minutely striated, rugose, purple tinged; blade 1.5-4.0 x 1.2-2.0 cm, ovate-elliptic, apex obtuse, margin entire, sometimes somewhat revolute. **Inflorescence** 4-9 cm long, apical, flowering only once, racemose, arching-nutant, densely many-flowered; peduncle, 4 mm long, terete, without bracts and rachis verrucose. **Flowers** 16-32, simultaneous, resupinate, green, sepals, petals and lip dotted purple, apex of column purple; without fragrance. **Floral bracts** 7-17 mm long, prominent, generally nearly as long as ovary, triangular-lanceolate, long-acuminate, dorsally verrucose, green with purple dots. **Ovary** 7-18 mm long, terete, thin, not inflated, furrowed. **Sepals** spreading, dorsally verrucose, sub-obtuse, 3-veined, margin entire, spreading; dorsal sepal 9.0-12 x 1.5-3.0 mm, oblong, slightly incurved, lateral sepals 9.0-12 x 3.7-5 mm, obliquely united to base of column, obovate-oblong, minutely apiculate, oblique. **Petals** 8-10 x 1.0-1.5 mm, spreading, slightly falcate, linear-spatulate, rounded, 1-veined, margin minutely serrulate. **Lip** 5.0-7.0 x 6.5-6.6 mm, united to column, 3-lobed, base slightly cordate; bicallose, calli prominent, somewhat laterally flattened; forming a semi-circular, fleshy protuberance in front of calli; lateral lobes 2.5-2.7 x 3.0-3.5 mm, rounded, margin crenate; mid-lobe 2.0-3.0 x 2.7-3.0 mm, sub-quadrato to trapezoid, minutely apiculate, margin crenate. **Column** 7-8 mm long, slightly arched, thin, short. **Clinandrium-hood** reduced, margin entire. **Rostellum** apical, slit. **Anther** reniform, 4-celled. **Pollinia** 4, sub-equal, sub-obovoid. **Nectary** short, wide, without penetrating the ovary, unornamented. **Lateral lobes of stigma** short, about 1/5 length of stigmatic cavity. **Capsule** 16-20 x 12 mm; globose, pedicel 5-6 mm long, apical neck reduced.

OTHER SPECIMENS: BOLIVIA: La Paz: Nor Yungas: Chuspipata, 3000 m, 27 VIII 1983, *Solomon 10703*, MO! **ECUADOR: Loja:** PN Podocarpus, Ecosistema Páramo, CIB, 3320 m, 16 X 2012, *Aguirre 111*, LOJA! Nudo de Sabanilla, 2900 m, 21 II 2002, *Lozano E-847*, LOJA! Parque Nacional Podocarpus, Yangana-Cerro Toledo, 3100 m, 26 II 1985, *Øllgaard 58260*, QCA! QCNE! Parque Nacional Podocarpus, Yangana-Cerro Toledo, 3200-3900 m, 29 IV 1987, *van der Werff 9171*, QCNE! **Morona-Santiago:** Camino Gualaceo-Limón ca. km 27, 2860 m, 21 XI 1988, *Dodson 17734*, MO! East of pass on road Cuenca to Limón, 2800-3100 m, 21 XI 1988, *Hágsater 9626*, RPSC! (Illustration voucher) Gualaceo to Limón km 27, 2860 m, 21 XI 1988, *Hágsater 9627*, AMO! QCNE! QCA! Pasando Puerto Tambillo, bajando a San Miguel de Cuyes, 3213 m, 17 X 2018, *Hágsater 16012*, QCNE! (digital images and LCDP, AMO!) Gualaceo to Chigüinda, 3400 m, I 1989, *Hirtz 3997*, QCNE! RPSC! (Digital image, AMO!) Road from Limón to Cuenca on east side of pass, I 1989, *Hirtz 4184*, MO! Sigsig to Gualaceo, km 80, 3000 m, 3 XII 1990, *Jørgensen 92803*, QCA! San Miguel de Cuyes, 2900-3200 m, 2 XII 1995, *Suin 19*, AMO! **Zamora-Chinchi:** Arriba de Jimbura (cantón), pasando la cima de la Cordillera Occidental y bajando a Zumba, 3277 m, 19 IX 2016, *Hágsater 14639*, QCNE! (Digital image, AMO!) Road Loja-Zamora, 2800 m, 3 X 1997, *Lewis 3605*, LOJA! Bosque protector Tambillo, carretera a la parroquia San Miguel de Cuyes, Lomas de Moriré, 3318 m, 9 I 2006, *Minga 1051*, HA! **PERU: Amazonas:** Prov. Bongará, Distr. Yambasbamba, San Lucas de Pomacochas, camino de San Lorenzo a Yambasbamba, 2794 m, 25 Oct. 2018, *Ocupa 102*, HUT (LCDP and digital images, AMO!) **Cajamarca:** Prov. Bongará, Distrito Yambasbamba, comunidad campesina San Lucas de Pomacochas, camino de San Lorenzo Yambasbamba, 2794 m, 25 X 2018, *Ocupa 102*, HUT! (LCDP voucher) **Cusco:** Distr. Huayopata, Abra de Malaga, 3700 m, 3 XII 2003, *Valenzuela 2425*, MO! **Junín:** Marancocha. Zona de amortiguamiento del bosque de Protección Pui Pui, 3470 m, 25 X 2014, *Valenzuela 28809*, HOXA! **Pasco:** Oxpampa, P.N. Yanachaga-Chemillén, Sector Quebrada Yanachaga, 2922 m, 7 X 2009, *Acuña 186*, MO! N of Oxapampa, 3500 m, 25 VI 1988, *Foster 12244*, F! USM! Oxapampa: Distr. Huancabamba, La Colmena Trocha Erica, Parque Nacional Yanachaga-Chemillén, 3460 m, 20 VIII 2008, *Valenzuela 11605*, USM! Distr. Huancabamba, PN Yanachaga-Chemillén, 2910 m, 16 II 2004, *Vásquez 29435*, HOXA! MO!

OTHER RECORDS: BOLIVIA: Without locality, VII 1997, *Vásquez 843*, xerox of illustration, AMO! **ECUADOR:** Without locality data, *Portilla s.n.* Digital image, AMO! (Photo voucher) **Loja:** por llegar al paramo entre Valladolid y Yangana, Cerro Toledo, 3200 m, 30 X 2021, *Celis s.n.* Digital image, AMO! **Morona Santiago:** vía Limón-Gualaceo, cerca de la Loma de la Virgen, 3200-3400 m, 25 IV 2022, *Jiménez & Garzón 1429*, Digital image, AMO! Sigsig-Chigüinda, km 23, 3281 m, 24 I 2004, *Hágsater 14045*, flower in spirit, Digital images, AMO! **Zamora-Chinchi:** Sistema lacustre Yacurí, 3300 m, 18 I 2022, *Fierro s.n.*, Digital images! <https://www.inaturalist.org/observations/105259403>



Authors: E. Santiago, E. Hágsater & L. Ocupa H.

LCDP: L. Ocupa H.

Illustrator: R. Jiménez M.

Photo: J. Portilla

Editors: E. Hágsater & E. Santiago

DISTRIBUTION AND ECOLOGY: Ranging from southern Ecuador to western Bolivia, along the upper eastern slope of the Andes, terrestrial, at 2800-3900 m altitude, general found on roadside banks. Flowering throughout the year.

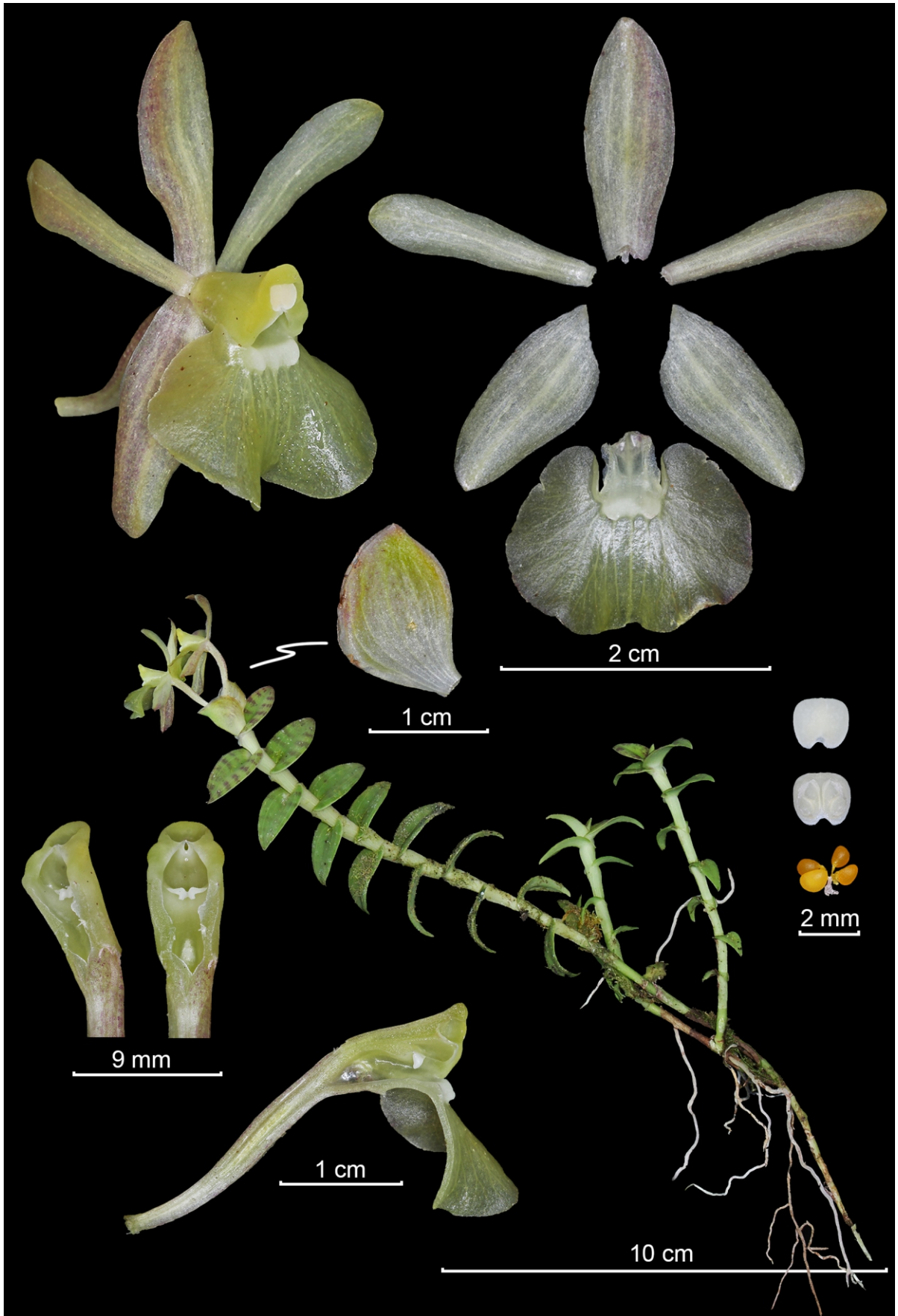
RECOGNITION: *Epidendrum fritzianum* belongs to the Andean Group, Fritzianum Subgroup characterized by the monopodial stems branched above, the ovate to ovate-elliptic, acute to short-acuminate leaves, lateral sepals obliquely united to the base of the column, and clearly 3-lobed lip. The species is recognized by the tall plants with the leaves 1.5-4.0 x 1.2-2.0 cm, ovate-elliptic, the flowers green dotted purple, the sepals dorsally verrucose, 9.0-12 mm long, and the lip with the disc fleshy, mid-lobe sub-quadrate to trapezoid. *Epidendrum pittieri* Ames (apparently endemic to Colombia) has shorter plants, to 60 cm tall, the leaves ovate to ovate-oblong, 2-3 x 0.7-1.1 cm, the flowers creamy white to yellowish green, the sepals unornamented, 12-14 mm long, and the lip has 3 low ribs, the mid-lobe is oblong. *Epidendrum scabrum* Ruiz & Pav. has the inflorescence paniculate with the flowers green yellow and immaculate, the sepals 8.2-10.7 mm long, and the disc of the lip with 3 narrow ribs.

NOTE: The specific epithet, *Epidendrum polyphyllum*, was first used by Vellozo for the Brazilian *Cyrtopodium andersonii* (Lamb. ex Andr.) R.Br. Dodson & Bennett noted this but did not record Hoehne's earlier new name so they proposed the new name *E. aurorae*. The illustration and description published by Dodson & Bennett do not correspond to this species and therefore the new name *Epidendrum chaoticum* Hágsater & E.Santiago was proposed for the illustration and description.

CONSERVATION STATUS: LC. Least Concern. The species has a range of 1900 km from southern Ecuador above Chigüinda, to Bolivia north of La Paz, in Nor Yungas, Chuspipata, along the eastern upper rim of the Andes, in mostly well conserved areas, with at least 10 known localities.

ETYMOLOGY: Not stated. Probably in honor of Friedrich Carl Lehmann, as Fritz is the nickname for Friedrich in German. Lehmann collected the type and described the species with Kränzlin.

REFERENCES: Hágsater, E. & J. Linares, 2009, *Epidendrum pittieri* in E. Hágsater & L. Sánchez S. (eds.) The Genus *Epidendrum*, Part 8, **Icon. Orchid.** 12: pl. 1275. Hágsater, E. & E. Santiago, 2009, *Epidendrum chaoticum* in E. Hágsater & L. Sánchez S. (eds.) The Genus *Epidendrum*, Part 8, **Icon. Orchid.** 12: pl. 1219. Santiago, E. & E. Hágsater, 2009, *Epidendrum fritzianum* in E. Hágsater & L. Sánchez S. (eds.) The Genus *Epidendrum*, Part 8, **Icon. Orchid.** 12: pl. 1245. Santiago, E. & E. Hágsater, 2021, *Epidendrum scabrum* in E. Hágsater & L. Sánchez S. (eds.) The Genus *Epidendrum*, Part 14, **Icon. Orchid.** 18(2): pl. 1893.



EPIDENDRUM MICROTIGRIPHYLLUM Ocupe, Hągsater & E.Santiago

Plate 1955

EPIDENDRUM MICROTIGRIPHYLLUM Ocupa, Hágater & E.Santiago, *Icon. Orchid.* 18(1): pl. 1824. 2020.

Type: PERU: Amazonas: Prov. Bongará: Distr. Yambrasbamba, comunidad campesina San Lucas de Pomacochas, camino de San Lorenzo a Yambrasbamba 2124 m, 25 octubre 2018, **Luis Ocupa Horna 103**. Holotype: HUT! (LCDP voucher). See note.

Epiphytic and lithophytic, sub-caespitose, sympodial, repent, erect **herb**, 11-28 cm tall including the flowers. **Roots** 1-2 mm in diameter, filiform, scarce along the rhizomatous part of the stem. **Stems** 8-18 cm long, cane-like, erect, terete, lower part covered with several tubular, non-foliar sheaths, pale green, turning brown. **Leaves** numerous throughout the stem, spreading perpendicular to the stem; sheaths tubular, pale green; blade 1.0-3.0 x 0.4-1.0 cm, ovate-lanceolate, acute, grayish green, sometimes with transverse purple bands. **Spathes** 2, 1.4-1.7 x 1.0-1.3 cm, prominent, semi-ovate, conduplicate, oblique, obtuse, covering the peduncle of the inflorescence. **Inflorescence** apical, from mature stem, sessile; peduncle up to 1 cm long. **Floral bracts** 3 mm long, very small, much shorter than the ovary, hidden within the spathe, triangular, acute. **Ovary** 1.5-2.1 cm long, dilated shortly behind the perianth. **Flowers** 1-2, resupinate, simultaneous, grayish yellow-green, callus and anther white, column and clinandrium green; fragrance lacking. **Sepals** spreading, free, elliptic, obtuse, margin entire, somewhat revolute, 5-veined; dorsal sepals 18 x 6.5 mm, lateral sepals 16.5 x 7 mm, oblique. **Petals** 17 x 4.3 mm, free, spreading, oblanceolate, apex rounded, 3-veined, margins entire, spreading. **Lip** 14 x 18 cm, united to the column, entire, cordiform-reniform, widest beyond the middle, base deeply cordate, apex rounded, margin entire, scarcely and slightly undulate; callus prominent, entire, broad, white, the sides formed by semi-orbicular thickenings forming a shallow arc when seen from in front. **Column** 10 x 5 mm, straight, thick, widened vertically towards the obliquely truncate apex. **Clinandrium-hood** prominent, fleshy thickened at the apex above and on the sides. **Anther** 2 mm wide, reniform, 4-celled. **Pollinia** 4, semi-obovoid, slightly laterally compressed, in two pairs, dark yellow; caudicles short; viscidium translucent, clear white. **Nectary** wide, slightly penetrating behind the perianth, unornamented. **Lateral lobes of the stigma** small, triangular, white, stigmatic cavity occupying about 1/3 of the column, apical. **Capsule** not seen.

OTHER SPECIMENS: ECUADOR: Morona-Santiago: Macas-Guamote, ca. 1800 m, 5 II 1985, *Hirtz 3138*, MO! Digital image of live flowers AMO! Macas-Guamote, 2200 m, III 2000, *Hirtz 7233*, SEL! flower in spirit and photo of live flower: AMO! Cantón Gualaquiza, Bosque Vegetación Protectora Tambillo, 2400 m, 1 IV 2001, *Suin 909*, HA!

OTHER RECORDS: ECUADOR: Zamora-Chinchi: Chinchipe, San Andrés, Parque Nacional Yacuri, camino Zumba-Jimbura, a 50 km de Zumba, pasando San Andrés y la Quebrada Troya, 2192 m, 30 I 2004, *Hágater 14098*, AMO in spirit! Digital images, AMO! (Photo voucher) **PERU: Amazonas:** Prov. Bongará, Yambrasbamba, Exposición 2 Congreso Peruano de Orquideología, Orquídeas Amazónicas vivero alto, Alto Nieva, 2165 m, 2 XI 2019, *Hágater 16315*, digital image, AMO! **San Martín:** Moyobamba, Exposición 2 Congreso Peruano de Orquideología, *Hágater 16282*, digital photo, AMO! *Ibid. Hágater 16382*, digital photo, AMO!

DISTRIBUTION AND ECOLOGY: Ecuador and Peru: Amazonian slope of the Cordillera de los Andes, Parque Nacional Sangay, Yacuri, and Cordillera de Colán. On shrubs and boulders in wet montane forest, at 1800-2400 m altitude. Flowering in October and April.

RECOGNITION: *Epidendrum microtigriphyllum* belongs to Megalospathum Group characterized by the caespitose but branching habit, the many-leaved stem, fleshy, oblique leaves, a short, few flowered, raceme subtended by large semi-ovate spathaceous bracts, resupinate flowers, and the column more or less united to the lip, and the Tigriphyllum Subgroup which is characterized by the plants generally pendant and the leaves ovate to lanceolate, with purple-reddish transversal lines. The new species is recognized by the comparatively small leaves, 1.0-3.0 x 0.4-1.0 cm, the column straight with fleshy prominent clinandrium-hood, and the lip cordiform-reniform, widest beyond the middle, and callus prominent, entire, broad, white, the sides formed by semi-orbicular thickenings. *Epidendrum tigriphyllum* Hágater has pendulous plants, larger leaves, 1.6-3.8 x 0.5-1.5 mm, narrower petals 21 x 1.6-2.0 mm, the column a very prominent, fleshy with an expanded clinandrium-hood, and the lip spade-shaped, with only a slightly cordate base, obtuse apex, with a narrow, prominent callus divided into 4 lobes, one pair superimposed on the other pair. *Epidendrum miradoranum* Dodson & D.E.Benn. has ovate-lanceolate leaves 1.2-2.7 x 0.5-1.0 cm, a single apical spathe 16 mm long, and up to 4 green flowers slightly tinged pale pink, sepals 22-25 mm long, and the lip rectangular-reniform with two short, sub-orbicular calli. *Epidendrum chaparensis* Dodson & R.Vásquez has narrowly lanceolate, oblique leaves, 1.4-2.5 x 0.3-0.8 cm, a two-flowered inflorescence, flowers smaller, pale greenish white, sepals 13-14 mm long, and the lip sub-orbicular with a pair of short, globose calli.

NOTE: In accordance with article 9.2 of the Shenzhen Code, the citation of the type is amended.

CONSERVATION STATUS: NT. Not Threatened. Widespread and relatively common. Some collections have been made in protected areas in both Ecuador and Peru, some in forest remnants.

ETYMOLOGY: From the Greek μικρος, small, τιγρη, tiger and φυλλο, leaf, in reference to the relatively small leaves of this species with purple striped leaves, which facilitates its recognition.

ACKNOWLEDGMENTS: Type specimen collected in Peru by L. Ocupa under permit RDG N° 247-2016-SERFOR/DGGSPFFS and extension Resol. 430-2017-SERFOR/DGGSPFFS, within the project "Estudios Taxonómicos selectos de la flora del norte del Perú". Collections by Hágater and Salazar made in Ecuador under framework contract "Diversidad Genética del Ecuador" MAE-DNB-CM 2016-0045, Instituto Nacional de Biodiversidad, INABIO. "Investigando las causas de la megadiversidad. Factores asociados a la diversificación macroevolutiva de cuatro grupos vegetales neotropicales".

REFERENCES: Dodson, C.H., & D.E. Bennett Jr., *Epidendrum miradoranum*, *Icon. Pl. Trop.* ser 2, 1: pl. 66. 1989. Dodson, C.H., & R. Vásquez Ch., *Epidendrum chaparensis*, *Icon. Pl. Trop.* ser 2, 4: pl. 327. 1989. Hágater, E., 1999, *Epidendrum tigriphyllum*, in E. Hágater & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 2, *Icon. Orchid.* 3: pl. 387. Hágater, E., & E. Santiago, 2020, *Epidendrum chaparensis*, in E. Hágater & E. Santiago (eds.), *The Genus Epidendrum*, Part 14, *Icon. Orchid.* 18(1): pl. 1805. Ocupa H., L., E. Hágater & E. Santiago, 2020, *Epidendrum microtigriphyllum*, in E. Hágater & E. Santiago (eds.), *The Genus Epidendrum*, Part 14, *Icon. Orchid.* 18(1): pl. 1824.



Authors: L. Ocupa H., E. Hágater & E. Santiago

LCDP: L. Ocupa H.

Photo: E. Hágater

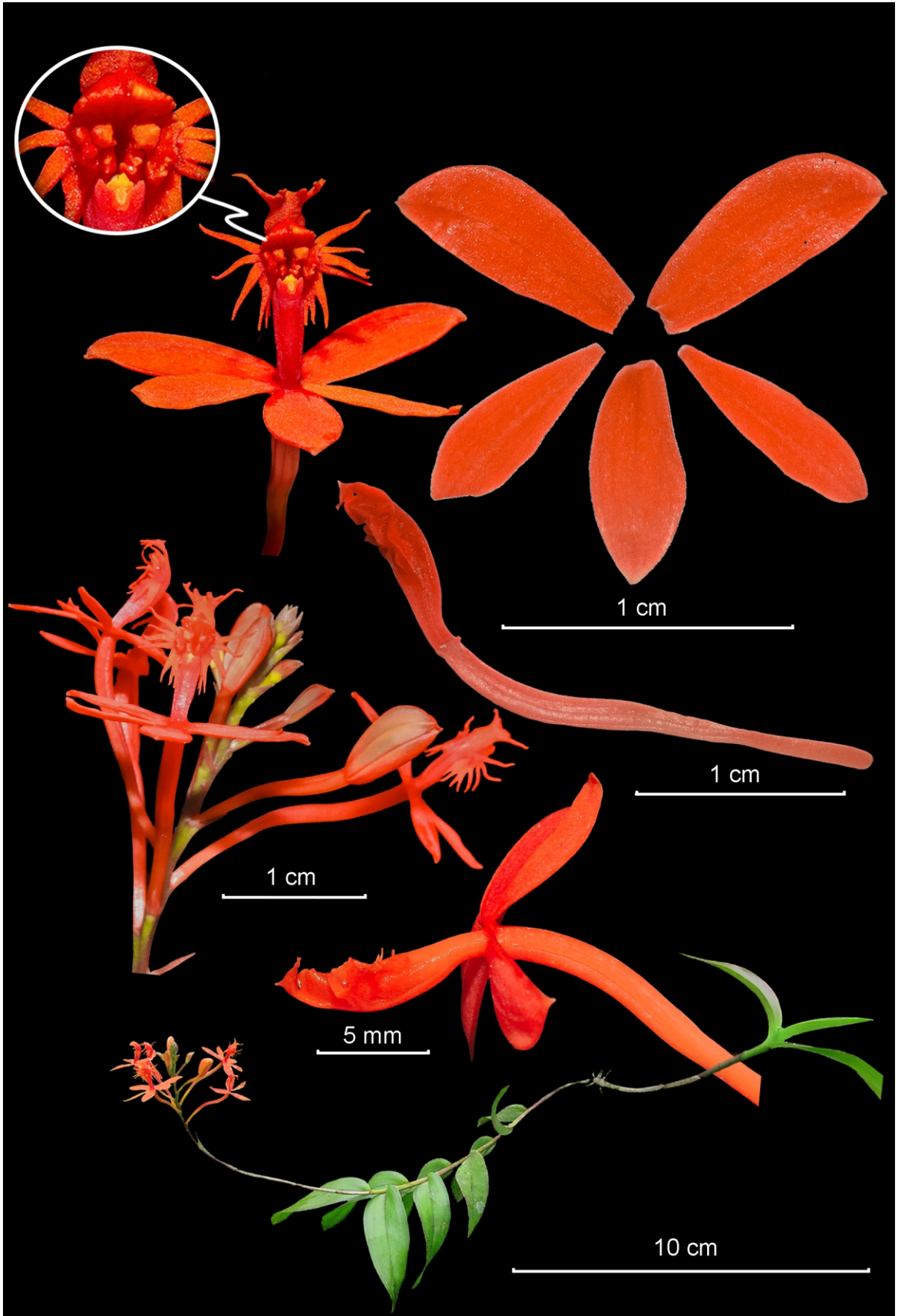
Editors: E. Hágater & E. Santiago

Herbario AMO

Ciudad de México, MÉXICO

ICONES ORCHIDACEARUM 19(2). 2022

Plate 1955



EPIDENDRUM MONICARMASIAE Cornejo & Hagsater

Plate 1956

EPIDENDRUM MONICARMASIAE Cornejo et Hągsater, sp. nov.

Type: ECUADOR: Santo Domingo de los Tsáchilas: Cantón Santo Domingo, Parroquia El Esfuerzo, Finca de Paul Henry, en cultivo de Pitahaya, a varios km hacia el SE de Luz de América, 680 m, 19 marzo 2022, **Xavier Cornejo, John Littner Clark, Camilo Restrepo & Paul Henry 10028**, Holotype: GUAY! (LCDP & Photo voucher).

Similar to *Epidendrum aura-usecheae* Hągsater, Rinc.-Useche & O.Pérez, but the flowers carmine red (vs. flowers yellow with column and calli turning red with age), the lateral lobes formed by 6–7 spreading fimbria (vs. numerous fimbria spreading in all directions).

Epiphytic, caespitose, sympodial, suberect **herb**, ca. 30 cm tall. **Roots** ca. 1.5 mm in diameter, fleshy. **Stems** ca. 15.5 × 0.3 cm, simple, cane-like, subterete, thin, straight. **Leaves** 7–9, distributed throughout stem, alternate, sub-pendulous; sheaths 1.0–1.5 × 0.3 cm, tubular, minutely striated when dry; blade 5.0–6.8 × 1.2–2.0 cm, coriaceous, smooth, lower leaves lanceolate to lanceolate-oblong, upper leaves oblong, about 3 to 4.5 times longer than wide, apex obtuse at upper leaves, margin entire. **Spathes** lacking. **Inflorescence** ca. 14 cm long, apical, racemose; peduncle 8.5 cm long, terete, thin, somewhat upward curved, nearly totally covered by ca. 4 acute, tubular sheaths, 2.0–3.5 × 0.3 cm; rachis ca. 5.5 cm long, somewhat compressed, thin. **Flowers** c. 15, successive, ca. 4 open at one time, non-resupinate, entirely carmine red. **Floral bracts** 3–5 mm long, much shorter than ovary, triangular-lanceolate to lanceolate, acuminate, gradually shorter towards apex of rachis. **Ovary** 14–20 mm long, subterete, thin, arching towards apex, longitudinally sulcate. **Sepals** 8.0–8.5 × 2.0–3.5 mm, spreading, free, oblanceolate to elliptic-oblanceolate, minutely mucronate, 5-veined, papillose, margin entire. **Petals** 8.5 × 2.5 mm, spreading, free, oblanceolate, papillose, cuneate towards base, broadly acute to barely obtuse towards apex, 4– to 5-veined. **Lip** 9–10 × ca. 6 mm, united to column, 3-lobed, base slightly cuneate, margins deeply fimbriate, lateral lobes formed by 6–7 spreading fimbria including some strongly reflexed and parallel to column; callus concave within, 5-tuberculate, 1 broadly deltoid thickened transverse apical body and 4 longitudinal growths: 2 outer, 3-dentate lateral flat growths, and 2 inner tuberculate flat growth, each with an apical tuberculum developed; lateral lobes ca. 3 × 3 mm, deeply lacinate; mid-lobe 3–4 × 4 mm, rather shortly oblong, forming two divaricate lineal lobes, one on each side, and 2 to 4 shorter projections among those, apex truncate. **Column** 5 × 2 mm, straight, thin, upper-laterally costate, flat at top. **Clinandrium hood** reduced. **Anther** obovoid, acute, 3-celled, densely papillose. **Pollinia** not seen. **Rostrum** apical, slit. **Lateral lobes of stigma** small. **Nectary** penetrating nearly 1/2 pedicellate ovary, narrow. **Capsule** not seen.

OTHER SPECIMENS: None seen.

OTHER RECORDS: None seen.

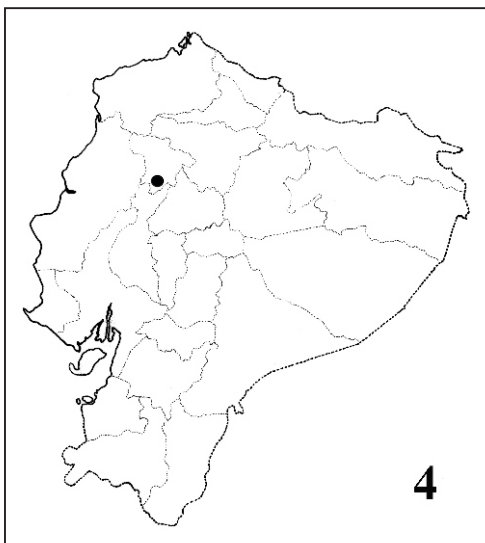
DISTRIBUTION AND ECOLOGY: Known presently from northwestern Ecuador, at the Centinela area, in the Paul Henry finca, as an occasional epiphyte in a small Pitahaya plantation, near a partially conserved fragmented wet forest, at 680 m altitude. Flowering in March.

RECOGNITION: *Epidendrum monicarmasiae* belongs to the Schistochilum group, Secundum subgroup, which is characterized by the caespitose habit, simple stems, the leaves oblong-lanceolate, coriaceous, the bilobed and elongate peduncle of the erect, racemose inflorescence, the flowers non-resupinate, and the callus massive and complex. The new species is recognized by the non-resupinate flowers, entirely carmine red, relatively small flowers, the sepals 8–8.5 mm long, and the lip deeply fimbriate, the fimbria in all directions, including some strongly reflexed and parallel to the column, the callus complex, formed by 8 erect truncate tubercules at base, in two groups, and a large, thickened transverse apical body. It is reminiscent of *Epidendrum aura-usecheae* due to the deeply fimbriate lip, though that species has more numerous fimbriae, and the flowers are yellow and is found in northern Colombia at 1200–2600 m altitude. *Epidendrum ptochicum* Hągsater from the area and southern Colombia on the Pacific slope of the Andes at 600–1300 m elevation, is epiphytic, myrmecophilous, the similar sized flowers, deep orange to red, the petals wider, 8 × 3–4 mm, and the lip 7.6 × 9.6 mm, less deeply fimbriate and with a yellow callus of different structure.

ETYMOLOGY: In Honor of Biologist Mónica Concepción Armas Soto, MSc. (1960–) professor of Plant Histology and former Dean of the Faculty of Natural Sciences at the University of Guayaquil, Ecuador.

CONSERVATION STATUS: EN. Endangered. ab (iii). Presently known from the type locality in the Paul Henry's finca that is located in the Centinela area, previously reported as a well-known biologically destroyed place (Dodson & Gentry, 1991), where several endemic and endangered species still survive after decades in the heavily transformed habitats, as fragmented forests and nearby crops, where a young type's son plant of *Epidendrum monicarmasiae* was left alive after collecting the unicate holotype. As the fragmented forests surrounding the type locality are still under pressure of a steady deforestation the species is assigned as Endangered.

REFERENCES: Dodson, C. H. & A. H. Gentry, 1991, Biological extinction in western Ecuador. *Ann. Missouri Bot. Gard.* 78: 273–295. Hągsater, 2006, *Epidendrum ptochicum* in E. Hągsater, & L. Sánchez S. (Eds.), The Genus *Epidendrum*, Part 5, *Icon. Orchid.* 8: pl. 877. Hągsater, E., C. Rincón-Useche & O. Pérez, 2013, *Epidendrum aura-usecheae* in E. Hągsater, & L. Sánchez S. (Eds.), The Genus *Epidendrum*, Part 10, *Icon. Orchid.* 14: pl. 1410.



Authors: X. Cornejo & E. Hągsater

LCDP: X. Cornejo, J. L. Clark & A. Cisneros

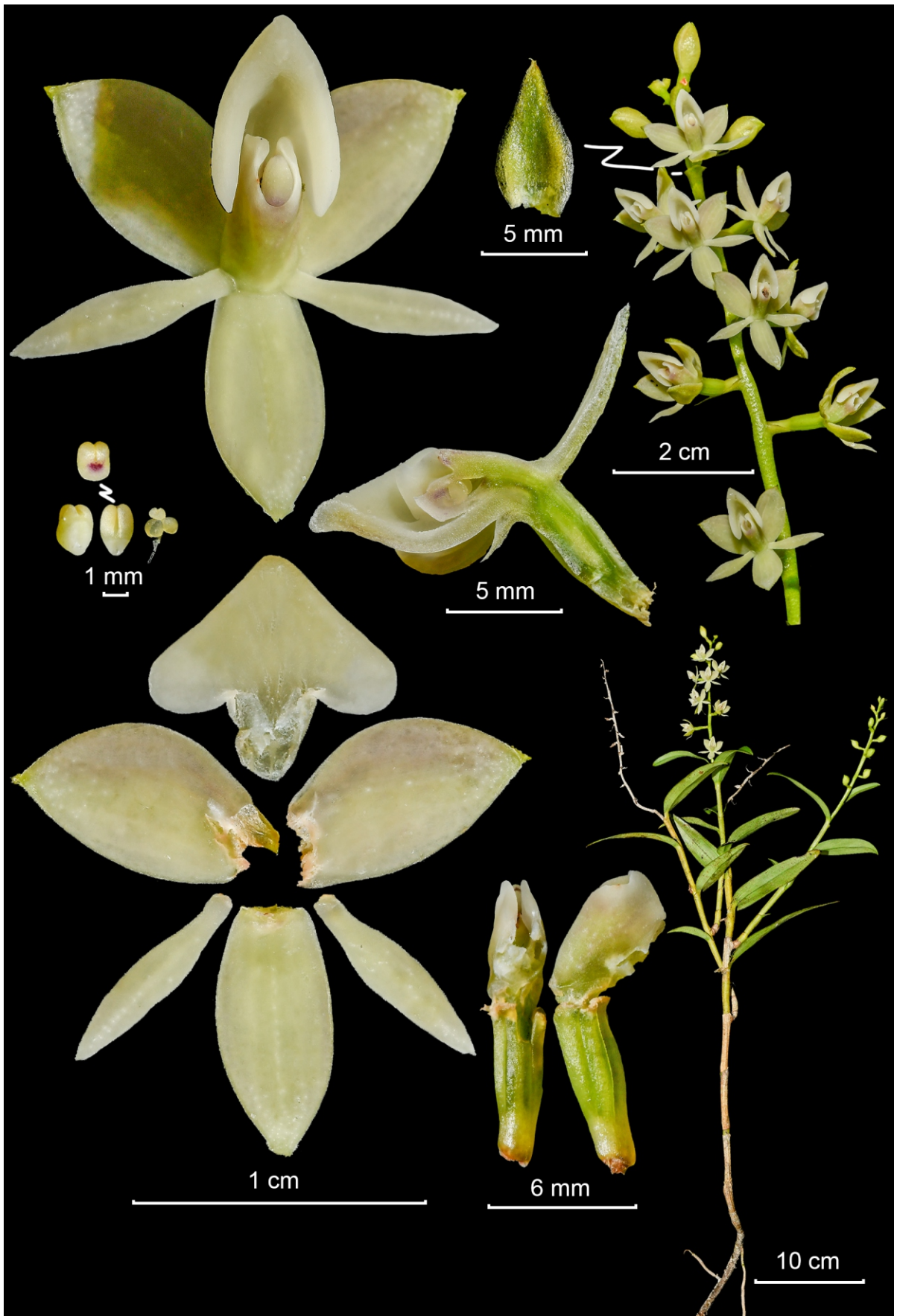
Photo: X. Cornejo

Editors: E. Hągsater & E. Santiago

Herbario AMO

Ciudad de México, MÉXICO

ICONES ORCHIDACEARUM 19(2). 2022. Plate 1956



EPIDENDRUM NOTOSTACHYUM Hágsater & E.Santiago

Plate 1957

EPIDENDRUM NOTOSTACHYUM Hágsater & E.Santiago, *Icon. Orchid.* 15(1), pl. 1545. 2015.

Type: PERU: Pasco: Distrito Oxapampa, Parque Nacional Yanachaga-Chemillén, Sector Chacos, 2471 m, 14 Enero 2004, **Rodolfo Vásquez, Abel Monteagudo, Antonio Peña & Rolando Francis 28928**. Holotype: AMO! (Illustration, AMO). Isotypes: HOXA! SEL!

Terrestrial, monopodial, erect **herb**, 40 to 100 cm tall. **Roots** 2.0-3.0 mm in diameter, basal, fleshy, thick. **Stems** primary stem 33-85 × 0.4-0.7 cm; branches 12-20 × 0.4-0.55 cm; branching when mature, cane-like, base terete, slightly laterally compressed towards apex, erect, straight, base covered by sheaths 4.5-6.0 cm long, tubular, non-foliar, scarious. **Leaves** numerous on primary stem (ca. 21 or more), distributed throughout stems; 5-8 on branches, distributed along apical half of stem, articulate to foliar sheath, somewhat spreading in relation respect to stem, green concolor, coriaceous; sheaths 1.0-5.0 cm long, tubular, minutely striated, rugose, green; blades of primary stem 7.5-15 × 1.6-2.2 cm, blades of branches 4.5-10 × 0.8-1.5 cm lanceolate, obtuse, margin denticulate towards apex. **Spathes** lacking. **Inflorescence** 6.5-15 cm long, apical, racemose, erect, flowers laxly distributed in a helicoid; peduncle 5-10 mm long, terete, straight, pale green; rachis 6-11 cm long, straight, pale green. **Floral bracts** 6-9 × 1.5-4 mm, small, shorter than ovary, narrowly triangular to ovate-triangular, acute, embracing. **Flowers** 11-30, simultaneous, non-resupinate, fleshy, green to greenish white; fragrance of oats during daytime. **Ovary** 5-7 mm long, terete, thin, furrowed, green, not inflated. **Sepals** 8.0-9.5 × 3-5 mm, free, partly spreading, green to greenish white, dorsally papillose, apex acute, minutely apiculate, 5-veined, margin entire, spreading; dorsal sepal elliptic; lateral sepals hemi-ovate, oblique. **Petals** 7.7-8 × 1.5-1.7 mm, free, partly spreading, linear-oblancoleate, apex acute, 3-veined, margin entire, spreading. **Lip** 5.0-5.7 × 6.5-8.3 mm, united to column, fleshy (mainly towards apex), entire, deltoid, base truncate or slightly cordate, apex rounded, ecallose, without ribs; cymbiform in natural form, margin entire, spreading. **Column** 5 mm long, straight, thick, apex directed slightly upwards, with a pair of prominent teeth that surpass body of column. **Clinandrium-hood** reduced, margin entire. **Anther** 4-celled, ovoid, apex truncate. **Restellum** apical, slit. **Lateral lobes of stigma** not seen. **Nectary** shallow, penetrating about 2/3 of column, without penetrating ovary. **Capsule** ellipsoid, 30-35 × 10-13 mm; pedicel 6-8 mm long; body 16-20 × 10-13 mm; apical neck 5-6 mm long.

OTHER SPECIMENS: BOLIVIA: Cochabamba: Chapare; along the road to Villa Tunari, 1500 m 24 I 1980, *Luer 4938*, SEL! **La Paz:** Nor Yungas; 24 km NE of Unduavi on road to Yolosa Junction (Coroico), 3100 m, 29 II 1980, *Solomon 5151*, MO! SEL! 13.2 km NE (below) Chuspipata (16.5 km S of Yolosa), 2150 m, 19 VII 1982, *Solomon 8077*, NY! MO! SEL! U! **COLOMBIA: Antioquia:** Parque Nacional Natural "Las Orquídeas", 29 IV 1990, *Ramírez 3851*, JAUM! MEDEL! **Norte de Santander:** Toledo, Puente Nuevo, via Saravana, 26 II 1979, *Morales 84*, COL! **ECUADOR: Napo:** road from Baeza to Tena; environs of Cosanga, 13 XII 1976, *Davis 364*, COL! Guagra Urcu, near summit, 3150 m, 29 IX 1980, *Holm-Nielsen 27609*, AAU! **PERU: Cusco:** La Convención, N del Río Apurimac, NE de Pueblo Libre, 1650 m, 14 VII 1998, *Baldeón 3011*, CUZ! USM! Quellomayo-Lucumayo, 2650 m, 26 VII 1944, *Vargas 4517*, CUZ! Paucartambo, S. Pedro; Tambomayo, 1200 m, V 1970, *Vargas 21870*, CUZ! **Huánuco:** Carpish Pass, 84 km from Tingo María on highway to Lima, ca. 2750 m, 19 XI 1949, *Allard 21104*, US! Carpish, 2850 m, 15 VIII 1940, *Asplund 13134*, S! between Huánuco and Pampayacu, 13 I 1927, *Kanehira 334*, AMES! Chinchao, Trocha del campamento (Vertice 39) al cerro Negra Punta, 19 X 2011, *Medoza 6393*, USM! north of Carpish Pass, 46.8 km NE of Huánuco, 2490 m, 6 XII 1981, *Plowman 11111*, USM! km 451 on Lima-Tingo María road, ca. 2450 m, 2 VI 1981, *Young 522*, MO! NY! **Pasco:** Dist. Villa Rica; Comunidad Centro Bocaz, 1800-1900 m, 29 V 2005, *Arias 408*, HOXA! MO USM Ibid. 1850 m, 31 V 2005, *Arias 423*, HOXA! MO! P. N. Yanachaga Chemillén, 2400 m, 19 I 2007, *Monteagudo 13638*, AMO! HOXA! Ibid. 2220 m, 14 IX 2007, *Monteagudo 15049*, HOXA USM! MO Ibid. Quebrada diablo fuerte, trocha hacia la parcela Oso-Playa, 2398-2500 m, 23 VI 2008, *Monteagudo 16483*, USM! Dist. Oxapampa; camino hacia la antena de Chacos-Zona de Amortiguamiento, 2024 m, 23 X 2010, *Perea 4144*, HOXA! USM! P. N. Yanachaga-Chemillén, 2360-2800 m, 27 IX 2005, *Ortiz 980*, MO! Sector Grapanazu, P.N. Yanachaga, 2210 m, 15 X 2003, *Rojas 1798*, HOXA! Sector Muchuymayo, zona de amortiguamiento del Parque Nacional Yanachaga-Chemillén, al borde del río Machis, 2087 m, 20 XII 2007, *Rojas 4986*, AMO! HOXA! USM! Sector Oso Playa, 2215 m, 14 X 2009, *Valenzuela 13528*, HOXA! Palmazu, Cooperativo Navarra, 2000 m, 5 VIII 1986, *van der Werff 8366*, SEL! Oxapampa; Chacos, 2700 m, 6 XI 2009, *van der Werff 23215*, AMO! HOXA! P. N. Yanachaga-Chemillén, Sector Chacos, 2219 m, 21 I 2004, *Vásquez 28827*, HOXA! MO! SEL! Ibid. 24 I 2004, *Vásquez 28921*, HOXA! MO! Ibid. Santa Bárbara, 3400 m, 24 I 2004, *Vásquez 28991A*, HOXA! Parque Nacional Yanachaga-Chemillén. Sector Abra Esperanza, 2800 m, 25 II 2007, *Vásquez 31969*, USM!

OTHER RECORDS: Without locality data, *Pfahl s. n.*, Digital photo, AMO (Photo voucher) **BOLIVIA: Cochabamba:** Prov. Chapare, Cuesta del Sillar, km 105 Cochabamba-Villa Tunari, 1840 m, *Vásquez 142*, (LPB), illustration published as *Epidendrum macrostachyum*, (Vásquez & Dodson 1982). **COLOMBIA: Santander:** Surutá, Cachirí, *Ortiz Valdivieso s.n.*, slide, AMO! **ECUADOR:** without locality data, *Medina s.n.*, digital image, AMO! **PERU: Huánuco:** without locality data, *Yupanqui s.n.*, digital photo, AMO! Pasco: Parte alta de Oxapampa, 3489 m, 30 IV 2021, *Edquén 5027*, digital images, AMO! Ibid. 2055 m, 24 VII 2021, *Edquén 5061*, digital images, AMO! (LCDP voucher).

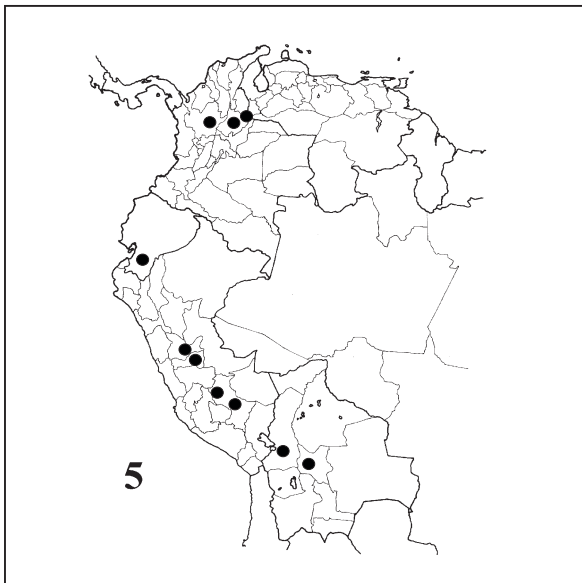
DISTRIBUTION AND ECOLOGY: Along the upper slopes of the Cordillera Oriental, from Northern Colombia to western Bolivia; at 1500-3000 m altitude, terrestrial. Flowering from June to January.

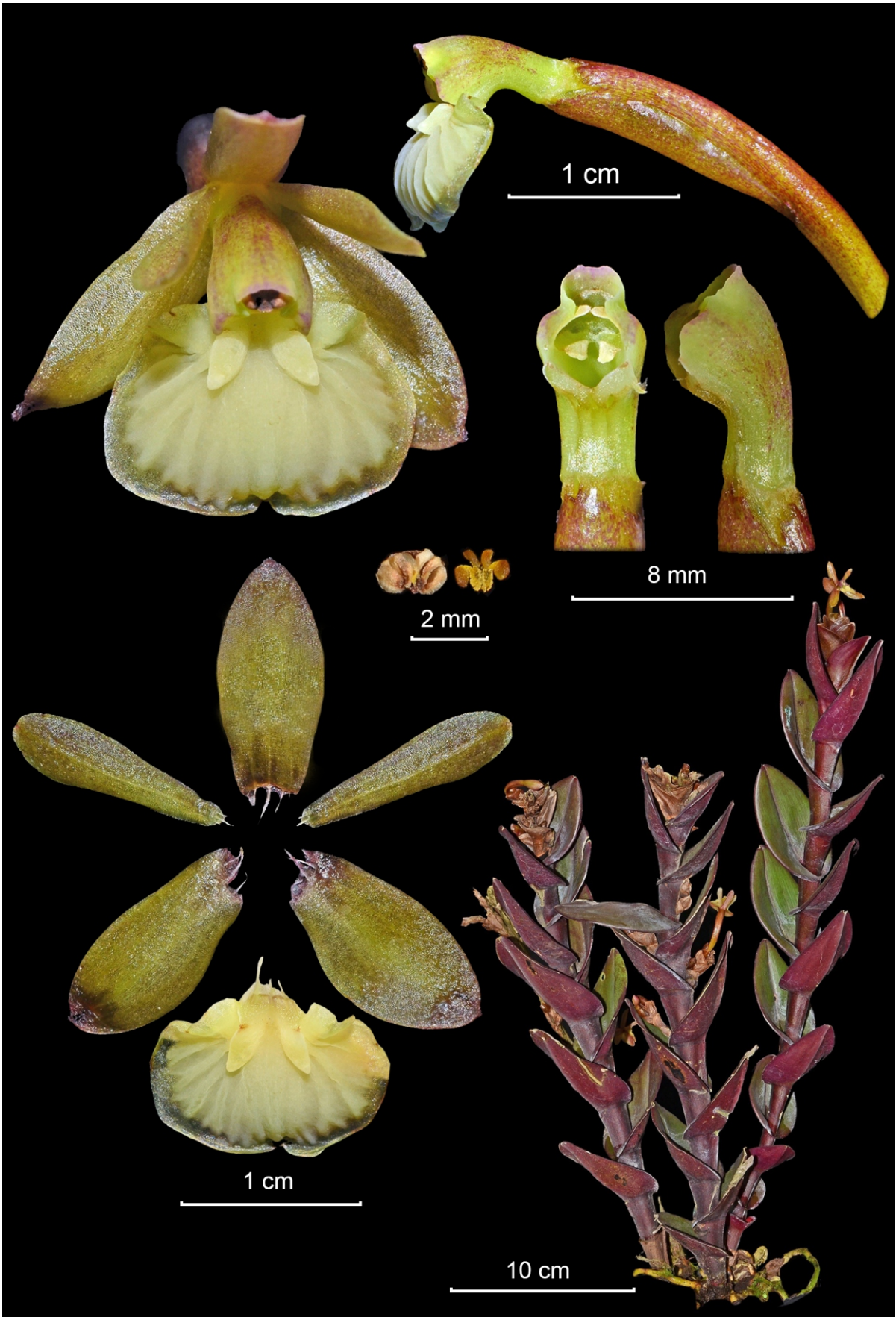
RECOGNITION: *Epidendrum notostachyum* belongs to the Macrostachyum Group, which is characterized by the monopodial plants with sub-apical branching, the rugose leaf sheaths, the large leaves generally spreading, the inflorescence racemose, erect, and the fleshy flowers generally green to black (ripe olive colored), as well as yellow to pink to purple, with an entire, conduplicate, generally ecallose and pubescent lip embracing the column, and the nectary pubescent to papillose in front of the stigmatic cavity and at least at the base of the lip. The species is recognized by the narrow, lanceolate leaves, 4.5-15 × 0.8-2.2 cm, floral bracts small; flowers green or greenish white, sepals 8.0-9.5 mm long, dorsally papillose, anther ovoid with the apex truncate; nectary shallow, penetrating about 2/3 of the column, not the ovary. *Epidendrum borealistachyum* Hágsater & E.Santiago is vegetatively very similar, but the flowers lilac-white, apex of the column deep purple, nectary deep, penetrating 1/3 of the ovary. *Epidendrum palaciosii* Hágsater & Dodson has elliptic-lanceolate leaves, 5-12 × 2.3 cm; flowers are grayish lilac, sepals dorsally muricate, petals oblanceolate with the apex rounded, 3.5 mm wide. *Epidendrum microrigidiflorum* Hágsater has ovate-lanceolate leaves, apex acuminate, flowers are greenish yellow to cream-colored, sepals dorsally glabrous, and the lip is widely rhombic, with the base cuneate.

ETYMOLOGY: From the Greek νότος, southern, and σταχυς, ear of corn, in reference to the southern distribution of this species within the range of the group, with inflorescences which are reminiscent of ears of corn and constitute the Macrostachyum Group. Most of the specimens first seen are from Bolivia and Peru, but later some specimens have been identified from northern Colombia and Ecuador.

CONSERVATION STATUS: NT. Not Threatened. The species is widespread and common from northern Colombia (Santander) to Bolivia (Cochabamba).

REFERENCES: Hágsater, E., 2006, *Epidendrum microrigidiflorum* in E. Hágsater & L. Sánchez s. (eds.), *Icon. Orchid.* 8: pl. 853. Hágsater, E., & C. H. Dodson, 1993, *Epidendrum palaciosii* in *Icon. Orchid.* 2: pl. 171. Hágsater, E., & E. Santiago, 2015, *Epidendrum borealistachyum* in E. Hágsater & L. Sánchez s. (eds.), *Icon. Orchid.* 15(1): pl. 1505.





EPIDENDRUM PLURICOSTATUM Hágsater, Reina-Rodr. & J.Duarte

Plate 1958

EPIDENDRUM PLURICOSTATUM Hágsater, Reina-Rodr. & J. Duarte, *Icon. Orchid.* 19(1): pl. 1933. 2022.

Type: COLOMBIA: Nariño: Mun. Ricaurte: Reserva Forestal Protectora Nacional, La Planada, cultivada en Orquidario, 1856 m, 8 VII 2021, **Guillermo Reina-Rodríguez, Carol Rojas-Florez, Kelly Ortiz, Irene Caicedo, Nohemy Nastacuas, Jairo Guanga & Betty Caicedo 3366.**
Holotype: PSO. (Holotype lost.)

Lectotype (here designated): COLOMBIA: Cauca: Tambo, Parque Nacional Munchique, 65-68 km vía 20 de Julio, 2000 m, 27 abril 1979, **Gustavo Morales L., James & María Luteyn 154.** Lectotype COL! See note.

Epiphytic, sympodial, caespitose, erect **herb**, 27-40 cm tall including the inflorescence. **Roots** 2 mm in diameter, basal, scarce, thin. **Stems** 27-37 x 0.8-2.0 cm, simple, cane-like, terete at base, laterally compressed and ancipitose above, erect, straight. **Leaves** 10-13, distributed throughout stems, alternate, articulate, erect-spreading, deciduous with time; sheaths 2.5 x 0.8-2.0 cm, tubular, somewhat infundibuliform, laterally compressed, ancipitose, minutely striated, purple to green; blade 5.0-7 x 2.7-4 cm, ovate to elliptic, apex rounded, narrowly bilobed, medium green, dorsally usually purple, coriaceous, margin entire, revolute. **Spathes** 2, unequal, one at apex of peduncle, 30-35 x 20-25 mm (conduplicate), ovate, dorsally keeled, apex rounded, base tubular, ancipitose, leaf-like, green to red-purple, second smaller, 18-26 x 7-8 mm (conduplicate), hemi-ovate, dorsally keeled, green to red-purple, similar to floral bracts but larger. **Inflorescences** 4.5-7.5 cm long, apical with several lateral inflorescences in mature stems, short, compact, few-flowered, distichous, producing new racemes from same inflorescences through time and becoming pluri-racemose; peduncle ca. 30 mm long, apical portion of inflorescence laterally compressed, ancipitose, short, covered at mid-length by 2 unequal spathes. **Floral bracts** 17 x 9.5 mm and progressively smaller, much shorter than ovary, ovate, conduplicate, obtuse, imbricated. **Ovary** 23-41 mm long, terete, smooth, ventrally inflated for apical half. **Flowers** several, developing one at a time per raceme, resupinate, sepals green to ochre-green, lip yellow tinged red, petals pale green, lip cream colored, column green minutely dotted red dorsally, anther green to whole flower pale green; fragrance not registered. **Sepals** spreading, free, elliptic, acute, 5-veined, margin entire, spreading; dorsal sepal 13.0-15.6 x 4.9-6.0 mm, lateral sepals 13.0-15.2 x 5.8-6.5 mm. **Petals** 12.0-14.0 x 1.9-3.8 mm, sub-parallel to column, free, narrowly oblong, apex rounded, slightly oblique, 3-veined, margin entire, spreading. **Lip** 8.5-11.0 x 11.0-13.3 mm, united to column, entire, transversely elliptic, base slightly cordate, margin entire, spreading somewhat hyaline; bicallose, calli thick, slightly divergent, and leaning outwards, disc large, provided with numerous thickened veins radiating to near margin, some branching, three mid-veins converging near apex of lip. **Column** 8.0-9.0 x 3.8 mm, thin at base, gradually thickened towards apex, slightly arched, apex truncate. **Clinandrium-hood** 2 x 1.7 mm, prominent, slightly surpassing body of column, margin erose. **Anther** widely ovoid, acute, 4 celled. **Pollinia** 1.2 mm long, obovoid, laterally compressed, caudicles soft and granulose, viscarium semi-liquid. **Rostrillum** apical, slit. **Lateral lobes of stigma** very large, transverse to column, forming a narrow vertical passage into nectary. **Nectary** penetrating 1/2 of ovary, narrow, smooth. **Capsule** not seen.

OTHER SPECIMENS: COLOMBIA: Cauca: P.N.N. Munchique, V 1981, *Chaparro 99*, FMB! (sterile). El Tambo: P.N.N. Munchique. Cerro Changuayaco, 2450 m, 21 IX 2001, *Salgado 379*, CAUP! **Risaralda:** camino al cerro Moctezuma, 1926-2451 m, 10 I 2006, *Arévalo 463*, COL! P.N.N. Tatamá, Cerro Montezuma, 2500 m, 30 IX 2006, *Arévalo 641*, COL! carretera al Cerro Montezuma, 15 III 1986, *Bernal 1000*, COL! **Valle del Cauca:** Quereamal, 20 I 1980, *Guarín 76*, COL! El Cairo, 2000 m, IV 1982, *Ortiz 4445*, HPUJ! **ECUADOR: Carchi:** Tulcán El Chical, 1400-1600 m, 2 II 2022, *Medina s.n.*, HA! Digital images, AMO! (LCDP voucher).

OTHER RECORDS: COLOMBIA: Caldas: Riosucio, 1900 m, 15 XI 2020, *Arango s.n.*, Digital Image, AMO! Riosucio, 1900 m, 31 I 2021, *Arango s.n.*, Digital Images, AMO! Cauca: Popayán, Calibío: Hort. Finca San Isidro, 1726 m, 29 III 2018, *Hágsater 15651*, digital images, AMO! **Risaralda:** Pueblo Rico, Cerro Montezuma, 18 XI 2012, *Calderon s.n.*, Digital images, AMO! Montezuma, P.N.N. Tatamá, rec'd 19 I 2016, *Moreno s.n.*, Digital Images, AMO! **Valle del Cauca:** El Cairo: Serranía Los Paraguas, Las Amarillas, *Arango s.n.*, Digital image, AMO! **ECUADOR: Carchi:** Hort. Ecuagenera, IX 2003, *Hágsater 13837*, spirit, AMO! Digital images, AMO! Hort. Ecuagenera, 16 X 2018, *Hágsater 15960*, Digital images, AMO! Tulcán, El Chical, rec'd 7 X 2021, *Hirtz s.n.*, Digital Image, AMO! El Chical, Hector Yela en su orquidario La Casa Drácula, *Hirtz s.n.*, Digital images AMO! (Photo voucher). **Imbabura:** Otavalo: Fundación Cielo Azul, muy cerca del Río Guayllabamba con la represa Mandarayacu, 1200 m, *Baquero s.n.*, Digital images, AMO!

DISTRIBUTION AND ECOLOGY: Presently known from central Colombia, from Risaralda south, along the Cordillera Occidental, on both sides of the Cordillera, and into northern Ecuador on the Pacific slopes, at 1400-2500 m elevation in wet forest. Flowering throughout the year.

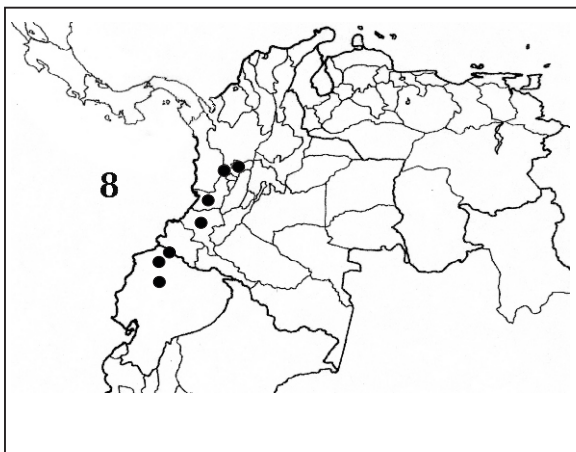
RECOGNITION: *Epidendrum pluricostatum* belongs to the Albertii Group which is characterized by the sympodial habit, the laterally compressed to ancipitose or somewhat fusiform-thickened stems, the apical or apical and lateral, distichous inflorescences, more or less with imbricating bracts on the peduncle, producing one flower at a time, and the Albertii Subgroup, which has apical and more commonly short, lateral inflorescences (the apical one with an ancipitose peduncle terminating in a conduplicate spathaceous bract somewhat larger but similar to the floral bracts) with several progressively longer, imbricating bracts covering the short peduncle and the flowers are membranaceous, delicate, generally successive, one developing at a time from each raceme. The new species is recognized by the short apical and lateral inflorescences with rounded floral bracts, with one or two prominent spathaceous bracts on the apical inflorescence, the petals narrowly oblong, and the lip 8.5-11.0 x 11.0-13.3 mm, united to column, entire, sub-cordiform, transversely elliptic, base slightly cordate, margin entire, spreading, bicallose, calli thick, slightly divergent, and leaning outwards, disc large, provided with numerous thickened veins radiating to near margin, some branching, three mid-veins converging near apex of lip. It has been confused with *Epidendrum phyllocharis* Rchb.f. which has flowers white or rarely pale green tinged with red, petals linear 1.7-2 mm wide and the lip pentagonal-subcircular with 5-7 radiating keels, truncate and minutely apiculate at the apex. *Epidendrum brachypodum* Hágsater has pale green to pale purple flowers with relatively wide sepals and petals, the petals spatulate-obtrullate, 5.4 mm wide, and the lip sub-rhombic-orbicular with a single prominent keel and somewhat thickened. *Epidendrum albertii* Schltr. is vegetatively very similar, with similar colored flowers, but the lip is ovate-oblong with an acute apex and the column strongly arched at the apex. *Epidendrum hexagonum* Hágsater & Dodson, from Ecuador, has larger plants, elliptic-oblancoleolate leaves 13-18 cm long, green flowers with narrowly elliptic-oblancoleolate petals 17-18 mm long, and the lip with a single central keel.

NOTE: Unfortunately, the holotype of this species has been lost and therefore a Lectotype is designated from the specimens cited in the original publication. In addition the locality is corrected in accordance with Article 9.2 of the Shenzhen code.

ETYMOLOGY: From the Latin *pluri-*, many, *costatus*, ribbed, with the lip having a many-ribbed disc, which distinguishes it from the species with which it has been confused for many years, *Epidendrum phyllocharis*.

CONSERVATION STATUS: NT Near threatened. Presently known Area of occupancy is around 2600 km², with more than 10 known locations present in two countries, with a range of some 600 km. It appears in at least two National Natural Parks in Colombia. Therefore, the proposed as near threatened (NT) applies (IUCN 2012).

REFERENCES: Hágsater, E., 2004, *Epidendrum brachypodum* in E. Hágsater & L. Sánchez S. (eds.), The Genus *Epidendrum*, Part 4, *Icon. Orchid.* 7: pl. 715. Hágsater, E., & C.H. Dodson, 1993, *Epidendrum hexagonum* in E. Hágsater & G.A. Salazar (eds.), The Genus *Epidendrum*, Part 1, *Icon. Orchid.* 2: pl. 144. Hágsater, E., G. Reina-Rodríguez & J. Duarte, 2022, *Epidendrum pluricostatum*, in The Genus *Epidendrum*, Part 15, *Icon. Orchid.* 19(1): pl. 1933. Santiago, E., & E. Hágsater, 2007, *Epidendrum albertii* in E. Hágsater & L. Sánchez S. (eds.), The Genus *Epidendrum*, Part 6, *Icon. Orchid.* 9: pl. 903. Santiago, E., & E. Hágsater, 2007, *Epidendrum phyllocharis* in E. Hágsater & L. Sánchez S. (eds.), The Genus *Epidendrum*, Part 6, *Icon. Orchid.* 9: pl. 973.



Authors: E. Hágsater, G. Reina-Rodríguez & J. Duarte

LCDP: H. Medina



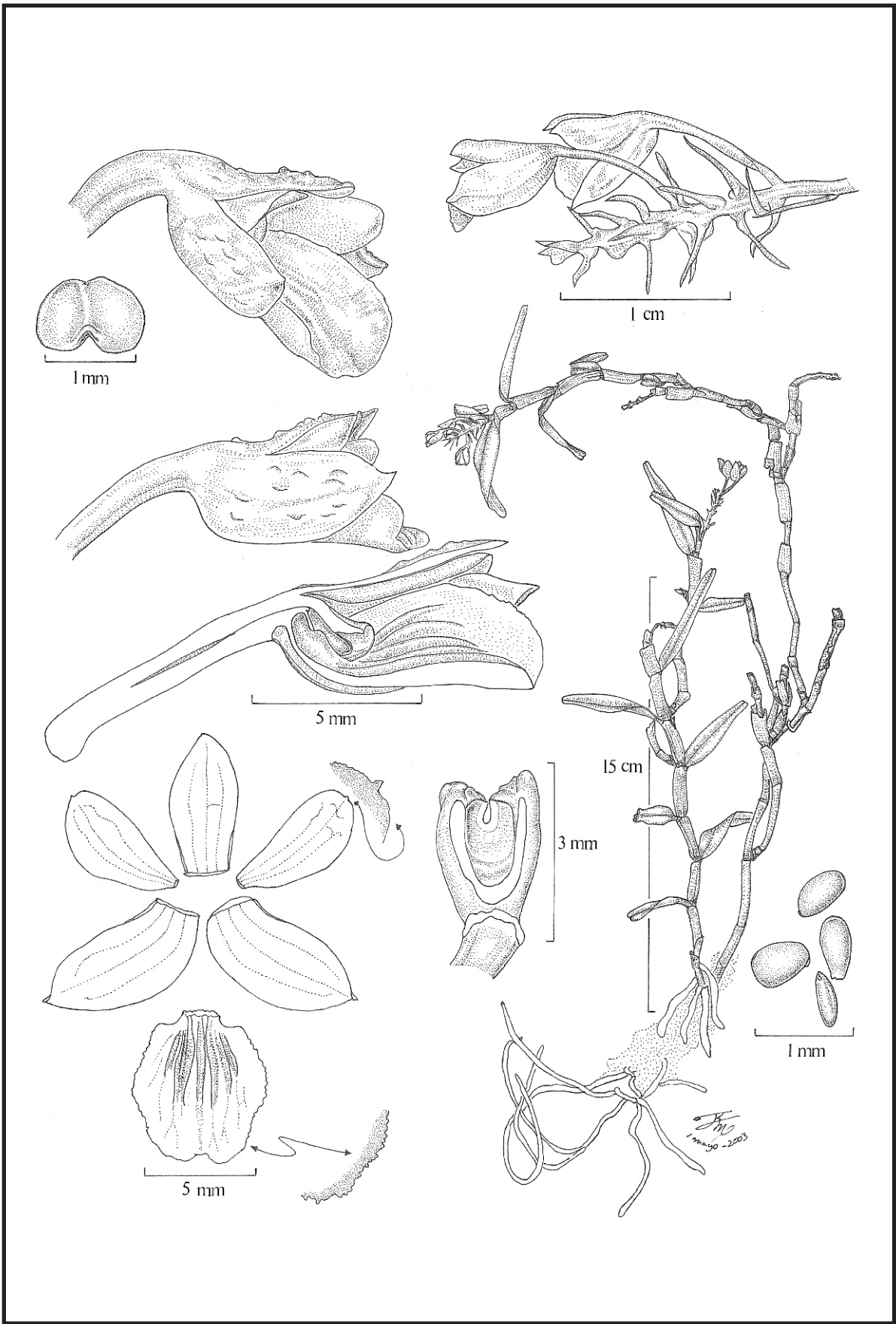
Photo: H. Medina

Editors: E. Hágsater & E. Santiago



EPIDENDRUM PSEUDOGLOBIFLORUM Hágsater & Dodson

Plate 1959a



EPIDENDRUM PSEUDOGLOBIFLORUM Hágsater & Dodson

Plate 1959b

EPIDENDRUM PSEUDOGLOBIFLORUM Hágsater & Dodson, *Icon. Orchid.* 7: pl. 780. 2004.

Type: ECUADOR: Loja: Parque Nacional Podocarpus, E. of Nudo de Cajanuma, 2900 m, 20 September 1989, **A. Bøgh 47919**. MO! (Illustration voucher). Isotype: AAU.

Epiphytic, monopodial, scandent **herb** 16-50 cm tall, of successive lateral growth, rarely branching. **Roots** 1-3 mm in diameter, thick, fleshy, from base of primary stem, rarely above. **Stems**: primary stem 11-23 x 0.2-0.4 cm, successive stems 6-15 x 0.17-0.4 cm; originating from an upper internode of previous stem, cane-like, terete, thin, sinuous. **Leaves** about 8-9 on primary stem, 3-6 on upper stems, suberect; sheaths 10-15 x 3.2-4.0 mm, tubular, somewhat infundibuliform when dry, striated, minutely rugose, brown; blade 1.6-5 x 0.5-1.0 cm, lanceolate-oblong, obtuse, apex retuse, bilobed, with a low dorsal keel, margin entire. **Inflorescence** 1.5-2.2 cm long, apical, racemose, sub-globose, many-flowered, dense, arching nutant; peduncle 3-8 mm long, short, without bracts; rachis 7-17 mm, terete, thin. **Floral bracts** 2.0-4.5 mm long, about half as long as ovary or shorter, triangular-lanceolate, acute. **Flowers** 7-20, simultaneous, resupinate, trumpet-shaped, orange to vermilion red. **Ovary** 6.0-10.0 mm long, terete, thin, with low longitudinal ribs. **Sepals** connate at base, partly spreading towards apex, elliptic-oblong, subacute, minutely apiculate, 3-veined, margin entire, dorsally pustulate, dorsal sepal 6.3-7.4 x 3.0-3.9 mm, lateral sepals 8-10 x 3.7-3.9 mm, abruptly falcate near base. **Petals** 5.8-7.7 x 2.8-3.1 mm, partly spreading, free, obovate, arching, rounded, minutely apiculate, 3-veined, margin entire, apical margin minutely erose. **Lip** 5-7.5 x 5-7.5 mm, united to column, entire, widely sub-orbicular-hexagonal, base truncate, apex slightly retuse, margin dentate; callosity with 7 prominent, smooth keels which disappear towards middle of lip. **Column** 2.5-3.0 mm long, short, thick, bent upwards at middle, with a pair of apical, truncate, thickened wings. **Clinandrium hood** prominent, fleshy, short, margin entire. **Anther** reniform, 4-celled. **Pollinia** 4, obovoid, laterally compressed, unequal. **Rostellum** apical, slit. **Nectary** short, rounded, not entering ovary. **Capsule** globose, pedicel 3.0-4.5 mm long, thin, body 10-12 x 8-9 mm, apical neck 2.5-4.0 x 0.8-1.1 mm.

OTHER SPECIMENS: ECUADOR: Azuay: Sigüig: San Miguel de Jima, antes del Puerto Tambillo, 3382 m, 17 X 2018, *Hágsater 16005*, QCNE! (LCDP voucher) **El Oro:** Pueblo Viejo cerca de Chilla, 2550 m, 22 IV 1998, *Cornejo 6175*, QCNE! **Loja:** PNP, Ecosistema Páramo, CIA, 3270 m, 4 X 2012, *Aguirre 29*, LOJA! Nudo de Cajanuma, 2900 m, 26 X 1989, *Bøgh 86576*, LOJA! Loja-Zamora, 2600 m, 14 VII 1983, *Bohlin 949* GB! Cumbre de Villonaco, 3300 m, 6 IX 1990, *Cerón 11889*, LOJA! QCNE! Podocarpus National Forest, 2750 m, 25 VII 1985, *Dodson 16090*, MO! QCA! QCNE! La Toma-Cerro Villonaco, 2700 m, 24 VIII 1982, *Emperaire 1053*, LOJA! Villonaco, 2900 m, 5 X 1946, *Espinosa 735*, AMES! LOJA! NY! Loja-Zamora km 18, El Tiro, 2800 m, 25 IX 2001, *Madsen 8543*, LOJA! Nudo de Cajanuma, 2800-3000 m, 6 IX 1988, *Madsen 75258*, LOJA! The pass between Loja and Zamora, 2880m, 24 IX 1967, *Sparre 18951*, S! Villonaco, 2500-2900 m, 24 IV 1987, *van der Werff 8955*, MO! (*pro parte*) Cajanuma, 2900 m, 21 IX 2008, *Werner 2617*, AMO! Digital images, AMO! (Photo voucher: inflorescence) **Morona Santiago:** Tambillo, San Miguel, Gualaquiza, 2900 m, 1 VII 1997, *Suin 264*, HA! Area de Bosque Vegetación Protectora Tambillo, 2930 m, 11 IX 2001, *Suin 1086*, AMO! HA! **Zamora-Chinchipec:** Loja-Zamora, 23 IX 1982, *Balslev 3187*, QCA! Ibid. 2800 m, 28 IX 1961, *Dodson 756*, AAU! SEL! Ibid. 20 XI 1961, *Dodson 1479*, AAU! F! SEL! Ibid., 2600 m, 21 IX 1980, *Dodson 10520*, SEL! Arriba de Jimbura, 3044 m, 19 IX 2016, *Hágsater 14644*, QCNE x3! Digital images, AMO!

OTHER RECORDS: ECUADOR: Without locality, Ecuagenera, *Hirtz 7884*, slide, AMO! **Azuay:** Cerro Moriré Cuyes, *Hirtz s.n.*, digital image, AMO! **Loja:** bajando del puerto a Loja, 3000 m, 28 I 2004, *Hágsater 14069*, digital images, AMO! carretera vieja Loja a La Toma, 2750 m, 1 II 2004, *Hágsater 14121*, Digital images, AMO! Ibid. 2862 m, 1 II 2004, *Hágsater 14127*, Digital images, AMO! (Photo voucher: plant) Parque Nacional Podocarpus, Cajanuma, 2800 m, 8 VIII 2014, *Portilla s.n. sub Ecuagenera 3272*, digital images, AMO!

DISTRIBUTION AND ECOLOGY: Known only from southern Ecuador around Loja and south to El Oro and Zamora-Chinchipec. Expected in neighboring Peru. Epiphytic in wet montane forest at 2500-3400 m elevation. Flowering in throughout the year but apparently more between September and February.

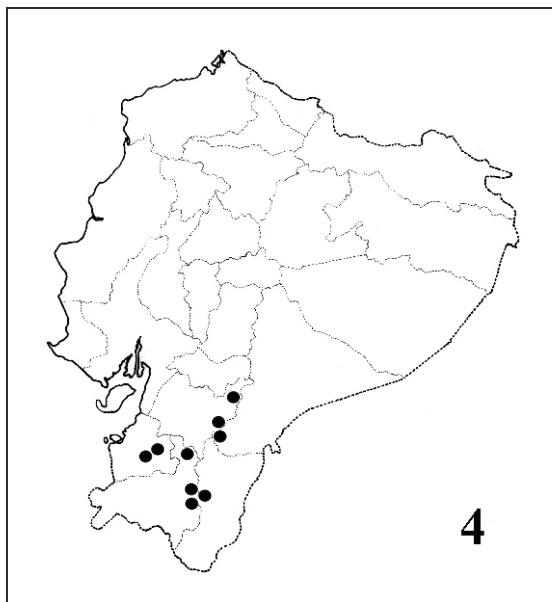
around Loja, above Chilla in the province of El Oro, on the Cerro Villonaco and the eastern, wet side of the ridge of the Andes directly east and south of Loja, at 2600-3300 m altitude, terrestrial amidst moss or epiphytic in elfin cloud forest or scrubby paramo. Flowering from April to November.

RECOGNITION: *Epidendrum pseudoglobiflorum* belongs to the Diothonea Group and Subgroup which is characterized by the monopodial, branching habit, linear-lanceolate to lanceolate, bilobed leaves, arching-nutant, racemose inflorescence, membranaceous or rarely fleshy flowers, the lip entire to 3-lobed, with an erose margin, callosity, without or with 1-10 thin, smooth to erose keels, the column united to the lip from totally to obliquely united to free. The species is recognized by the trumpet-shaped, orange to vermilion-red flowers, connate, pustulate sepals, entire, widely sub-orbicular-hexagonal lip, callosity with 7 prominent, smooth keels, obovate, arching, 3-veined petals, and the short, thick column which is arched upwards at the middle with the wings on the side truncate and thickened. It has been confused with *Epidendrum globiflorum* F.Lehm. & Kraenzl. which is found nearby, but has a deeply 3-lobed lip, greenish white flowers, partly spreading, 6.0-7.5 mm long sepals; the column ends in a pair of outstretched, rounded, falcate wings, and the clinandrium is much reduced. *Epidendrum podocarpophilum* Schltr. has pale orange flowers, longer, narrower leaves 3.0-6.5 x 3.5-9 cm, and somewhat shorter sepals 5-6 mm long, the inflorescence with 10-17 flowers and the lip 3-keeled, these short and basal, with the surface of the disc verrucose, the mid-lobe transversely rectangular, apically bilobed forming a pair of subquadrate lobes.

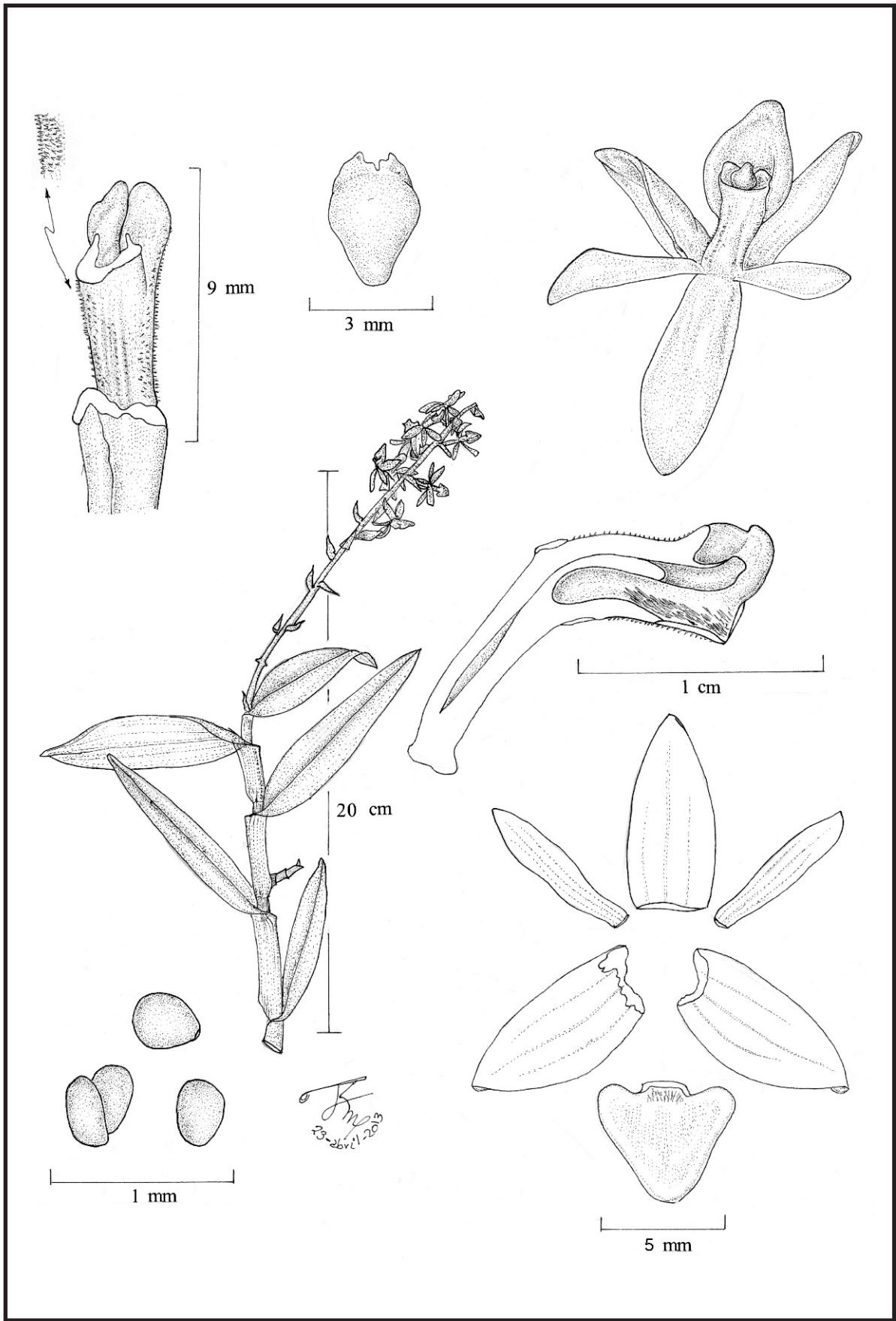
CONSERVATION STATUS: CE. Critically Endangered. The species has a limited to southern Ecuador. The areas where it was once common is no longer found, but it has been collected recently in areas which have not been heavily travelled.

ETYMOLOGY: From the Greek, *glos*, false, a lie, and the Latin *globus*, ball-like, globose, and *flos*, flower, in reference to the fact that this species has been long mistaken for another distinct, rare species from the region.

REFERENCES: Santiago, E., 2004, *Epidendrum pseudoglobiflorum* in E. Hágsater & L. Sánchez S. (eds.) The Genus *Epidendrum*, Part 4, *Icon. Orchid.* 7: pl. 780. Santiago, E. & E. Hágsater, 2006, *Epidendrum globiflorum* in E. Hágsater & L. Sánchez S. (eds.) The Genus *Epidendrum*, Part 5, *Icon. Orchid.* 8: pl. 837. Santiago, E. & E. Hágsater, 2009, *Epidendrum podocarpophilum* in E. Hágsater & L. Sánchez S. (eds.) The Genus *Epidendrum*, Part 8, *Icon. Orchid.* 12: pl. 1277.



Empty



EPIDENDRUM SPICULISTACHYUM Hágsater & E.Santiago

Plate 1960

EPIDENDRUM SPICULISTACHYUM Hágsater et E.Santiago, *sp. nov.*

Type: ECUADOR: Morona Santiago: Cantón Gualaquiza, Área de Bosque Vegetación Protectora Tambillo, 2440 m, 15 abril 2001, **Linder Suin & Juan Guartán 987**. Holotype: QCNE 164201! (Illustration voucher). Isotype: QCNE 164202!

Similar to *Epidendrum notostachyum* Hágsater & E.Santiago but the flowers green spotted with brown (vs. flowers green or green-white), the petals linear-oblong with the apex obtuse (vs. petals linear-oblongeolate, with the apex acute), the column densely spiculate (vs. column unornamented), and the anther pyriform (vs. anther ovoid).

Epiphytic, sympodial, caespitose, erect **herb**. **Roots** not seen. **Stems** 17 x 0.3-0.6 cm (only apical portion seen), branching, cane-like, terete, thin. **Leaves** ca. 6, distributed throughout stems, distichous, articulate, sub-coriaceous, sub-spreading; sheaths 15-35 x 3-6 mm, tubular, minutely striated; blade 7.0-8.5 x 1.3-2.0 cm, lanceolate, apex short acuminate, margin entire, spreading. **Spathe** lacking. **Inflorescence** ca. 14 cm long, apical, racemose, sometimes with a short, few-flowered raceme from base of main raceme, erect, laxly few-flowered; peduncle 2 cm long, straight, terete, thin; rachis 12 cm long, terete, thin, slightly sinuous. **Flowers** simultaneous, non-resupinate, green spotted with brown; fragrance not registered. **Floral bracts** 3-7 mm long, shorter than ovary, narrowly triangular, acuminate, embracing. **Ovary** 7-10 mm long, terete, thin, furrowed. **Sepals** 8-9 x 3.6-4 mm, free, apex obtuse, 3-veined, unornamented, margins entire, spreading; dorsal sepal slightly reflexed, narrowly ovate; lateral sepals elliptic, oblique, with a low dorsal keel at the apex. **Petals** 7 x 1 mm, spreading, free, apical portion arching forward in natural position, oblong, obtuse, 3-veined, margin entire, spreading. **Lip** 5 x 6 mm, united to column, entire, fleshy, cymbiform in natural position, base cordate, apex rounded, margin entire, spreading; ecallose. **Column** 3-4 mm long, thin, apex arching upwards, densely spiculate. **Rostellum** apical, slit. **Lateral lobes of stigma** not seen. **Clinandrium-hood** reduced, margin entire. **Anther** pyriform, 4-celled. **Pollinia** 4, obovoid; caudicles no seen; viscarium semi-liquid. **Nectary** shallow, wide, bottom rounded, without penetrating pedicellate ovary, densely pubescent in front of stigmatic cavity, pubescence reclining inwards. **Capsule** not seen.

OTHER SPECIMENS: ECUADOR: **Morona Santiago:** Cantón Gualaquiza, Área de Bosque Vegetación Protectora Tambillo, 2600 m, 30 I 2001, *Suin 740*, AMO! HA! QCNE x2!

OTHER RECORDS: None seen.

DISTRIBUTION AND ECOLOGY: Presently known from a single area, in south-central Ecuador, on upper Amazon slope of Andes in Morona-Santiago; epiphytic at 2240-2810 m elevation. Flowering from January to April.

RECOGNITION: *Epidendrum spiculistachyum* belongs to the Macrostachyum Group, which is characterized by the monopodial plants with sub-apical branching, rugose leaf sheaths, the large leaves generally spreading, the inflorescence racemose, erect, and the flowers fleshy, generally green to black (ripe olive colored), as well as yellow to pink to purple, with an entire, conduplicate, generally ecallose and pubescent lip embracing the column, and the nectary pubescent to papillose in front of the stigmatic cavity and at least at the base of the lip. The new species is recognized by the lanceolate leaves with the apex short acuminate, the flowers green spotted with brown, the sepals 8-9 mm long, the petals linear-oblong, obtuse, the column densely spiculate, and the anther pyriform. *Epidendrum notostachyum* is vegetatively similar, but the flowers are green or green white, concolor, the sepals 8-9.5 mm long, dorsally papillose, the petals linear-oblongeolate, acute, the column unornamented, and the anther ovoid. *Epidendrum borealistachyum* Hágsater & E.Santiago also has lanceolate leaves, but the apex obtuse, the flower lilac-white, the column unornamented with the apex tinged purple. *Epidendrum cuyestachyum* Hágsater & E.Santiago is vegetatively similar, but has a dense inflorescence with the flowers dark brown with the ventral surface green, the anther and lip lime green, the sepals 14-15 mm long, the petals narrowly linear and the column scarcely papillose.

ETYMOLOGY: From the Latin *spiculatus*, with spikes, and *stachyum*, a cone, in reference to this Macrostachyum Group, with this species distinguished by the spiculate column, a rare feature.

CONSERVATION STATUS: DD. Data deficient. Known presently from a single area. The species has been generally lumped under *Epidendrum macrostachyum*, and the species would be expected to be more widely distributed in southern Ecuador and into northern Peru.

REFERENCES: Hágsater, E., & E. Santiago, 2015, *Epidendrum borealistachyum* in E. Hágsater & L. Sánchez S. (eds.), The Genus *Epidendrum*, Part 11, **Icon. Orchid.** 15(1): pl. 1505. Hágsater, E., & E. Santiago, 2015, *Epidendrum notostachyum* in E. Hágsater & L. Sánchez S. (eds.), **Icon. Orchid.** 15(1): pl. 1545. Hágsater, E., & E. Santiago, 2022, *Epidendrum cuyestachyum* in E. Hágsater & E. Santiago (eds.), The Genus *Epidendrum*, Part 14, **Icon. Orchid.** 19(2): pl. 1952.



Authors: E. Hágsater & E. Santiago

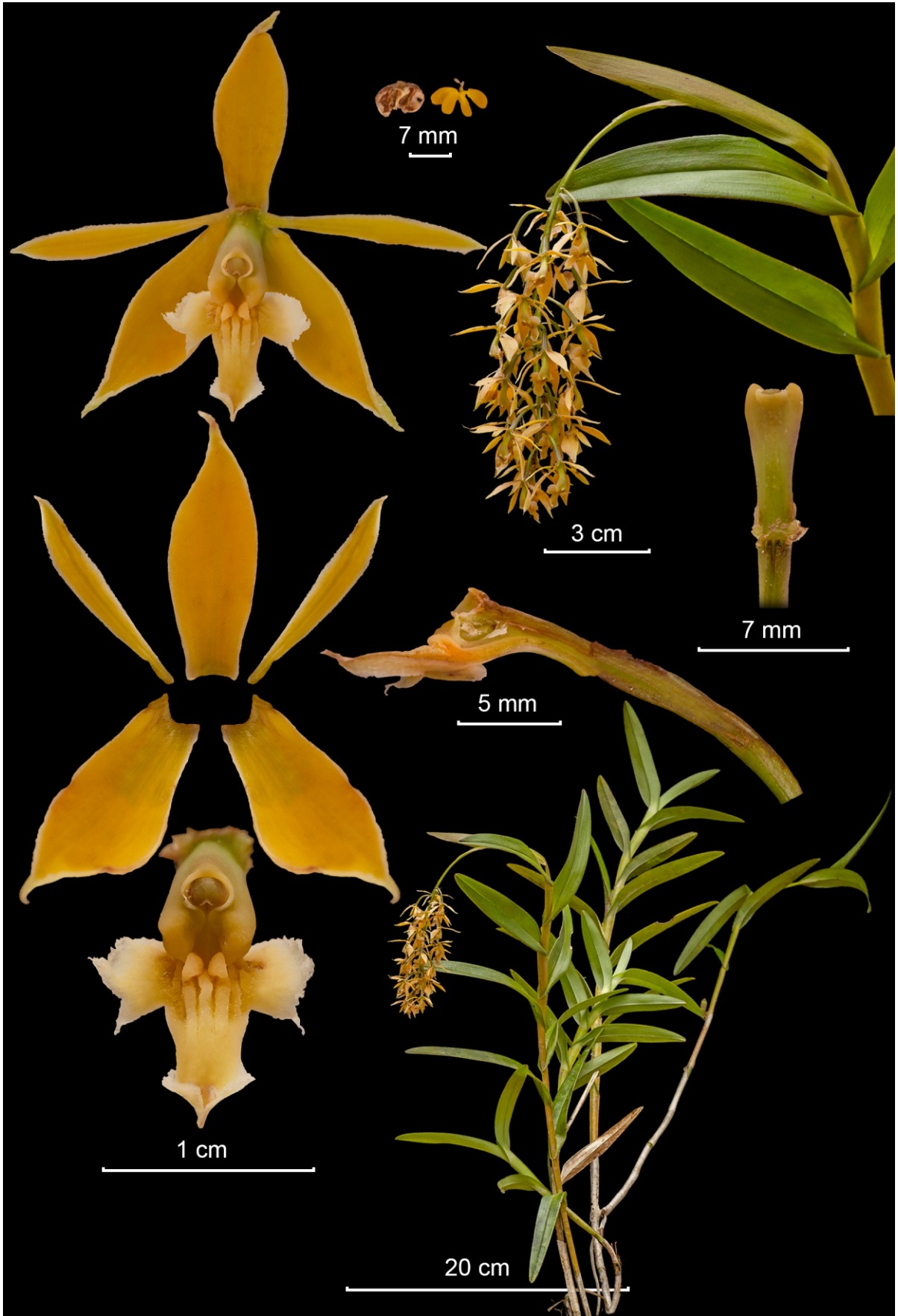
Illustrator: R. Jiménez M.

Editors: E. Hágsater & E. Santiago

Herbario AMO

Ciudad de México, MÉXICO

ICONES ORCHIDACEARUM 19(2). 2022. Plate 1960



EPIDENDRUM TAMBORENSE Hągsater, C.J.Jerez & M.Jerez

Plate 1961

EPIDENDRUM TAMBORENSE Hágsater, C.J.Jerez et M.Jerez, sp. nov.

Type: VENEZUELA: Mérida: Mun. Campo Elías: Parroquia Jají: Páramo El Tambor, 2360 m, 9 mayo 2022, **Carlos J. Jerez 1936**.
Holotype: MER! (LCDP voucher).

Similar to *Epidendrum dolichotryioides* Hágsater & E.Santiago, but the spathe larger, 5-18 cm long (vs. spathe 2.4-5.5 cm long), flowers of similar size and color, but the lip larger, 9.3 x 11.5 mm (vs. lip 7 x 5.5-6.5 mm), and the mid-lobe 5.8 x 4.3 mm, rectangular, somewhat constricted in middle, margin entire along basal half, erose-dentate at apex, sides of apex involute, thus appearing apiculate. (vs. mid-lobe 4.0-4.5 x 2 mm, oblong, somewhat constricted at the middle and sub-rhombic apically, margin entire, apex somewhat involute).

Epiphytic and terrestrial, sympodial, caespitose **herb**, 38-85 cm tall including inflorescence. **Roots** 3 mm in diameter, basal, fleshy, white. **Stems** 32-60 x 0.5-0.6 cm, simple, cane-like, terete below, laterally compressed above, erect; base covered by non-foliar, tubular, scarious sheaths, 3.0-6.0 x 0.5-0.6 cm. **Leaves** 5-12, distributed along apical half of stems, sub-erect, alternate, articulate, subcoriaceous, medium green; sheath 2.5-5.0 x 0.5-1.5 cm, tubular, minutely striated; blade 4.0-14 x 1.0-3.0 cm, oblong-lanceolate, apex obtuse, margin entire, spreading. **Spathes** 1-2, 5-18 x 0.5-1.2 cm, acute, covering about half to three quarters of peduncle, basal half tubular, conduplicate throughout. **Inflorescence** 9.5-25 cm long, apical, racemose, arching-nutant, laxly few-flowered; peduncle 12-25 cm long, thin, laterally compressed, with single bract ca. 1 cm long at near half to three-quarters length of peduncle; raceme 11 x 5.2 cm. **Floral bracts** 2-8 mm long, prominent but shorter than ovary, narrowly triangular, acuminate, embracing. **Flowers** 12-22, simultaneous, resupinate, pale ochre to ochre-brown, apical margins of lip pale, base of column green: fragrance not registered. **Ovary** 11-16 mm long, terete, thin, not inflated, unornamented, furrowed. **Sepals** spreading, free, elliptic, short-acuminate, dorsally minutely pustulose towards apex, 5-veined, margin entire, spreading; dorsal sepal 12.8 x 3.4 mm, lateral sepals 11.1 x 4.4 mm, oblique, short-aristate, with low dorsal keel. **Petals** 11.1 x 1.7 mm, spreading, free, linear-oblancheolate, acute, 1-veined, oblique, margin erose, spreading. **Lip** 9.3 x 11.5 mm, united to the column, 3-lobed, base somewhat cordate; bicallose, calli small, fleshy, somewhat curved outwards, triangular when seen from front; disc with 3 low prominent parallel ribs that disappear near middle of mid-lobe, with one smaller rib on each side, thus 5 in total, sometimes ribs much reduced; lateral lobes 3.7 x 4.7 mm, cuneate, apical margin somewhat zig-zag, margin erose, the basal margin somewhat sinuous-dentate, forward (apical) corner prominently apiculate; mid-lobe 5.8 x 4.3 mm, rectangular, somewhat constricted in middle, margin entire along basal half, erose-dentate at apex, sides of apex involute, thus appearing apiculate. **Column** 6.8 mm long, straight, basal half thin, gradually widening towards apex. **Clinandrium-hood** tubular, truncate, margin entire. **Anther** reniform, 4-celled. **Pollinia** obovoid, sub-equal, caudicles short, soft and granulose; viscarium semi-liquid. **Rostellum** apical, slit. **Lateral lobes of stigma** half as long as stigmatic cavity. **Nectary** narrow, penetrating 1/3 of pedicellate ovary. **Capsule** not seen.

OTHER SPECIMENS: VENEZUELA: Mérida: La Carbonera, Passhöhe Ejido-Azulita, 2300 m, 24 IV 1949, *Renz 5231*, RENZ! Páramo El Tambor, Jají-Gebiet, 2700 m, 27 IV 1949, *Renz 5245*, RENZ x2! Between Mesa del Trapiche and El Molino, 2530-2590 m, 15 V 1944, *Steyermark 56500*, f!

OTHER RECORDS: VENEZUELA: Mérida: Páramo El Tambor, 28 IV 2021, *M. Jerez s.n.*, Digital images, AMO! (Photo voucher).

DISTRIBUTION AND ECOLOGY: Known presently from two localities in northwestern Venezuela in the state of Mérida, in the Sierra de la Culata and the Sierra Nevada; terrestrial and epiphytic at 2300-2700 m elevation in Andean tropical cloud forest, terrestrial in floodable Elfin Forest, and epiphytic in more dense forests.

RECOGNITION: *Epidendrum tamborense* belongs to the Pergracile Group characterized by the sympodial, caespitose to sometimes somewhat creeping habit, the stems cane-like, simple, several leaved, with an elongate apical, racemose, lax-flowered inflorescence, the flowers star-shaped, membranaceous, and the lip 3-lobed, not fleshy thickened, bicallose, the mid-lobe rectangular to triangular, the lateral lobes dolabriform to semi-orbicular. The species is recognized by the stems laterally compressed above with 5-12 leaves, the very prominent spathe 5-18 x 0.5-1.2 cm, acute, the long peduncle 25 cm long, laterally compressed, the nutant raceme of some 12-22 ochre-brown flowers, the sepals 11.1-12.8 mm long, apically aristate, short acuminate, the petals 11.1 x 1.7 mm, linear oblanceolate, acute, and the lip with 3 parallel ribs, sometimes much reduced, the lateral lobes cuneate, with forward (apical) corner prominently apiculate, and the mid-lobe rectangular, somewhat constricted in the middle. *Epidendrum dolichobotryioides* Hágsater & E.Santiago has a much smaller spathe, the sepals 11-13 mm long and the mid-lobe of the lip oblong, somewhat constricted at the middle and sub-rhombic apically, the margin entire, apex somewhat involute. *Epidendrum vidal-senegei* Hágsater has larger flowers, sepals 13-16 mm long, and the mid-lobe of the lip is rectangular, with the apex acute, retuse, 3-4 times longer than broad. *Epidendrum pergracile* Schltr. has smaller flowers, sepals 7 mm long, a triangular mid-lobe of the lip, and the lateral lobes form a straight angle with the mid-lobe.

ETYMOLOGY: In reference to Páramo El Tambor, a natural area which is skirted by the road between Jají and La Azulita, at the end of the northern slope of the Cordillera de Mérida in western Venezuela. Páramo El Tambor derives its name from a sacred stone (Piedra El Tambor) revered by surrounding communities (Armand, 2000).

CONSERVATION STATUS: DD. Data deficient. Known presently from two localities.

REFERENCES: Armand, J., Falcón & J.A. Gil, 2000, La Piedra El Tambor y su connotación sagrada: Una aproximación holística. *Bol. Antropológico* 50: 53-78. http://www.saber.ula.ve/bitstream/handle/123456789/18414/jorge_armand.pdf?sequence=2&isAllowed=y
Hágsater, E., 1999, *Epidendrum vidal-senegei* in Hágsater, E., L. Sánchez S. & J. García-Cruz (eds.), The Genus *Epidendrum*, Part 2, Icon. Orchid. 3: pl. 396. Hágsater, E., E. Santiago & M. Chocce-Peña, 2013, *Epidendrum dolichobotryioides* in Hágsater, E., & L. Sánchez S. (eds.), The Genus *Epidendrum*, Part 10, Icon. Orchid. 14: pl. 1424.



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Photo: M. Jerez

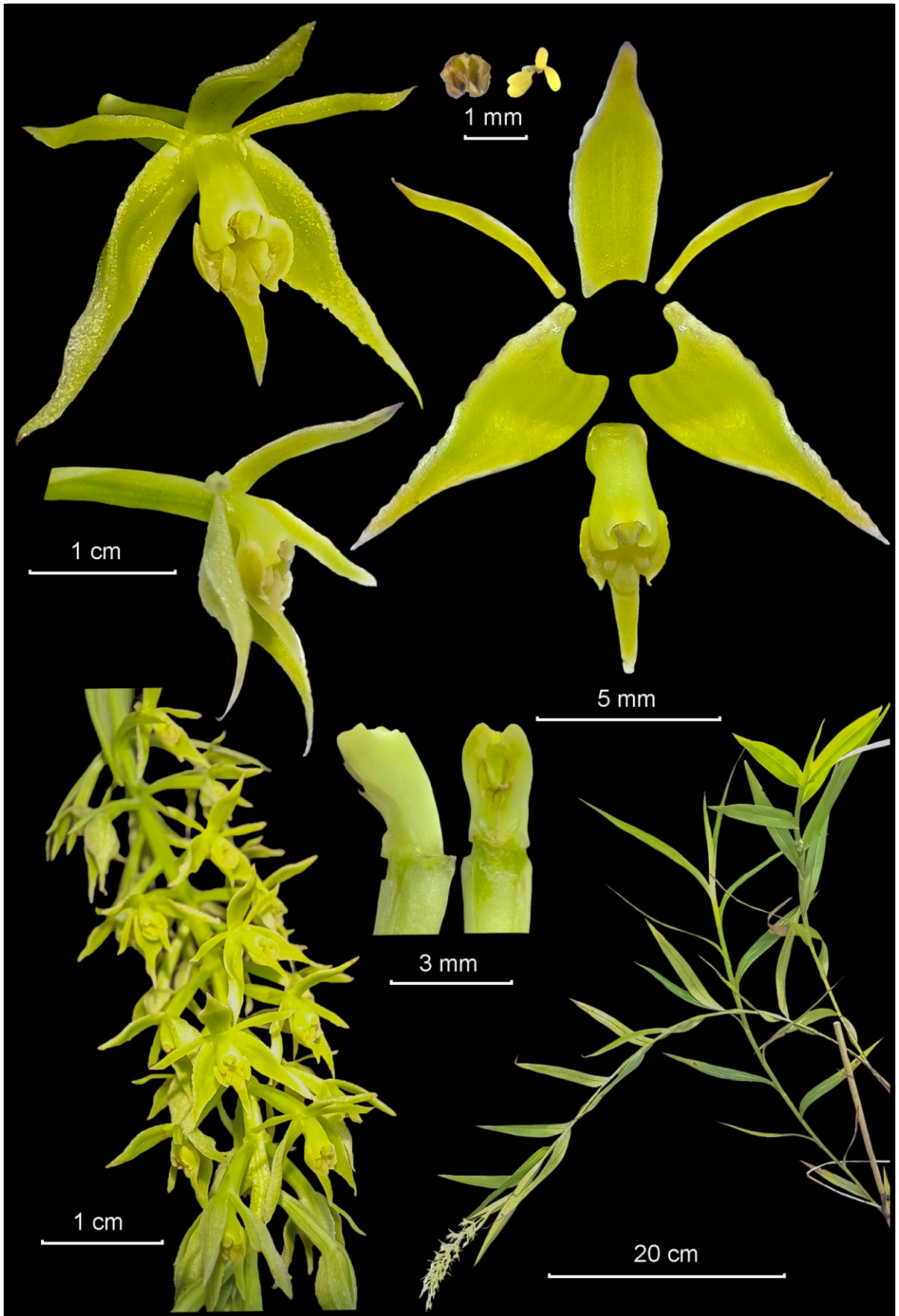
Editors: E. Hágsater & E. Santiago

Herbario AMO

Ciudad de México, MÉXICO

ICONES ORCHIDACEARUM 19(2). 2022.

Plate 1961



EPIDENDRUM VIRIDIALPICOLA Hágsater & Ordóñez-Blanco

Plate 1962

EPIDENDRUM VIRIDIALPICOLA Hágsater et Ordóñez-Blanco, *sp. nov.*

Type: COLOMBIA: Cundinamarca: San Antonio del Tequendama: Distrito de Manejo Integrado Cuchilla de Peñas Blancas, 2600-2700 m, 18 septiembre 2019, **Juan Camilo Ordóñez Blanco & Gustavo Morales 3428**. Holotype: JBB 36200! (LCDP & photo voucher).

Similar to *Epidendrum tequendamae* F.Lehm. & Kraenzl. but the plants taller, ca. 98 cm tall (vs. plants 30-40 cm tall), the leaves more numerous, ca. 12, linear-lanceolate, acuminate (vs. leaves 3-6, linear-lanceolate, acute), the flowers similar in size but concolor green (vs. flowers ochre with column greenish white), and the clinandrium-hood truncate, covering most of the anther (vs. clinandrium-hood much reduced, without covering the anther).

Terrestrial, sympodial, caespitose **herb**, ca. 98 cm tall (excluding inflorescence). **Roots** 3 mm in diameter, basal, thick. **Stems** 96 x 0.49-0.53 cm, simple, cane-like, laterally compressed, ancipitose, erect to arching, straight. **Leaves** 12, articulate, alternate, sub-coriaceous and similar in length; sheaths 3.30-3.34 x 0.49-0.53 cm tubular, laterally compressed, minutely striated; blades 11.5-14.3 x 1.3-1.65 cm, linear-lanceolate, acuminate, sub-erect, margin entire, spreading. **Spathes** 1-2, 6.0-7.8 x 0.68 cm, tubular, conduplicate, acute, papyraceous. **Inflorescence** ca. 17 cm long, apical, racemose, arched, sub-densely many-flowered; peduncle 8 cm long, laterally compressed, straight, nearly totally hidden by spathe; apically provided with a bract 0.24-3.04 mm long, linear-oblong, acuminate, embracing. **Floral bracts** 4-16 mm long, prominent, about as long as ovary or longer, linear-triangular, acuminate, embracing. **Ovary** 7-10 mm long, terete, thin, not inflated, unornamented. **Flowers** ca. 36, opening in succession from base to apex, eventually all open, resupinate, lip always facing rachis, medium green, concolor; fragrance not registered. **Sepals** free, fleshy, acuminate, 3-veined, margin minutely crenulate and transparent, spreading; dorsal sepal 7.0 x 2.0-2.25 mm, somewhat spreading, oblong-elliptic; lateral sepals 9.0 x 2.65 mm partly spreading, ovate-triangular, oblique, acuminate, aristate, with prominent dorsal keel that continues apically to form an aristate tip, dorsal margin of keel erose. **Petals** 5.82 x 0.64 mm, spreading, free, linear-oblong, acute, somewhat falcate, 1-veined, margin entire, spreading. **Lip** 4.53 x 2.42 mm (without spreading the lateral lobes), united to column, fleshy, 3-lobed, base cordate; bicallose, calli prominent, laminar, short; disc with a very short thick mid-rib, extending beyond calli to base of mid-lobe; lateral lobes 0.97 x 2 mm, embracing apex of column, semi-orbicular-dolabriform, apex acute to apiculate, distal margin erose; mid-lobe 2 x 1.04 mm, slightly arched in natural position, narrowly triangular, acute, margin entire. **Column** 3.29 mm long, somewhat humped at base, thick, apex with pair of truncate wings, notched above. **Clinandrium-hood** short, truncate, covering nearly whole anther, margin entire. **Anther** globose, with a low central rib; 4-celled. **Pollinia** 4, sub-obovoid, laterally compressed; caudicles soft and granulose, somewhat longer than pollinia; viscarium semi-liquid. **Rostellum** sub-apical, slit. **Lateral lobes of stigma** not seen. **Nectary** short, penetrating about 1/3 of ovary, no inflated, unornamented. **Capsule** not seen.

OTHER SPECIMENS: None seen.

OTHER RECORDS: COLOMBIA: Cundinamarca: Mun. San Antonio de Tequendama, finca de Señora Stella González, IV 2022, S. González Ramírez s.n. Digital image, AMO!

DISTRIBUTION AND ECOLOGY: Presently known from a single municipality of San Antonio de Tequendama, in the Distrito de Manejo Integrado Cuchilla de Peñas Blancas, a conservation project close to Bogotá, at 2800 m elevation, epiphytic. Flowering in May-June.

RECONGITION: *Epidendrum viridialpicola* belongs to the *Alpicola* group, which is characterized by the simple, cane-like stems with 1-2 narrow spathes, and a fox-tail inflorescence with numerous flowers with a fleshy lip with triangular mid-lobe and the rounded lateral lobes. The new species is recognized by the tall stems with numerous linear-lanceolate, acuminate leaves, the inflorescence with successive concolor green flowers opening from the base towards the apex, all eventually open simultaneously, the sepals 7-9 mm long, the petals linear-oblong, somewhat falcate, shorter than the sepals, and the lip 4.53 x 2.42 mm (without spreading the lateral lobes), with dolabriform-semi-orbicular lateral lobes and narrowly triangular mid-lobe, and the clinandrium-hood truncate, covering most of the anther. *Epidendrum tequendamae* has similar sized flowers, but ochre in color with the column white, and the stems shorter with 3-6 leaves, linear-lanceolate and acute, and the clinandrium-hood much reduced, without covering the anther.

ETYMOLOGY: From the Latin *viridis*, green, and *alpicola*, from the Alps, the mountains in central Europe, in this sense occurring in the mountains. The combination refers to the green flowered species of the *Alpicola* group, most species being ochre to brown colored with few partly green or even white.

CONSERVATION STATUS: DD. Data deficient. Known presently from a single collection.

ACKNOWLEDGMENTS: We thank the Jardín Botánico de Bogotá José Celestino Mutis and to Nelsy Ruth Quintero, Carlos Arias, Margarita López and Eder Vanegas for their invaluable contributions.

REFERENCES: Hágsater, E., 2016, *Epidendrum tequendamae*, in E. Hágsater & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part. 11, *Icon. Orchid.* 15(2): pl. 1597.

