

ICONES ORCHIDACEARUM

Fascicle 15(2)
THE GENUS EPIDENDRUM
Part 11
“Species New & Old in Epidendrum”

Eric Hágsater

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ICONES ORCHIDACEARUM

Fascicle 15(2), plates 1569 to 1600

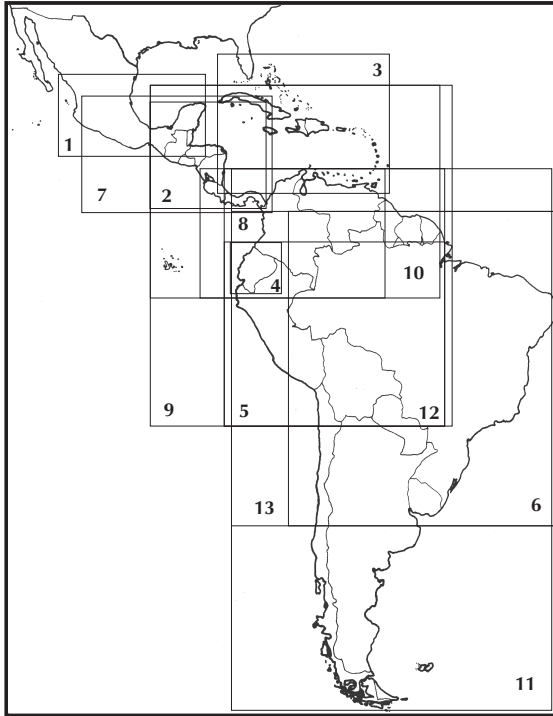
THE GENUS EPIDENDRUM Part 11

“Species New & Old in Epidendrum”

Reference Map

TROPICAL AMERICA

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



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ICONES ORCHIDACEARUM

Fascicle 15(2), plates 1569 to 1600

THE GENUS *EPIDENDRUM*

Part 11

“Species New* & Old in *Epidendrum*”

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APPENDIX 1: Corrections to earlier volumes of *Icones Orchidacearum*

EPIDENDRUM ERYTROPACHYCHILUM Hágsater et E.Santiago, *Icon. Orchid.* 15(1): t. 1522. 2015.
Is hereby recognized as a synonym of *Epidendrum miniatum* Schltr, thus title should be changed to (see new plate 1522a):

EPIDENDRUM MINIATUM Schltr., *Repert. Spec. Nov. Regni Veg. Beih.* 8: 75. 1921.

Type: ECUADOR: Loja: Zwischen Gestrüpp am Boden, um Los Hornillos, Ost-Andes von Loja, 2600-3000 m, **Friedrich Carl Lehmann 6858**. Holotype: B, destroyed. Isotype: AMES 73925! (illustration of flower, prepared by E. Hágsater, 21 June 1990, AMO!) Sketch of flower in Mansfeld, R., 1929, *Repert. Spec. Nov. Regni Veg. Beih.* 57: Taf. 89, fig. 348.

Synonym: ***Epidendrum erytropachytilum*** Hágsater et E.Santiago, *Icon. Orchid.* 15(1): t. 1522. 2015. Type: ECUADOR: Azuay: Oriente Border: Eastern Cordillera, between Oña and the río Yacuambí, 10 September 1945, **Francisco Prieto P-308**. Holotype: NY! (Illustration voucher) Isotypes: AMES! S!

EPIDENDRUM JORGE-WARNERI Karremans & Hágsater, *Icon. Orchid.* 15(1): t. 1530. 2015.

The correct spelling of the specific epithet is *jorge-warneri*, with a single “i”.

EPIDENDRUM VIGOSI Hágsater & E.Santiago. *Icon. Orchid.* 15(1): t. 1567. 2015

Type: COLOMBIA: Antioquia: [Río] Porce, 900 m, [hort.] La Guinea, pressed cult. Mexico City, 19 noviembre 1996, **Luis Carlos Vieira, José Antonio González & Federico Siegert sub Eric Hágsater 11523**. Holotype: AMO 19782! (Illustration & photo voucher). Clonotype: 3 julio 1998, AMO 18130!

The specimen numbers are inverted, and so should read:
Holotype: AMO 18130! (Illustration & photo voucher). Clonotype: 3 julio 1998, AMO 19782!

Publication dates:

Volume 1 was published on 26 February 1990
Volume 2 was published on 11 October 1993
Volume 3 was published on 25 March 1999
Volume 4 was published on 8 August 2001
Volume 5-6 was published on 9 June 2003
Volume 7 was published on 13 January 2005
Volume 8 was published on 1 June 2006
Volume 9 was published on 18 May 2007

Volume 10 was published on 11 June 2008
Volume 11 was published on 3 December 2008
Volume 12 was published on 16 December 2009
Volume 13 was published on 10 December 2010
Volume 14 was published on 31 May 2013
Volume 15(1) part 11 was published on 26 May 2015
Volume 15(2) part 11 was published on 19 July 2016

ICONES ORCHIDACEARUM

Fascicle 15(1-2), plates 1501 to 1600

THE GENUS *EPIDENDRUM*

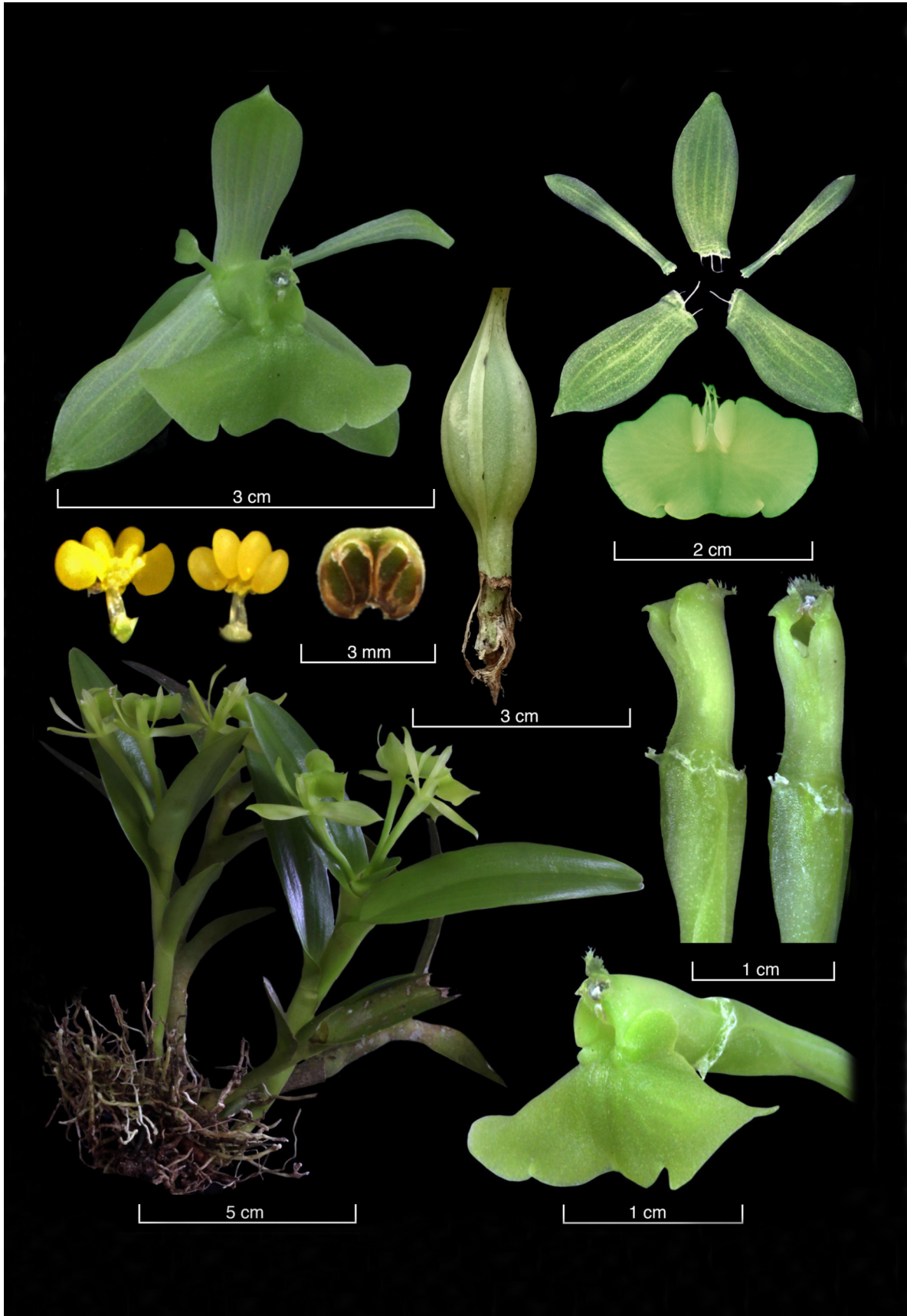
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EPIDENDRUM ADSETTII Serracín, J.S.Harrison, Bogarín & L.Sánchez

Plate 1569

EPIDENDRUM ADSETTII Serracín, J.S.Harrison, Bogarín et L.Sánchez, *sp. nov.*

Type: PANAMA: Prov. Panamá; Chilibre, Los Altos de Cerro Azul, El Torreón, Calle Kirpatrick, bosque detrás de la casa de Bill Adsett, 9°12.660'N 79°24.901'W, 783 m, bosque muy húmedo premontano transición cálido, epífita, 20 febrero 2014, **Zuleika Serracín, Diego Bogarín, Jerry & Linda Harrison 445**. Holotype: UCH! (illustration & photo voucher). Isotypes: UCH! PMA!

Epidendrum adsettii is most similar to *Epidendrum anastasioi* Hágsater from which it differs by having narrowly oblong-elliptic leaves with six parallel light-green nerves, a 3-lobed, deeply cordate lip with a pair of prominent auricles at base, erect against the sides of the column in natural position, column with a revolute, entire wing on each side, and a fimbriate clinandrium hood.

Epiphytic, sympodial, caespitose, erect **herb**, 15-23 cm tall including the inflorescence. **Roots** 0.5-1.0 mm in diameter, basal, flexuose, filiform. **Stems** 12-17 (20) x 1 cm, simple, cane-like, terete at the base, laterally compressed above, slightly sinuose. **Leaves** 3-5, distributed throughout the stem; foliar sheath 2.0-3.5 x 0.6-0.7 cm, tubular, laterally compressed, smooth; blade 5-9 x 1.3-2.6 cm, narrowly oblong-elliptic, unevenly retuse, coriaceous, conduplicate, green, with six parallel light-green evident nerves. **Spathe** lacking. **Inflorescence** apical from the mature stem, sub-corymbose, flowering only once, sessile. **Floral bracts** 2.5 x 1.0 mm, much shorter than the ovary, triangular, acute, amplexicaul. **Ovary** pedicellate, 23 x 4 mm, terete, somewhat inflated behind the perianth. **Flowers** 3-4 in each flowering stem, resupinate, simultaneous, light dull green; fragrance not recorded. **Sepals** 16-20 x 6-7 mm, ovate-elliptic, coriaceous, spreading, free, spatulate, acute, 5-veined, margin entire, spreading. **Petals** 16-19 x 2-4 mm, oblanceolate to spatulate, acute, partly spreading, membranaceous, 1-veined, the vein trifurcate near the base so as to appear 3-veined above, margin entire, spreading. **Lip** 13.0 x 21.5 mm, united to the column, obscurely 3-lobed, obreniform, base deeply and obliquely cordate, with a pair of prominent sub-orbicular auricles 6 x 3 mm, erect and reclining on the sides of the column (erect in the image of the lip, also visible as a circle on the side of the column, on the view of the column and lip in the right-hand bottom corner of the plate), margin entire, the posterior margin revolute; lateral lobes 14 x 10 mm (excluding the basal auricles), hemi-ovate, sides semi-circular, apex narrowly rounded; mid-lobe 2.2 x 13.0 mm, very short and wide, much smaller than the lateral lobes and separated by a narrow incision, transversely oblong, widely emarginate, the apical corner of the lateral lobes level with the mid-lobe; bicallose, the calli small, curved, divergent; disc 3-ribbed, the mid-rib very wide and low, the lateral ribs very narrow and adnate to the mid-rib, short, the central rib only reaching the middle of the lip. **Column** 12 x 4 mm, arcuate towards the apex, apically with a revolute, entire wing on each side, the margin entire, with apical, triangular, acute teeth at the side of the anther. **Clinandrium-hood** short, fimbriate. **Anther** 4-celled, sub-ovoid. **Pollinia** 4, ovoid, laterally compressed, sub-equal, with short caudicles, elongate, translucent stipe and viscidium. **Rostellum** sub-apical, slit. **Lateral lobes of the stigma** prominent. **Nectary** deep, penetrating ca. 3/4 of the ovary, not inflated, unornamented. **Capsule** fusiform; pedicel 6 mm long, terete; body 26 x 14 mm long; apical neck 6 mm long.

OTHER SPECIMENS: None seen.

OTHER RECORDS: None seen.

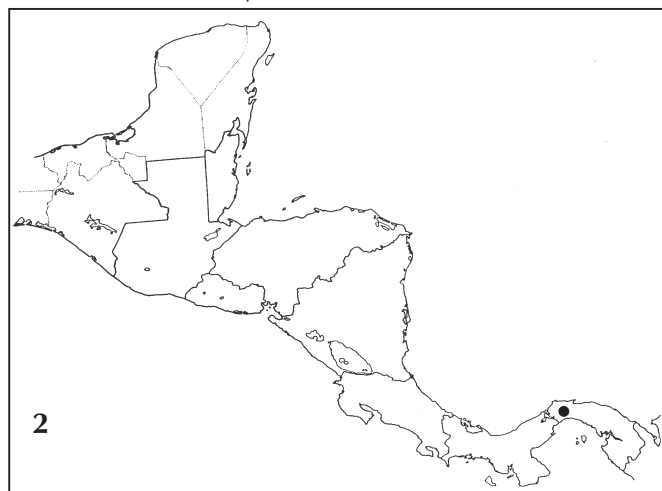
DISTRIBUTION AND ECOLOGY: Presently only known from the forested residence of Bill & Esther Adsett in Parque Nacional Chagres in Los Altos de Cerro Azul, near Cerro Jefe in central Panama at ca. 800 m. Plants grow as epiphytes in tall secondary forest. Plants found on four trees, on tree trunks at 5 m from ground. Flowering mostly in September; fruiting recorded in December.

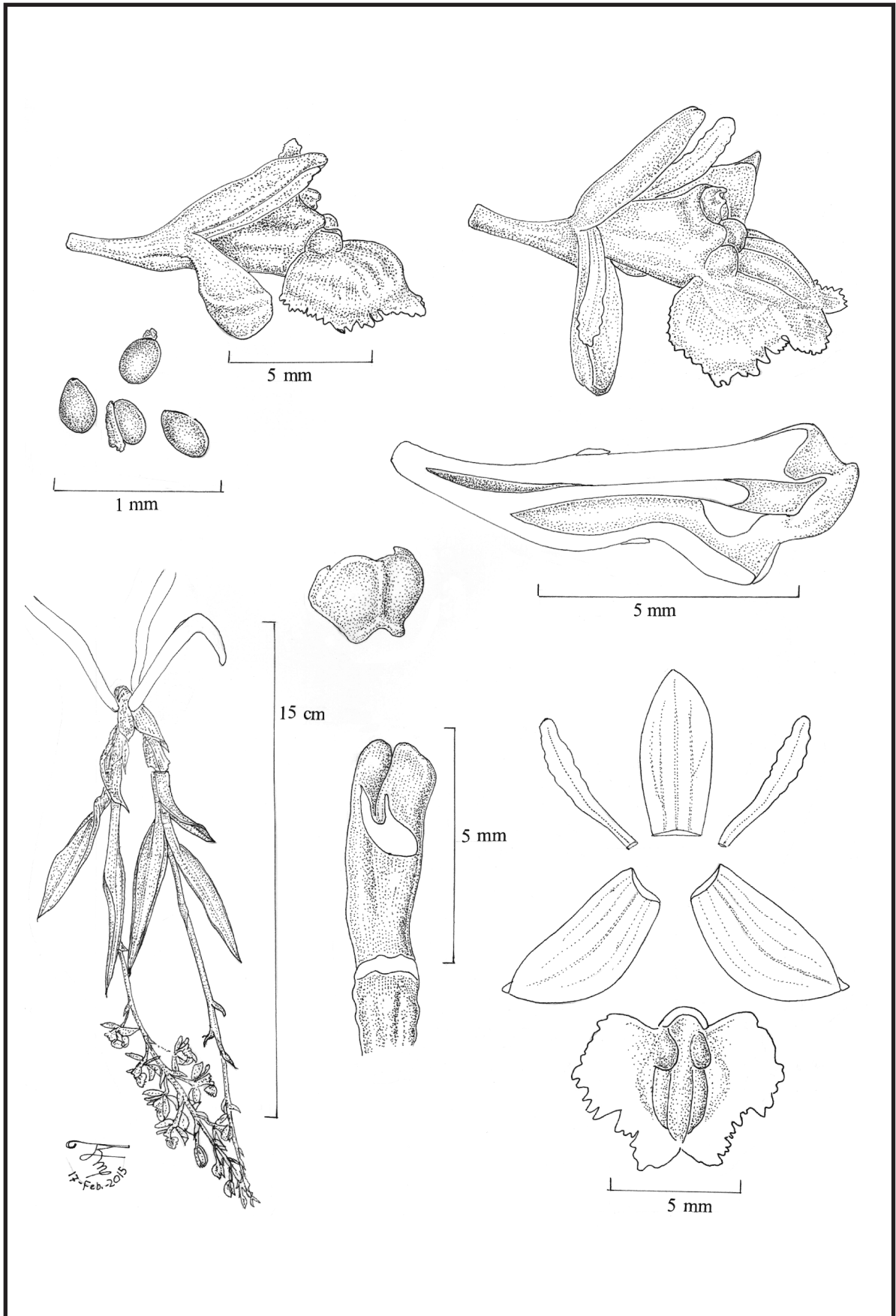
RECOGNITION: *Epidendrum adsettii* belongs to the *difforme* group, which is characterized by the caespitose, sympodial plants, fleshy light green to glaucous leaves, apical inflorescence without the spathes, sessile, rarely with a short peduncle, one-flowered to corymbose, fleshy, and flowers green to yellowish-green, rarely white. The new species is recognized by the following combination of features: small plants, 15-23 cm tall including the inflorescence, the coriaceous, narrowly oblong-elliptic leaves 5-9 x 1.3-2.6 cm, bright green and shiny above when young and bumpy-textured when aged, with six evident parallel light-green nerves, inflorescence with 3-4 dull green flowers, sepals flat, margins not revolute, 3-lobed lip 13.0 x 21.5 mm, deeply cordate with a pair of prominent basal erect auricles, flush on the sides of the column, lateral lobes (excluding the basal auricles), hemi-ovate, sides semi-circular, apex narrowly rounded; mid-lobe very short and wide, much smaller than the lateral lobes and separated by a narrow incision, transversely oblong, widely emarginate, apical corner of the lateral lobes level with the mid-lobe; calli curved, divergent, and the fimbriate clinandrium-hood. Most similar to *E. anastasioi* which has elliptic leaves, without evident nerves (vs. narrowly oblong-elliptic leaves with six parallel light-green nerves), glossy flowers (vs. dull green), smaller flowers, sepals 13-16 mm long (vs. 16-20 mm), lip 8-9 x 14-17 mm, semi-ovate lateral lobes, and mid-lobe protruding beyond the lateral lobes (vs. deeply cordate lip, 13.0 x 21.5 mm, with a pair of prominent auricles at base, erect against the sides of the column in natural position, with widely obovate lateral lobes, mid-lobe small and wide, the apical margin of the lateral lobes protruding beyond the mid-lobe), and the dentate clinandrium-hood (vs. fimbriate). *Epidendrum trialatum* Hágsater, known from El Valle de Antón, Panama to northern Costa Rica, has elliptic-ligulate leaves (vs. oblong-elliptic), the 3-6, greenish white flowers (vs. 3-4, dull green), flowers smaller, sepals 13-15 mm long (vs. 16-20 mm), and the 4-lobed, sub-quadrate lip, 8-10 x 14-15 mm (vs. 3-lobed, reniform, 13.0 x 21.5 mm), column with a pair of apical petaloid, dentate-fimbriate, revolute processes (vs. column with a revolute, entire wing on each side, the margin entire). *Epidendrum vulgoamparoanum* Hágsater & L.Sánchez from the Pacific lowlands of Costa Rica and Panama has larger plants 15-35 cm tall (vs. 15-23 cm), flowers larger, sepals 21-31 mm long (vs. 16-20 mm), widely ovate lip with the margin slightly undulate and numerous radiating thickened veins at the base (vs. reniform, without obvious numerous radiating veins, only two thickened veins from the base towards the apex), column truncate, without wings (vs. a revolute, entire wing on each side, the margin entire).

CONSERVATION STATUS: DD. Data deficient. Presently known from a single population of a few individuals in Los Altos de Cerro Azul in Parque Nacional Chagres.

ETYMOLOGY: The epithet honors William (Bill) Adsett, a long-time resident of Los Altos de Cerro Azul in central Panama. Bill, an avid birder, environmentalist and conservationist, has been active in Panama Audubon since 1986, serving as president in the 1990s. Along with wife Esther, Bill steadfastly supports education and conservation. In fact, the property on which this species is found was purchased to preserve a piece of primary forest.

REFERENCES: Hágsater, E., 1993, *Epidendrum anastasioi* in E. Hágsater & G. A. Salazar (eds.), *The Genus Epidendrum*, Part 1, **Icon. Orchid.** 2; t. 106. Hágsater, E. & L. Sánchez Saldaña, 2006, *Epidendrum vulgoamparoanum* in E. Hágsater & L. Sánchez Saldaña, (eds.), *The Genus Epidendrum*, Part 5, **Icon. Orchid.** 8: t. 898. Sánchez Saldaña, L. & E. Hágsater, 2008, *Epidendrum trialatum* in E. Hágsater & L. Sánchez Saldaña, (eds.), *The Genus Epidendrum*, Part 7, **Icon. Orchid.** 11: t. 1189.





EPIDENDRUM AIDA-ALVAREZII Hágsater

Plate 1570

EPIDENDRUM AIDA-ALVAREZII Hágsater, sp. nov.

Type: PERU: Departamento Cajamarca: Celendín: Distrito Sorochuco; El Punre, 2 km antes del poblado, sobre la ruta Machiquiyai-Sorochuco, 06°59'51"S, 78°18'57"W, 3550 m; remanente de vegetación arbustiva y herbácea muy intervenida; epífita, flores amarillas, frutos verdes, 30 septiembre 2001, *Aída B. Álvarez, Isidoro Sánchez Vega, Marcial Zapata, Linder Suin, & J.C. Valenzuela 2904*. Holotype: MO 6178595! (illustration voucher.) Isotype: NY!

Similar to *Epidendrum excelsum* C.Schweinf. but differs in the shorter, proportionately wider leaves, 0.6-5.0 x 0.5-1.0 cm, the straight column terminating in a short wide point, instead of being truncate, the shallowly 3-lobed lip, the apical half looks more like a truncate pyramid in general outline, with the mid-lobe emarginate, petals narrowly oblanceolate, apically rounded.

Epiphytic, sympodial, caespitose, pendent **herb**, to 15 cm long including the inflorescence. **Roots** 2-3 mm in diameter. **Rhizome** 0.5 cm long, short, covered by scarious and evanescent sheaths. **Stems** 1.4-2.7 x 0.5-0.8 cm, somewhat thickened, terete, completely covered by evanescent sheaths. **Leaves** 1-3; one produced from the apex of the pseudobulb; the others from sheaths produced around the middle of the stem, unequal in size, the apical not necessarily the longest; blade 0.6-5.0 x 0.5-1.0 cm, narrowly elliptic to oblanceolate, acute to acuminate, articulate, green, margin entire, narrowly revolute in dried material. **Spathes** lacking. **Inflorescence** 9-12 cm long, apical, racemose, flowering only once, pendent, loosely many flowered; peduncle 4-5 cm long, somewhat laterally compressed, with a 1-2 bracts near the middle, ca. 4-6 mm long; rachis up to 7 cm long, somewhat laterally compressed. **Floral bracts** up to 6 mm long, half as long as the ovary, triangular-lanceolate, acuminate, embracing. **Ovary** 6.5-7.0 mm long, thin, unornamented, inflated behind the perianth into a short vesicle. **Flowers** 10-15, successive, resupinate, yellow; fragrance not registered. **Sepals** spreading, free, margin entire; dorsal sepal 5.0-6.8 x 2.8 mm, oblong-ovate, obtuse, 3-veined, the lateral veins branched; lateral sepals 6.9-7.3 x 3.3 mm, elliptic-oblong, acute, dorsally carinate, 5-veined. **Petals** 6.2 x 1.2 mm, spreading, oblanceolate, apex rounded, 1-veined, margin widely undulated, erose towards the apex, spreading. **Lip** 6.5 x 8.5 mm, united to the column, obscurely 3-lobed, the general outline reminiscent of a hexagon, with the apical half more like a truncate pyramid, base slightly cordate, margin erose-denticulate, except for the entire posterior margin; bicallose, the calli prominent, ellipsoid, laterally somewhat compressed, disc 3-ribbed, the ribs low, parallel; lateral lobes 2.75 x 4.3 mm, dolabriform; mid-lobe 2.5 x 5.0 mm, a truncate pyramid, emarginate. **Column** 5 mm, straight somewhat clavate, thick, terminating in a short wide point. **Clinandrium-hood** reduced, margin entire. **Rostellum** apical, foramen slit. **Lateral lobes of the stigma** prominent, ca. ½ the length of the stigmatic cavity. **Nectary** penetrating about ½ of the ovary, slightly constricted near the perianth, smooth. **Anther** widely globose, 4-celled, with a low mid-rib in front. **Pollinia** 4, obovoid, caudicles about as long as the pollinia, granulose. **Capsule** 29 x 10 mm, pedicel ca. 6 mm long, thin, body 20 x 10 mm, globose, apical neck ca. 3 mm, thin.

OTHER SPECIMENS: PERU: There are several specimens from the P. N. Huascarán, in Ancash which may belong to this species, but require being able to boil a flowers to see the details.

OTHER RECORDS: none seen.

DISTRIBUTION AND ECOLOGY: Presently known only from northern Peru, in the Cordillera Occidental of the Andes; epiphytic at 3550 m altitude, on *Polylepis sericea* Wedd. and *P. weberbaueriana* Pilg. Flowering in September.

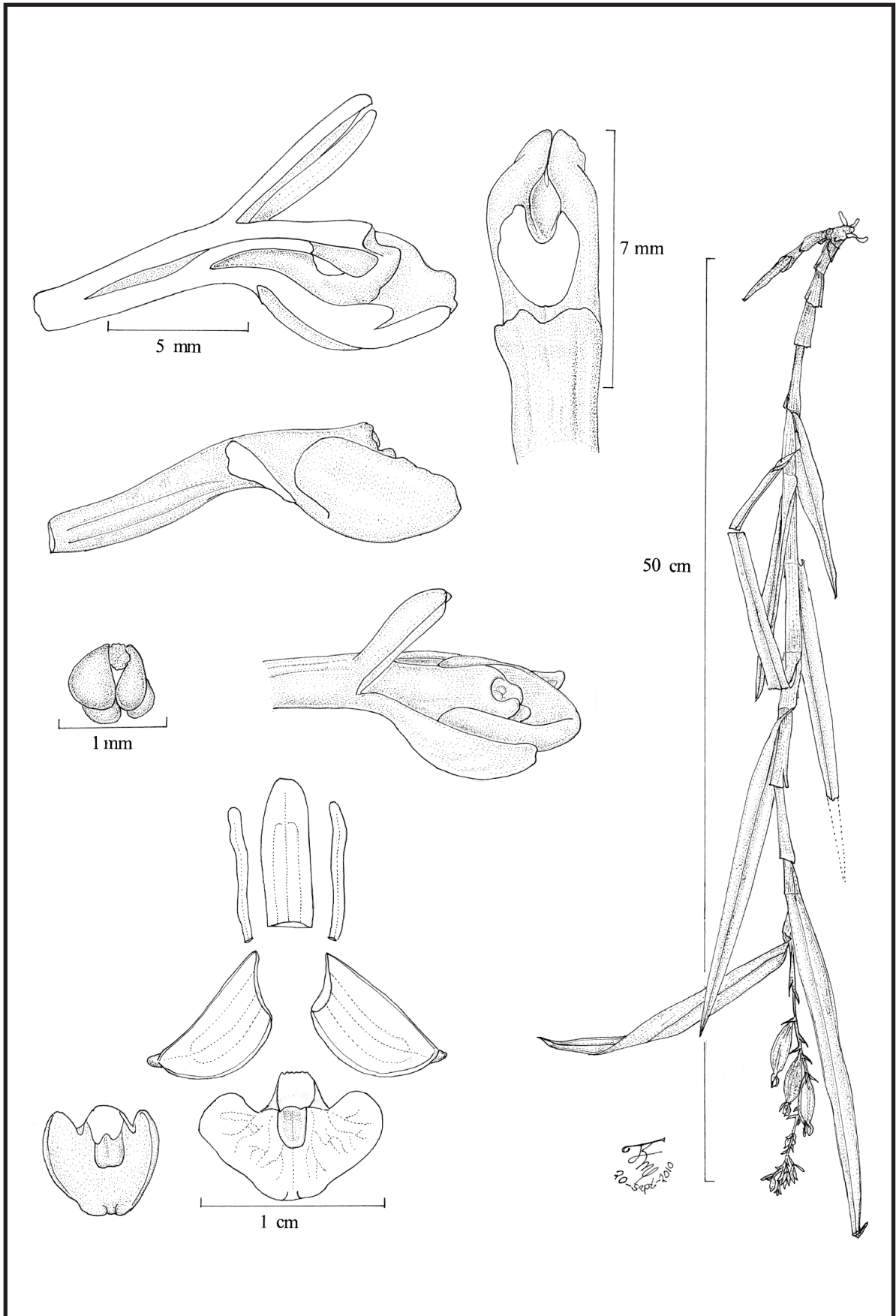
RECOGNITION: *Epidendrum aida-alvarezii* belongs to the Rupestre Group, which is characterized by caespitose, sympodial plants, pseudobulbous stems with 1-4 fully developed leaves toward the apex, and lack of spathes at the base of an erect, racemose or paniculate inflorescence, the lip ecallose or bicallose and with several fleshy thickened keels on the disc. The species is characterized by the shorter, proportionately wider leaves, 0.6-5.0 x 0.5-1.0 cm, the straight column terminating in a short wide point, instead of being truncate, the shallowly 3-lobed lip, with the mid-lobe emarginate, in general form the apical half looks more like a truncate pyramid, petals narrowly oblanceolate, apically rounded. *Epidendrum penlandii* L.O. Williams is very similar vegetatively, including the shape of the lip, but is described as the lip partly free from the column, lacking any calli, with 3-5 ribs on the disc of the lip; that species is apparently endemic to northern Ecuador, in Imbabura. *Epidendrum excelsum* C.Schweinf. has small, erect plants, has longer, proportionately narrower, grass-like leaves, 4-10 x 0.5-1.0 cm, an entire lip, with the margin deeply erose-dentate, two calli at the base which are large but not upright, and the disc somewhat thickened into 5-7 very low ribs. *Epidendrum ochoae* Collantes & Hágsater has a pendulous, sympodial habit, the stem with a homoblastic pseudobulb, terete, constituted by 3 internodes, green, smooth, brilliant, the leaves lanceolate to long-lanceolate, mucronate, leathery, sepals oblique, united to the column, the lip deeply 3-lobed, with 2 prominent, upright calli, and with 3 prominent thickened ribs, the lateral ones in front of the calli, smaller than the mid-rib. *Epidendrum pachydiscum* Hágsater, described from Cusco Province, is overall very similar, though it has erect stems, the lip is ecallose, and the lateral lobes of the lip are much wider. *Epidendrum megalocoleum* Hágsater the entire lip, deeply emarginate and mucronate, ecallose, the disc with 3 well-defined, central keels, the lateral pair ending at about ¾ the length of the lip, the central keel starting at the middle of the lip and ending in the fleshy mucro.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In honor of Aída Álvarez, associated with the QCNE herbarium, Museo Ecuatoriano de Ciencias Naturales, Quito, who collected the type.



REFERENCES: Collantes, B., & E. Hágsater, 2015, *Epidendrum ochoae* in E. Hágsater & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 11, *Icon. Orchid.* 15(1): t. 1546. Hágsater, E., 2004, *Epidendrum pachydiscum*, in E. Hágsater & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 4, *Icon. Orchid.* 7: t. 773. Hágsater, E., 2007, *Epidendrum megalocoleum*, in E. Hágsater & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 6, *Icon. Orchid.* 9: t. 956. Hágsater, E., 2015, *Epidendrum excelsum*, in E. Hágsater & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 11, *Icon. Orchid.* 15(1): t. 1525.



EPIDENDRUM ANCIPITOSUM Hågsater & E.Santiago

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

Type: PERU: Cusco: Prov: La Convención, Distrito Santa Teresa, Laguna de Illaspay, Bosque montano, 13° 07' 23" S 72° 37' 30" W, 3883 m, 21 septiemb 2005, **Isau Huamantupa, N. Anaya, Mirthia Callally, J. Tito, Lina Vargas y E. Paz 6863**. Holotype; MO 6122148! (illustration voucher). Isotype: MO 6122149! CITES export permit number PERU 10013, 11 August 2007, date received at MO 30 August 2007. Digital image of pretype, AMO! (photo voucher).

Vaguely reminiscent of *Epidendrum incapachyllum* Hágsater & E. Santiago, but the plant pendent, the leaves up to 20 x 1.5 cm, parallel to the stem, and the small flowers, green, turning brown when in fruit, sepals 8.2-8.7 mm long, the deeply and widely cordiform lip, embracing the column in natural position; with a single callus forming an oblong plate at the base of the lip.

Epiphytic, pendent, caespitose, sympodial **herb**, to 52 cm long. **Roots** ca. 2 mm in diameter, basal, thin, fleshy, scarce. **Stems** 38.5 x 0.8 cm, simple, cane-like, laterally compressed, ancipitose, base covered by non-foliar sheaths 1.5-3.2 cm long, tubular, non-foliar, scarious. **Leaves** 9, distributed throughout the stem, parallel to the stem, partly imbricated, similar in size and shape, green, adaxial face lustrous, abaxial glaucous; sheaths 2-4 cm long, tubular, ancipitose, minutely striated, pale green; blade 9.5-20 x 1.2-1.5 cm, linear-lanceolate, acuminate, margin entire, slightly revolute. **Spathe** lacking. **Inflorescence** 14 cm long, apical, racemose, pendent, laxly few-flowered; peduncle 2 cm long, laterally compressed, thin, provided near the base with 1-3 bracts 6-18 mm long, progressively smaller, the lower one tubular at the base, conduplicate at the apex, long-acuminate, green; rachis 12 cm long, laterally compressed. **Floral bracts** 3-6 mm long, shorter than the ovary, lanceolate, acuminate, embracing, greenish brown. **Ovary** 6-7 mm long, terete, thin, not inflated, striated, green, slightly tinged brown. **Flowers** ca. 20, resupinate, successive, sepals dorsally pale green, petals slightly tinged reddish brown: fragrance not recorded. **Sepals** partly spreading, free, 3-veined, fleshy, margin entire; dorsal sepals 8.2 x 2.5 mm, oblong, apex rounded, margin entire, slightly revolute; lateral sepals 8.7 x 4.3 mm, elliptic, oblique. **Petals** 7.6 x 0.7 mm, partly spreading, free, linear, apex rounded, 1-veined, margin entire, spreading. **Lip** 6 x 10 mm, entire, embracing the column in natural position, widely cordiform when spread, base cordate, apex truncate with a minute apicule, margin entire, spreading; callus single, forming an oblong platform, apex slightly bilobed. **Column** 6 mm long, straight, thick. **Anther** not seen. **Pollinia** 4. Obovoid; caudicles soft and granulose, shorter than the pollinia. **Rostellum** apical, slit. **Lateral lobes of the stigma** prominent, ½ the length of the stigmatic cavity. **Nectary** short, barely penetrating the ovary, on inflated, unornamented. **Capsule** 3.0 x 1.0 cm; pedicel 4 mm long, body 26 x 10 mm, apical neck null, perianth persistent.

OTHER SPECIMENS: None seen.

OTHER RECORDS: None seen

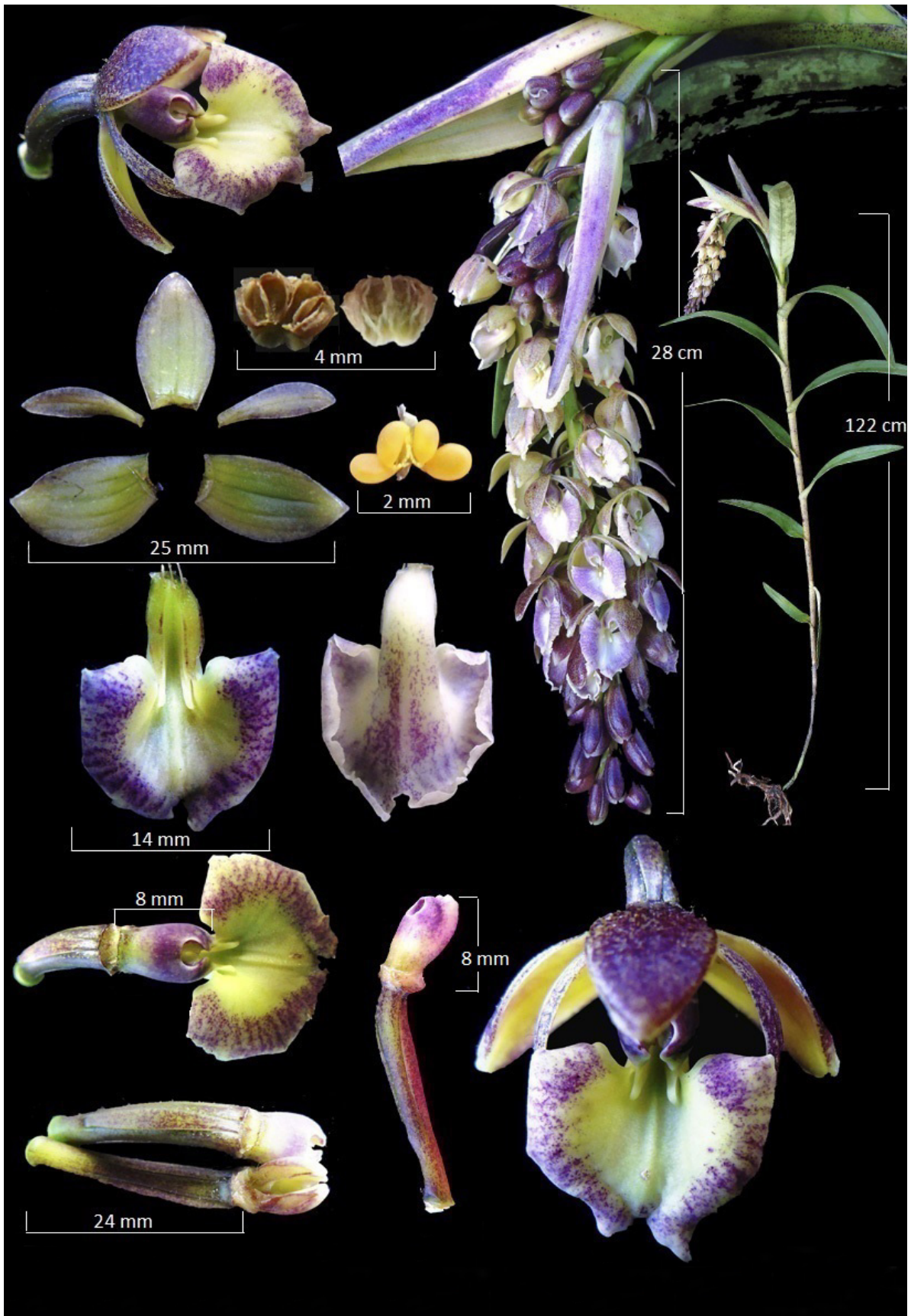
DISTRIBUTION AND ECOLOGY: Known presently only from the type, in montane forest, epiphytic at 3883 m altitude. Flowering July-August, in fruit in September.

RECOGNITION: *Epidendrum ancipitosum* belongs to the Ancipitosum Group which is recognized by the pendent, caespitose plant, ancipitose stems, with many narrow, long linear-lanceolate leaves, an apical racemose inflorescence, without spathes, the flowers pendent, resupinate, with linear petals, and widely cordiform lip, single callus, and devoid of any pillose hairs on either the disc of the lip nor the nectary. The species is recognized by the leaves up to 20 x 1.5 cm, pendent, parallel to the stem, and the small flowers, sepals 8.2-8.7 mm long, the deeply and widely cordiform lip, embracing the column in natural position; with a single callus forming an oblong plate at the base of the lip. We have not been able to place this species in any of our previously discussed groups within *Epidendrum*, though the flowers could be vaguely reminiscent of *Epidendrum incapachyllum* but that species has erect stems, an erect inflorescence, and the flowers are bright reddish orange to yellowish orange. The plants are somewhat reminiscent of *Epidendrum tandapianum* Dodson & Hágsater, but in that species the stems are erect, and the leaves somewhat spreading, the inflorescence is both apical and lateral, producing successive flowers, the lip triangular, only slightly cordate at the base, spreading in natural position, and petals are comparatively wide, about half as wide as the sepals.

ETYMOLOGY: From the Latin *ancipitius*, -two edged-, in reference to the stems which are two-edged, a relatively common feature in the genus *Epidendrum*.

REFERENCES: Hágsater, E., & E. Santiago, 2015, *Epidendrum incapachyllum* in Hágsater, E., & L. Sánchez Saldaña (eds.), *The Genus Epidendrum*, Part 11, **Icon. Orchid.** 15(1): t. 1528. Santiago, E., & E. Hágsater, 2009, *Epidendrum tandapianum* in Hágsater, E., & L. Sánchez Saldaña (eds.), *The Genus Epidendrum*, Part 8, **Icon. Orchid.** 12: t. 1296.





EPIDENDRUM BARYANTHUM Hágsater & M.Salas

Plate 1572

EPIDENDRUM BARYANTHUM Hágsater et M.Salas, *sp. nov.*

Type: PERU: Amazonas: Leymebamba; Laguna de Los Cóndores, 3000 m, mayo 2015, **Marcos Salas 100** (illustration voucher).
Holotype: USM! Isotype: HUT!

Similar to *Epidendrum lesteri* Hágsater & Dodson but the lip sub-orbicular in outline; lateral lobes dolabriform; mid-lobe wide and short, deeply emarginate, thus bi-lobed, formed by two semi-circular small lobes strongly revolute, petals 2.2-3 mm wide.

Epiphytic, sympodial, caespitose, sub-erect, tall **herb**, 122 cm tall. **Roots** 3-6 mm in diameter, basal, fleshy. **Stems** 115 x 1.3-1.9 cm, simple, cane-like, thick, the basal 1/3 covered by non-foliar sheaths. **Leaves** 11-15, distributed along the apical 2/3 of the stems, alternate, distichous, articulate, coriaceous, spreading, more or less recurved; leaf sheaths 3-7 x 0.8-1.45 cm, tubular, striated; blades 12-30 x 3.5-4.1 cm, narrowly lanceolate, acute, minutely apiculate, margin entire, spreading. **Spathes** 19.4 x 5.2 cm, single, conduplicate, elliptic, sub-acute, margin entire and slightly involute. **Inflorescence** 32 cm long, apical, paniculate, heavy, the racemes densely flowered, arching-nutant; peduncle 5 cm long, terete, thick; rachis 23 cm long, nearly totally hidden by the flowers, with a bract 7.4-14.3 x 3.0-4.2 cm, at the base of each raceme, similar to the spathe but slightly smaller. **Floral bracts** 4-8 mm long, much shorter than the ovary, linear-triangular, acute. **Flowers** ca. 46 on the main raceme, the lateral racemes smaller, with ca. 8 flowers, nearly simultaneous, sepals and petals pale green, most dorsally dark purple, lip pale green, the disc surrounded towards the margin by purple dots along the veins, dorsally pale greenish somewhat dotted purple along the center, column greenish tinged purple towards the apex; fragrance none. **Ovary** ca. 22 mm long, terete, thin, inflated, unornamented. **Sepals** 12-16 x 7-9 mm free, partly spreading, fleshy, elliptic, minutely apiculate, 4-6-veined, margin entire, the lateral sepals somewhat oblique, apex right-angled, dorsal sepal apically obtuse, rounded. **Petals** 9-14 x 2.2-3.5 mm, free, partly spreading, oblanceolate, slightly oblique, sub-acute, 1-veined, the vein branching above, margin entire, spreading. **Lip** 14-15 x 17-22 mm, united to the column, obscurely 3-lobed, base cordate, margin entire, revolute, sub-orbicular in outline; bicallose, the calli elongate, continued into the nectary, prominent; disc provided with 3 rounded, low, glabrous ribs; lateral lobes dolabriform, 6 x 12 mm; mid-lobe ca. 2 x 5 mm, wide, deeply emarginate, thus bi-lobed, formed by two semi-circular small lobes strongly revolute not evident in natural position. **Column** 7.2-9.0 mm long, straight, thick. **Lateral lobes of the stigmatic cavity** small, the cavity itself occupying nearly the whole column. **Rostellum** apical, slit. **Anther** reniform, 4-celled. **Pollinia** 4, obovate; caudicles in two pairs, granulose, about as long as the pollinia. **Capsule** ellipsoid, with a short pedicel and short apical neck.

OTHER SPECIMENS: PERU: Amazonas: Luya; Distrito Luya, Anexo de Vista Hermosa, Bosque de ENDA, 1940 m, *Damián & Briceño 121*, MOL.

OTHER RECORDS: PERU: Digital image, without data, *Isaias Rolando*, AMO! **Amazonas:** Luya; Distrito Luya, Anexo de Vista Hermosa, Bosque de ENDA, 1940 m, *Damián & Briceño 121*, digital images received 17 IV 2016, AMO! **Huancavelica:** Prov. Tayacaja; Distrito de Tintay Puncu: Bosque Tintay Puncu, anexo a Amaru, *Egoavil s.n.*, digital image, AMO! **Junín:** parte alta de la Quebrada Carpapata, ca. 2500 m, *Morón s.n.*, digital images received 3 IX 2010, (plant in bud only one flower at anthesis), AMO! **San Martín:** Prov. Mariscal Cáceres, Distrito Huicungo, 3 km al S de Laguna de Los Cóndores, La Morada, 3000 m, *Salas s.n.*, digital images received 23 May 2016 (in flower and fruit), AMO!

DISTRIBUTION AND ECOLOGY: Rare locally but known presently from the eastern slopes and summit of the Cordillera Oriental of the Andes in northern and central Peru, Amazonas, district of Leymebamba, near the Laguna de Los Cóndores, the private protected area of ENDA in Luya district, in Junín, above the Carpapata dam, as well as from the Tintay Puncu forest in Huancavelica; epiphytic in humid montane forest, at 1940-3000 m altitude. Flowering in May.

RECOGNITION: *Epidendrum baryanthum* belongs to the ferreyrae group which is characterized by the sympodial, caespitose habit, cane-like stems with numerous leaves, apical inflorescence subtended by 1-2 large spathes, and a nutant, heavy racemose to paniculate inflorescence with numerous large, fleshy, attractive flowers. The new species is recognized by the large sub-orbicular lip in outline, the margins revolute, with the mid-lobe short, wide and deeply emarginate, thus bi-lobed, formed by two semicircular small lobes strongly revolute, not evident in natural position; sepals 12-16 mm long, petals are oblanceolate, sub-acute, 2.2-3.0 mm wide. It is similar to *Epidendrum ferreyrae* Hágsater & Ric.Fernández, which has a clearly 3-lobed lip with the lateral lobes dolabriform and the mid-lobe sub-triangular, narrow; sepals 15-18 mm long, column 10 mm long. *Epidendrum lesteri* Hágsater & Dodson has 3-lobed, margin erose-crenate; lateral lobes sub-reniform; mid-lobe rectangular, comparatively large, the apex truncate, somewhat bilobed, short-apiculate; sepals 16 mm long, petals oblanceolate, apically rounded, 2 mm wide. *Epidendrum orthoclinium* Hágsater & Dodson, has a 3-lobed lip, the lateral lobes semi-circular, margin dentate, mid-lobe spatulate; sepals 11-12 mm long, petals oblanceolate, narrow, acute, 1.2 mm wide, column arched upwards at the clinandrium.

NOTE: Species of the ferreyrae group are apparently locally scarce, with only few plants seen, and usually high up on the trunk of trees and is rarely collected, and then only a few specimens have been seen. The many-flowered, usually paniculate inflorescence of heavy, flowers hangs and then the stem is dragged somewhat downward due to the weight if the inflorescence.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: from the Greek βαρυς heavy, and ανθος, flower, in reference to the relatively large, fleshy and thus heavy flowers that this species has.

REFERENCES: Hágsater, E., & C. H. Dodson, 2001, *Epidendrum orthoclinium* in Hágsater, E. & L. Sánchez S. (eds.), The Genus *Epidendrum*, Part 3, **Icon. Orchid.** 4: t. 466. Hágsater, E., & C. H. Dodson, 2004, *Epidendrum lesteri*, in Hágsater, E. & L. Sánchez S. (eds.), The Genus *Epidendrum*, Part 4, **Icon. Orchid.** 7: t. 754. Hágsater, E., & R. Fernández, 2007, *Epidendrum ferreyrae*, in Hágsater, E. & L. Sánchez S. (eds.), The Genus *Epidendrum*, Part 6, **Icon. Orchid.** 9: t. 936.



Authors: E. Hágsater & M. Salas

Plate: M. Salas Photo: I. Rolando

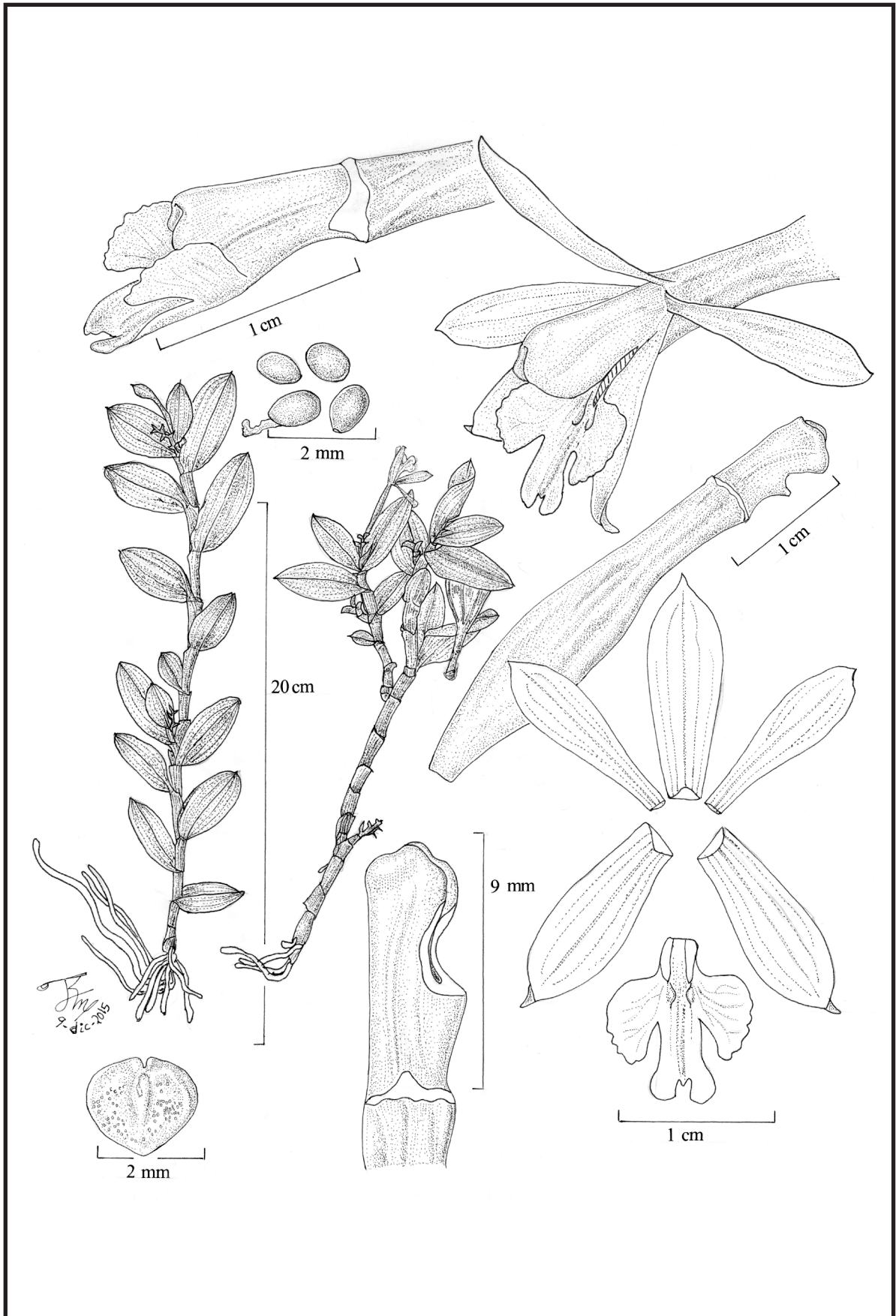
Editors: E. Hágsater & L. Sánchez S.

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Plate 1572



EPIDENDRUM BETANCURII Hágsater & E.Santiago

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

Type: COLOMBIA: Valle del Cauca/Chocó border: Municipio El Cairo, Correg. Boquerón, vereda Las Amarillas, Serranía de Los Paraguas beyond Cerro del Inglés, 17-23 km W of El Cairo, 1750-2050 m, 13 May 1988. **James L. Luteyn, Philip Silverstone-Sopkin, María Dolores Heredia & Nestor Paz 12286**. Holotype: CUVCI (illustration voucher).

Similar to *Epidendrum batesii* Dodson, but the leaves proportionately wider (length:width 2:1 vs. 4:1;), the petals wider (2.0-3.5 mm vs. 1.7-1.9 mm) and the mid-lobe of the lip longer, 5.4 mm long (vs. 2.5 mm) and apically deeply bilobed (vs. truncate, slightly emarginate).

Terrestrial, monopodial, branching, erect **herb**, 20-22 cm tall. **Roots** 0.6-1.5 mm in diameter, basal from the primary stem, and from the base of some branches, thin, white. **Stems** 4.3-12 cm long; branching sub-apically, terete, thin, erect, straight; primary stem 4.3-7.5 x 0.2-0.3 cm; branches 5-12.5 x 0.2-0.4 cm. **Leaves** 5-8, distributed throughout the stems, unequal in size (basal and apical leaves generally smaller); sheath 0.6-1.8 x 0.2-0.4 cm; tubular, terete, striated and rugose; blade 0.8-4.3 x 0.6-2.0 cm, length:width 2:1, oblong-elliptic, apex rounded, minutely apiculate, margin entire, spreading. **Spathe** lacking. **Inflorescence** 1.2 cm long, apical, racemose, short; peduncle 2-3 mm long, laterally compressed; rachis 9-10 mm, laterally compressed. **Floral bracts** 2-3 mm long, much shorter than the ovary, widely triangular, acute, embracing. **Flowers** 4, successive, non-resupinate, green, fragrance not registered. **Ovary** 3 cm long, terete, somewhat thickened in the middle. **Sepals** 12-15 x 3.0-4.8 mm, partly spreading, membranaceous, narrowly obovate, 5-veined, apex aristate, margin entire, revolute; dorsal sepals free; lateral sepals obliquely united to the base of the column. **Petals** 11.5-14 x 2.0-3.5 mm, partly spreading, free, oblanceolate, apex apiculate, 3-veined, the lateral veins bifurcate in the middle, thus appearing 5 veined; margin entire, revolute. **Lip** 7.0-8.0 x 7.0-9.3 mm, united to the column, 3-lobed, base truncate; bicallose, the calli small, laminar, laterally compressed; disc single ribbed, the rib thin, elongate, reaching the apical sinus of the mid-lobes; lateral lobes 3.0-3.5 x 5.0-5.4 mm, dolabriform, margin erose; mid-lobe 5.4 x 4.2 mm, oblong at the basal half, apically deeply bilobed, mucronate in the sinus, margin entire, spreading. **Column** 7.5-9.0 mm long, straight, thick, apically rounded. **Clinandrium-hood** reduced, margin entire. **Anthor** widely ovoid-cordiform, 4-celled. **Pollinia** 4-obovoid, laterally compressed; caudicles soft and granulose, as long as the pollinia. **Rostellum** apical, slit. **Lateral lobes of the stigma** not seen. **Nectary** not seen. **Capsule** 5.0-5.5 x 1.0-1.6 cm, ellipsoid, green; pedicel 7-10 mm long; body 26-27 x 10-16 mm, apical neck 16 mm long.

OTHER SPECIMENS: None seen.

OTHER RECORDS: None seen.

DISTRIBUTION AND ECOLOGY: Terrestrial, known presently only from the summit along the Cordillera Occidental from Antioquia to Valle del Cauca, in disturbed cloud forest, at 1750-2050 m. Flowering in January to May.

RECOGNITION: *Epidendrum betancurii* belongs to the Cardiophyllum Group, Batesii Subgroup, which is characterized by the monopodial main stem with a subapical branching habit, acute leaves, successive, essentially non-resupinate flowers, opening one at a time, deep nectary, entire to 3-lobed lip with the lateral lobes more or less fimbriate to erose. The species is recognized by the comparatively wide leaves ca. 2:1 (length:width), oblong-elliptic, the margin entire, inflorescence 1.2 cm long with 4, successive, green flowers, sepals 15 mm long, narrowly obovate, petals 14 mm long, spatulate, the lateral lobes of the lip dolabriform, the margin erose, and the mid-lobe oblong with the apical half deeply bilobed, mucronate in the sinus. *Epidendrum batesii* Dodson has proportionately narrower leaves, length:width = 4:1, 2.5-3.4 x 0.6-0.8 cm, narrower petals, 1.7-1.9 mm wide, mid-lobe of the lip shorter, and entire, 2.3-2.5 mm long. *Epidendrum acrobatesii* Hágsater & Dodson, endemic to southern Ecuador has leaves ca. 3:1, elliptic, with the margin minutely erose-dentate, inflorescence 5 cm long, with 6-12 greenish yellow flowers, sepals 10-12 mm long, petals linear, lateral lobes of the lip nearly as long as the mid-lobe, which is apically truncate. *Epidendrum farallonense* Hágsater has leaves ca. 3:1, lanceolate elliptic, the margin minutely erose-dentate, the inflorescence has 3-9 flowers, sepals 7.0-8.5 mm long, petals narrowly oblanceolate 6.5-7.5 mm long, and the lateral lobes of the lip are dolabriform with the margin lacerate-dentate and the mid-lobe sub-rectangular, the apex emarginate.

NOTE: The Batesii Group has a peculiar architecture in that the new stems produced from the apical half of the basal stem can be as long as the primary stem, and those closest to the apex are produced first, later shorter stems being produced further down the primary stem. The group requires more study of material from the Parque Nacional Natural Las Orquídeas, to establish the identity of digital images we have seen.

CONSERVATION STATUS: DD (data deficient).

ETYMOLOGY: in honor of Julio Betancur B. (1960-), Director of the Instituto de Ciencias Naturales, Universidad Nacional de Colombia, who is specialized in Bromeliaceae and Heliconiaceae from Colombia and has collected numerous plant specimens housed mainly in the Herbario Nacional Colombiano, COL. He has always been helpful in giving access to study the material deposited at COL and promoted team work between specialists and local students and botanists in general.



REFERENCES: Dodson, C. H., 1980, *Epidendrum batesii*, in *Orchids of Ecuador*, C.H. Dodson & P. M. de Dodson (eds.), **Icon. Pl. Trop.** 1: t. 73. Hágsater, E., 2007, *Epidendrum batesii* in *The Genus Epidendrum*, Part 6, E. Hágsater & L. Sánchez S. (eds.), **Icon. Orchid.** 9: t. 912. Hágsater E., 1999, *Epidendrum farallonense* in E. Hágsater, L. Sánchez S. & J. García-Cruz (eds.), *The Genus Epidendrum*, Part 2, *Epidendrum*, **Icon. Orchid.** 3: t. 332. Hágsater E. & C. H. Dodson, 2001, *Epidendrum acrobatesii* in E. Hágsater & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 3, *Epidendrum*, **Icon. Orchid.** 4: t. 402.

Authors: E. Hágsater & E. Santiago

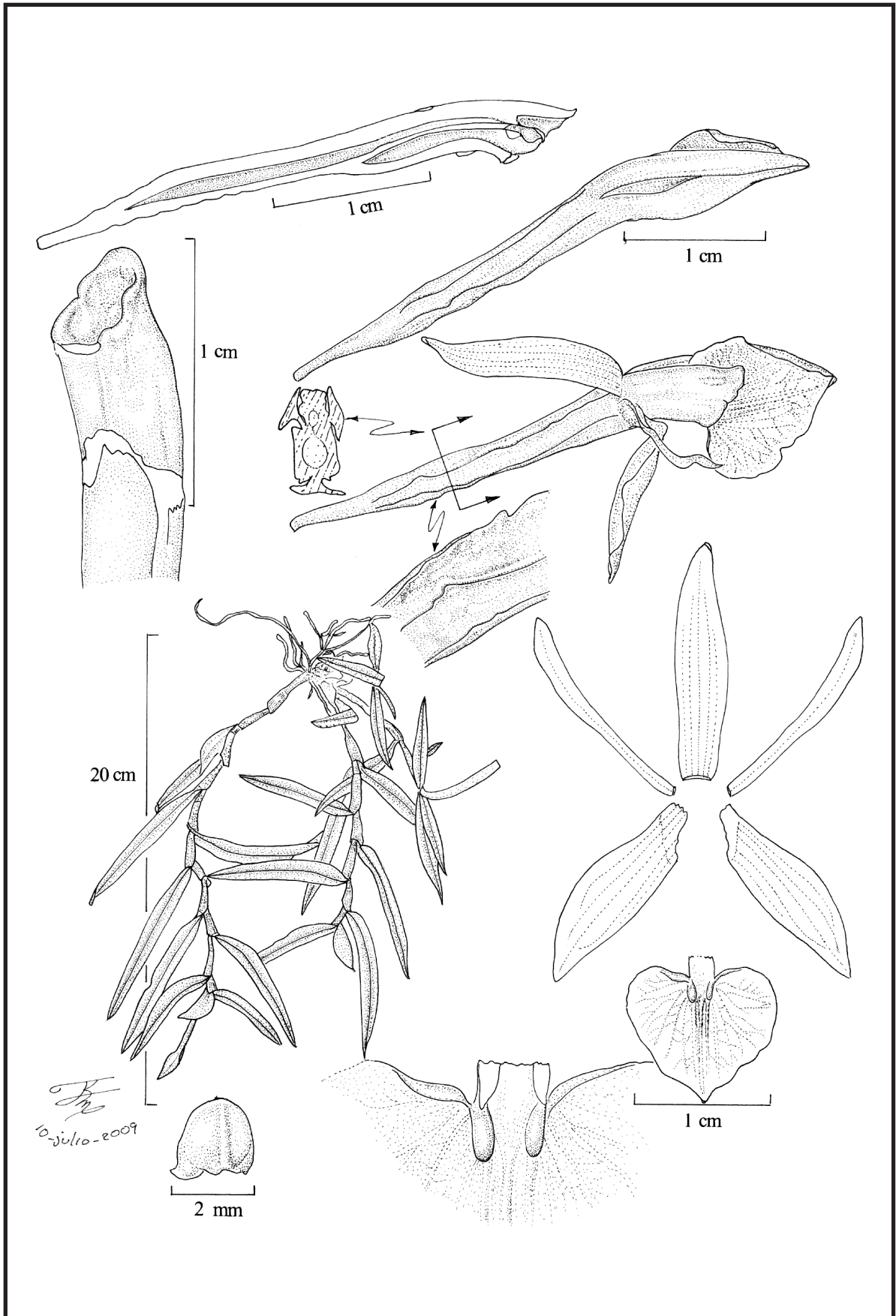
Illustrator: R. Jiménez M.

Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 15(2). 2016. Plate 1573



EPIDENDRUM CARDIOMORPHUM Hågsater & E.Santiago

Plate 1574

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

Type: ECUADOR: Tungurahua: am Tunguragua [Volcán Tungurahua], 2000 m, 15 December 1880, **Friedrich Carl Lehmann 296**. Holotype: W 59090! (illustration voucher) Isotype: G!

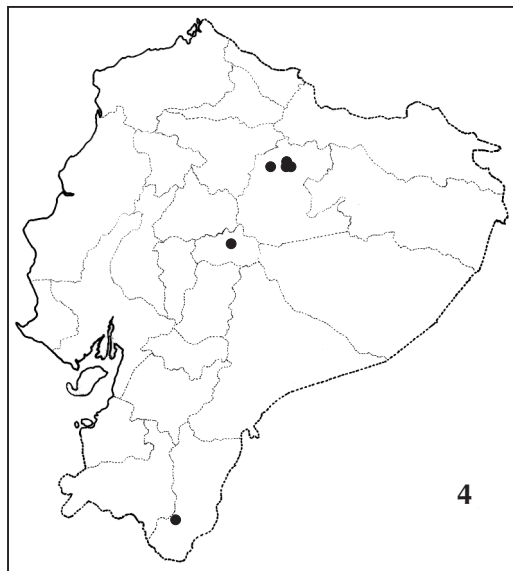
Similar to *Epidendrum vesicicaule* L.O.Williams but the leaves and flowers larger, the inflorescence always 2-flowered, petals oblique, lip with two small, well formed calli and multiple thickened veins on the lip; clinandrium-hood slightly surpassing the body of the column, fleshy, straight.

Epiphytic, sub-caespitose, pendent **herb**, 10-18 cm long. **Roots** 0.5 mm in diameter, basal, thin, white. **Stems** 15 x 0.15 cm, simple, cane-like, terete, thin, straight. **Leaves** 6-10, distributed throughout the stem, articulate, alternate, subcoriaceous, descendent, falcate; sheaths 1.0-1.8 x 0.2-0.5 cm, tubular, infundibuliform when dry, minutely striated; blade 4-8.6 x 0.5-1.0 cm, obliquely lanceolate, apex acute to acuminate, margin minutely papillose, spreading. **Spathe** 1, 1.7-2.3 x 0.6-1.0 cm, obliquely hemi-elliptic, conduplicate, apex acute. **Inflorescence** apical, sessile, two-flowered; peduncle 4 mm long, totally hidden within the spathe, sub-terete, rachis very short. **Floral bracts** 1 mm long, much shorter than the ovary, narrowly triangular, acute, embracing. **Flowers** 2, simultaneous, resupinate, pale green, membranaceous; fragrance not registered. **Ovary** 16-20 mm long, triquetrous, thin, not inflated, provided with 3, two-winged ribs, the wings spreading with the margin erose. **Sepals** free, 5-veined, margin entire, spreading; the dorsal sepal 14-18 x 4-5 mm, oblong-lanceolate, apex rounded; lateral sepals 14-16 x 5-6 mm, oblanceolate-elliptic, oblique, apex sub-acute. **Petals** 14-16.5 x 1-2 mm, partly spreading, free, linear (the apex somewhat wider), obtuse, 1-veined, slightly falcate, margin entire, spreading. **Lip** 10-11 x 9-11 mm, united to the column, entire, triangular-cordiform, base cordate, margin entire; bicallose, the calli thin, sub-globose, laterally compressed, small, parallel, the disc with three very thin, low, parallel ribs which disappear before the middle of the lip, and with multiple radiating thickened veins. **Column** 8-10 mm long, base thin, much thickened towards the apex, arching. **Clinandrium-hood** prominent (somewhat surpassing the body of the column), margin fleshy, straight. **Anther** reniform, with a dorsal mid-rib. **Pollinia** 4, obovoid; caudicles as long as the pollinia. **Rostrum** sub-apical, slit. **Lateral lobes on the stigma** prominent, occupying half the length of the stigmatic cavity. **Nectary** penetrating 1/5 of the ovary, slightly inflated, forming a vesicle, unornamented. **Capsule** 3 x 0.7 cm, ellipsoid; pedicel 5 mm long, terete, ting; body 15 x 7 mm; apical neck 10 mm long.

OTHER SPECIMENS: Without locality data, *Edouard Francois André* 3527, F! **ECUADOR: Napo:** Baeza, km 84 Quito-Tena, 1850 m, 17 VI 1983, *Dodson* 13999, MO! SEL! Union of Río Borja and Río Quijos, 1750 m, 19 IX 1980, *Holm-Nielsen* 26108, AAU! Río Borja, km 2, 1770 m, 19 IX 1980, *Holm-Nielsen* 26197, AAU! Ibid. 1760 m, 21 IX 1980, *Holm-Nielsen* 26561, AAU! **Napo-Pastaza:** 5 km west of Río Negro road from Baños to Puyo, 1500 m, 8 I 1962, *Dodson* 1916, QCA! SEL! **Zamora-Chinchi:** Km 45 Vilcabamba to Zumba beyond pass, 1800 m, 4 II 1987, *Dodson* 16930, RPSC!

DISTRIBUTION AND ECOLOGY: Found along the Cordillera Oriental in central and southern Ecuador, epiphytic at 1700-1900 m altitude. Flowering from April, June to December.

RECOGNITION: *Epidendrum cardiomorphum* belongs to Megalospathum Group characterized by the caespitose but branching habit, many-leaved stem, fleshy, oblique leaves, a short, few flowered, raceme subtended by large semi-ovate spathaceous bracts, resupinate flowers, the column more or less united to the lip, and the Vesicicaule Subgroup which has a sympodial habit, numerous leaves throughout the stems, the leaves concolor, green, lip triangular-cordiform and bicallose. The species is recognized by the lanceolate, falcate, green leaves, 4-8.6 x 0.5-1.0 cm, the sessile, two-flowered inflorescence, sepals 14-18 mm long, linear oblique petals, cordiform lip with two small, well formed calli, the disc with three very thin, low, parallel ribs which disappear before the middle of the lip, and with multiple radiating thickened veins; clinandrium-hood slightly surpassing the body of the column, fleshy, straight. *Epidendrum vesicicaule* has narrowly lanceolate leaves, 3.5-6 x 0.4-0.8 cm, the inflorescence is 4-flowered, flowers simultaneous, sepals 12-13 mm long, petals straight, lip cordiform with a pair of very fleshy thickened calli continued into a wide, fleshy thickened disc which nearly reaches the apex of the lip; column slightly upturned towards the basal half, apex truncate, clinandrium-hood fleshy. *Epidendrum pachyclinium* Hágsater & E.Santiago has similar sized flowers, but the lip is orbicular-cordiform, wider at the middle, and has a clearly arched column with the clinandrium-hood prominent very fleshy-thickened along the margin and slightly upturned; found at 1900-2000 m altitude. *Epidendrum falcivesicicaule* Hágsater & E.Santiago has been confused with this species, but has a two flowered inflorescence with 1-2 semicircular, oblique imbricating spathes, the cordiform lip with a pair of calli, elongate, prominent, on a thickened, rounded, white, spongy platform; clinandrium-hood is slightly incurved; it is also found at lower altitudes, 1900-2700 m. *Epidendrum calyptratum* F.Lehm. & Kraenzl. has a 10-12 flowered inflorescence, an ovate, acute lip with 2 minute calli, and the sepals are 6 mm long.



CONSERVATION STATUS: DD. Data deficiente.

ETYMOLOGY: From the Greek καρδιά heart, and μορφή, shape, in reference to the heart-shaped lip, with the wider part towards the base, which distinguishes this species from other similar ones.

REFERENCES: Hágsater, E. & E. Santiago, 2016, *Epidendrum falcivesicicaule*, in E. Hágsater & L. Sánchez S. (eds.), The Genus *Epidendrum*, Part 11, **Icon. Orchid.** 15(2): t. 1581. Lehmann, F.C. & F.W. L. Kränzlin, 1899, *Epidendrum calyptratum*, in F.W. L. Kränzlin, Orchidaceae Lehmannianae in Guatemala, etc., **Bot. Jahrb. Syst.** 26(5): 473. Santiago, E., & E. Hágsater, 2016, *Epidendrum pachyclinium*, in E. Hágsater & L. Sánchez S. (eds.), The Genus *Epidendrum*, Part 11, **Icon. Orchid.** 15(2): t. 1590. Santiago, E., & E. Hágsater, 2016, *Epidendrum vesicicaule*, in E. Hágsater & L. Sánchez S. (eds.), The Genus *Epidendrum*, Part 11, **Icon. Orchid.** 15(2): t. 1599. Williams, L. O., 1940, *Epidendrum vesicicaule*, in Orchid Studies XIII, **Bot. Mus. Leaflet.** 9: 13-14, plate III.

Authors: E. Hágsater & E. Santiago

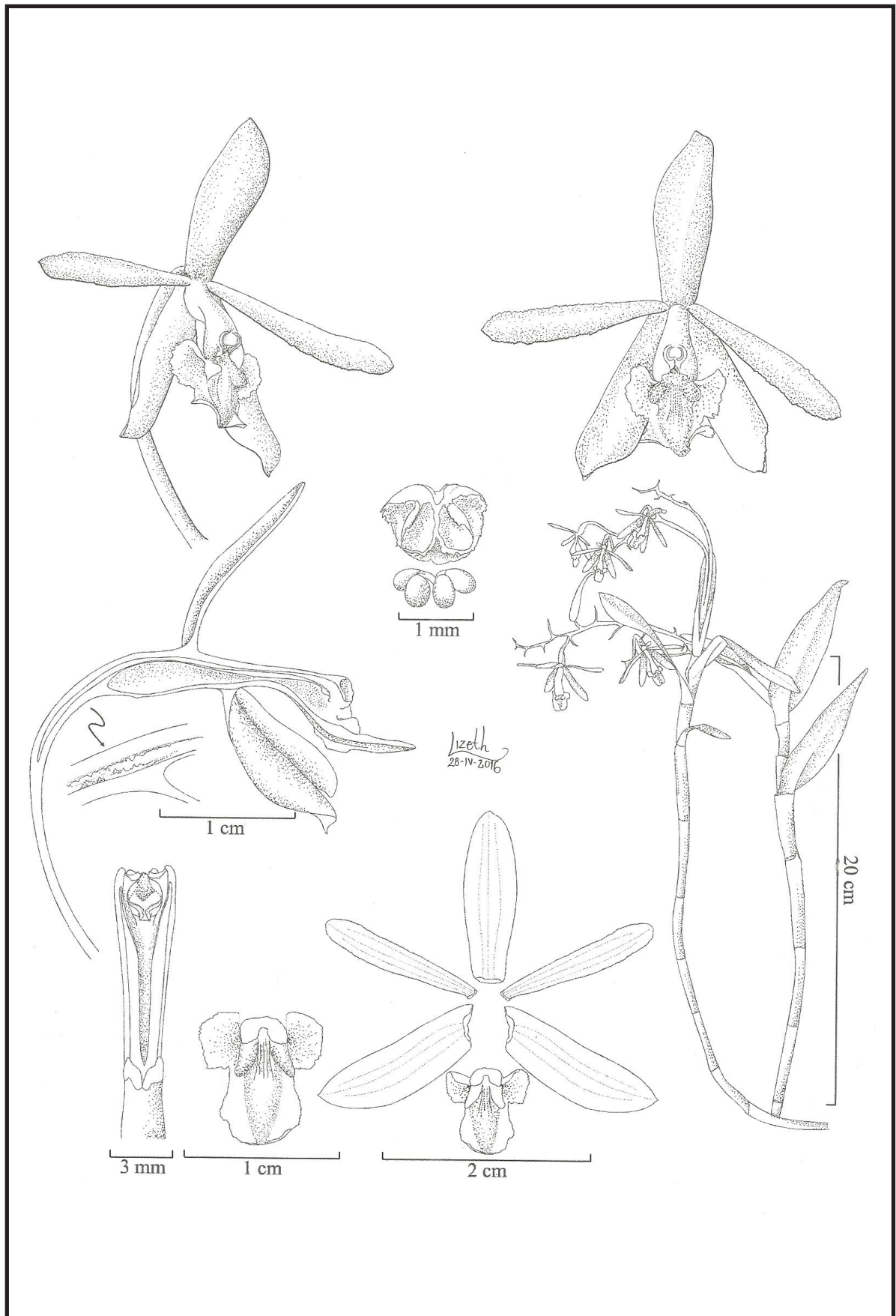
Illustrator: R. Jiménez M.

Editors: E. Hágsater & L. Sánchez S.

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ICONES ORCHIDACEARUM 15(2). 2016. Plate 1574



EPIDENDRUM CARLOS-URIBEI Hagsater & E.Santiago

Plate 1575

EPIDENDRUM CARLOS-URIBEI Hágsater et E.Santiago, *sp. nov.*

Type: COLOMBIA: Cundinamarca: Municipio de Fómeque, Parque Nacional Natural Chingaza, 3520 m, 11 Noviembre 2015, **Cristian Castro 369**. Holotype: COL! (illustration voucher). Isotype: COL!

Similar to *Epidendrum sismaense* Hágsater but the plants smaller, flowers brownish orange, the lip yellow, lateral lobes of the lip dolabriform, and mid-lobe cuneate.

Lithophytic, sympodial, caespitose **herb**, 33-40 cm tall. **Roots** 2 mm in diameter, basal, thin, white. **Stems** 17-28 x 0.4-0.9 cm, simple, cane-like, terete at base, somewhat laterally compressed along apical half, erect, straight, covered at the base by non-foliar sheaths 0.8-1.5 cm long, tubular, scarious. **Leaves** 3-5, sub-erect, alternate, articulate, coriaceous; sheaths 1.5-4.5 x 0.4-1.0 cm, tubular, minutely striated, greenish brown; blade 7.5-9.3 x 1.5-2.3 cm, unequal, the lower one smaller, elliptic-lanceolate, apex acute, margin entire. **Spathe** 1, 5-7 x 0.7-1.0 cm, tubular at base, conduplicate along the apical half, acute, amplexicaul, scarious. **Inflorescence** 11-18 cm long, apical, racemose to paniculate (rarely producing a small, few-flowered branch near the base of the inflorescence), arching-nutant, laxly few-flowered; peduncle 1.7-3.0 cm long, thin, laterally compressed; rachis laterally compressed, reddish orange to dark purple depending on the maturity of the inflorescence. **Floral bracts** 2-10 mm long, small, much shorter than the ovary, linear-triangular, acuminate, embracing. **Flowers** up to 10, simultaneous, resupinate, brown-orange, the lip and base of the petals yellow, column greenish yellow tinged brown; fragrance lacking. **Ovary** 24-30 mm long, elongate, dilated along the apical ¼, forming an angle of 90° where it thickens, slightly striated. **Sepals** 17-21 x 0.5-0.6 mm, slightly convex, apex acute, minutely apiculate, 3-veined, margin entire, slightly revolute; dorsal sepal free, spreading, elliptic; lateral sepals obliquely united to the base of the column, partly spreading, oblong, slightly oblique at the apex, margin spreading. **Petals** 16-21 x 3 mm, partly spreading, free, narrowly oblanceolate, the apex rounded, 3 veined, slightly oblique at the apex, margin spreading hyaline, denticulate. **Lip** 8 x 8 mm, united to the column, 3-lobed, base cordate; bicallose, the calli very prominent, laterally compressed, fleshy, divergent; disc with a prominent, wide mid-keel, apically rounded, reaching the sinus of the mid-lobe; lateral lobes 3.6 x 2.6 mm, small, sub-quadrate, the upper corner rounded, margin dentate, conduplicate at the base; mid-lobe 5.5 x 5 mm, cuneate, apex rounded, margin entire. **Column** 13-15.5 mm long, straight, thin along the basal 2/3, gradually dilated along the apical 1/3. **Clinandrium-hood** short, margin entire. **Anther** reniform 4-celled. **Pollinia** 4, obovoid; caudicles soft and granulose, slightly shorter than the pollinia. **Rostrum** apical, slit. **Lateral lobes of the stigma** half as long as the stigmatic cavity. **Nectary** shallow, penetrating ¼ of the ovary, inflated behind the sepals, unornamented. **Capsule** not seen.

OTHER SPECIMENS: COLOMBIA: Cundinamarca: Mun. Fómeque, Páramo de Chingaza, 3000-3330 m, 12 I 1965, *Huertas 5939*, COL!

OTHER RECORDS: COLOMBIA: Cundinamarca: Mun. Fómeque, Páramo de Chingaza, Cordillera Oriental, ca. 3200 m, *Constantino s.n.*, digital image series, received 17 I 2013, AMO! Municipio de Fómeque, Parque Nacional Natural Chingaza, 3520 m, X 2014, *Harding s.n.*, digital image, AMO! Ibid. IX 2015, *Harding s.n.*, digital image, AMO! Mun. Fómeque, Parque N. N. Chingaza, 3520 m, 23 XI 2015, *C. Uribe s.n.*, digital image series, AMO! (photo voucher).

DISTRIBUTION AND ECOLOGY: Known presently only from the Cordillera Oriental in northern Colombia, from the Páramo de Chingaza, lithophytic in moss, in Páramo, growing at 3200-3520 m altitude. Flowering from September to January.

RECOGNITION: *Epidendrum carlos-uribei* is closely related to the *Friderici-guilielmii* Subgroup of the *Excisum* Group, recognized by the tall, unbranched stems, few (3-5), unequal leaves, the sub-erect inflorescence with prominent spathe. The species is recognized by the small plants, to 40 cm tall, brown-orange flowers with the lip and base of the petals yellow, sepals 17-21 mm long, margin revolute, petals with hyaline, erose margin, lip with a short fleshy mid-rib in between the calli, margin of the lip erose, lateral lobes sub-quadrate, the upper corner rounded, mid-lobe cuneate. It has been confused with *Epidendrum sismaense* which has much larger, robust plants, rhizome creeping, stems to 80-100 cm tall, flowers greenish brown with the lip red, lustrous, the lip has 3 thin ribs on the disc, margin is entire, lateral lobes are semi-ovate, and the mid-lobe rectangular. *Epidendrum cocuyense* Hágsater & E.Santiago is vegetatively very similar, but the flowers are green tinged with purple, sepals 15-16 mm long, lip with a long mid-rib that reaches the apical sinus, lateral lobes are orbicular, margin entire, and the mid-lobe oblong. *Epidendrum trulliforme* Garay & Dunst. has green flowers tinged pink, sepals 16 mm long, the inflorescence is subtended by two spathes that cover the peduncle completely, lip entire, trulliform, base cuneate and the apex acute, with two prominent horn-like calli.

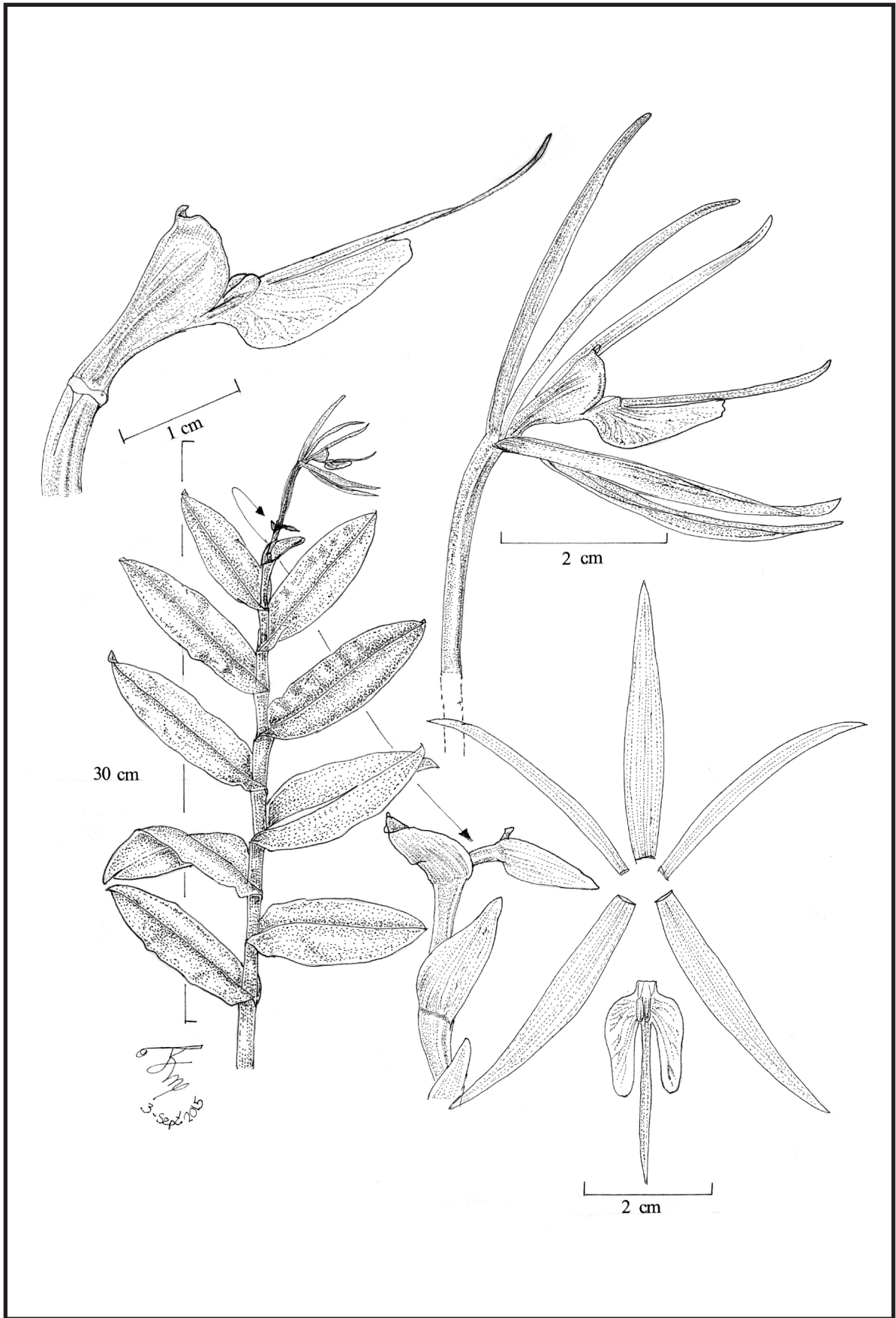
CONSERVATION STATUS: DD. Data deficient. Apparently all photographs and specimens are taken from a single known clump, in the Parque Nacional Natural Chingaza.

ETYMOLOGY: In honor of Carlos Uribe Vélez, (1943-) prominent orthopedist, resident of Bogotá, Colombia, who has dedicated many years to photograph the orchid diversity of Colombia, was a close friend of Pedro Ortiz Valdivieso, and together published a CD of Orchids of Colombia in 2007. He participated in the field trip where the authors observed and photographed the species in its natural habitat.

REFERENCES: Dunsterville, G. C. K., & L. A. Garay, 1976, *Epidendrum trulliforme*, **Venez. Orchid. III**, 6: 148-149. Hágsater, E., 2001, *Epidendrum sismaense* in Hágsater, E., & L. Sánchez Saldaña (eds.), *The Genus Epidendrum*, Part 3, **Icon. Orchid.** 4: t. 485. Hágsater, E., & E. Santiago, 2016, *Epidendrum cocuyense* in Hágsater, E., & L. Sánchez Saldaña (eds.), *The Genus Epidendrum*, Part 11, **Icon. Orchid.** 15(2): t. 1578.



Authors: E. Hágsater & E. Santiago Illustrator: L. Rodríguez M. Photo: C. Uribe V. Editors: E. Hágsater & L. Sánchez S.
Herbario AMO México, D.F. MÉXICO ICONES ORCHIDACEARUM 15(2). 2016. Plate 1575



EPIDENDRUM CHARTACIFOLIUM Hágsater & L.Sánchez

EPIDENDRUM CHARTACIFOLIUM Hágsater et L.Sánchez, sp. nov.

Type: COLOMBIA: Guaviare: San José del Guaviare, terrenos graníticos, sabana, 270 m, 12 XI 1939, **José Cuatrecasas 7676**. Holotype: COL 88329! Isotype: US 1795672! (illustration voucher).

Similar to *Epidendrum tridens* Poepp. & Endl. but the leaves papery (in herbarium specimens), distributed throughout the stem, flowers smaller.

Lithophytic, sympodial, caespitose **herb**, over 40 cm tall including the inflorescence. **Roots** basal, fleshy. **Stems** more than 26 cm tall, 0.4-0.65 cm wide, simple, cane-like, laterally compressed, straight, green. **Leaves** 9-12, distributed throughout the stems, erect, chartaceous in herbarium specimens; foliar sheaths 1.5-2.0 cm long, laterally compressed; blade 6.0-11.0 x 2.0-3.3 cm, unequal, progressively larger towards the base of the stem, ovate-elliptic, (length:width = 3:1), apex unequally bilobed, minutely mucronate, venation and dorsal keel evident, green. **Spathes** lacking. **Inflorescence** apical, racemose, eventually pluri-racemose, producing one flower at a time, and over several years from the same stem; peduncle 4-5 mm long, reduced, covered by a triangular acute bract; rachis 7-8 mm long. **Floral bracts** 4-6 x 2.5-3.0 mm, much shorter than the ovary, triangular, acuminate, embracing. **Ovary** 45-57 mm long, shorter than the apical leaf, terete, unornamented. **Flowers** successive, one at a time from each raceme, resupinate, sepals and petals greenish, lip white, greenish towards the apex, and column white, green towards the base, calli yellow; fragrance not registered. **Sepals** 38-47 x 5.0-5.3 mm, spreading, narrowly elliptic, acuminate, 10-veined, with numerous secondary veins; margin entire, revolute; lateral sepals slightly oblique. **Petals** 37-42 x 2.5-3.0 mm, partly spreading, linear-lanceolate, acuminate, 5-veined, with numerous secondary veins, margin entire, spreading. **Lip** 32 x 14 mm, united to the column, 3-lobed, margin entire, spreading; bicallose, the calli laminar, prominent; lateral lobes 17 x 6.5 mm, semi-ovate, rounded; mid-lobe 28 x 1.4 mm, ensiform, acuminate, margin entire. **Column** 16-17 mm long, straight strongly dilated towards the apex. **Clinandrium-hood** slightly surpassing the apex of the column, entire, margin slightly dentate. **Anther** not seen. **Pollinia** not seen. **Rostellum** not seen. **Lateral lobes of the stigma** reduced. **Nectary** not seen. **Capsule** not seen.

OTHER SPECIMENS: COLOMBIA: Guaviare: Mpio. San José del Guaviare, Serranía La Lindosa, Ciudad de Piedra, 290 m, rupícola, 13 XI 1985, *López 680*, COAH!

OTHER RECORDS: COLOMBIA: Guaviare; municipio de San José del Guaviare, carretera hacia la vereda El Capricho, Ciudad de Piedra, 19-VII 2015, *Rincón-González*, Digital images of plant *in situ*, AMO!

DISTRIBUTION AND ECOLOGY: Species known presently only from the Llanos Orientales of Colombia on the Amazon basin, in Savannah, 270-290 m altitude. Flowering in July, August, November, apparently throughout the year.

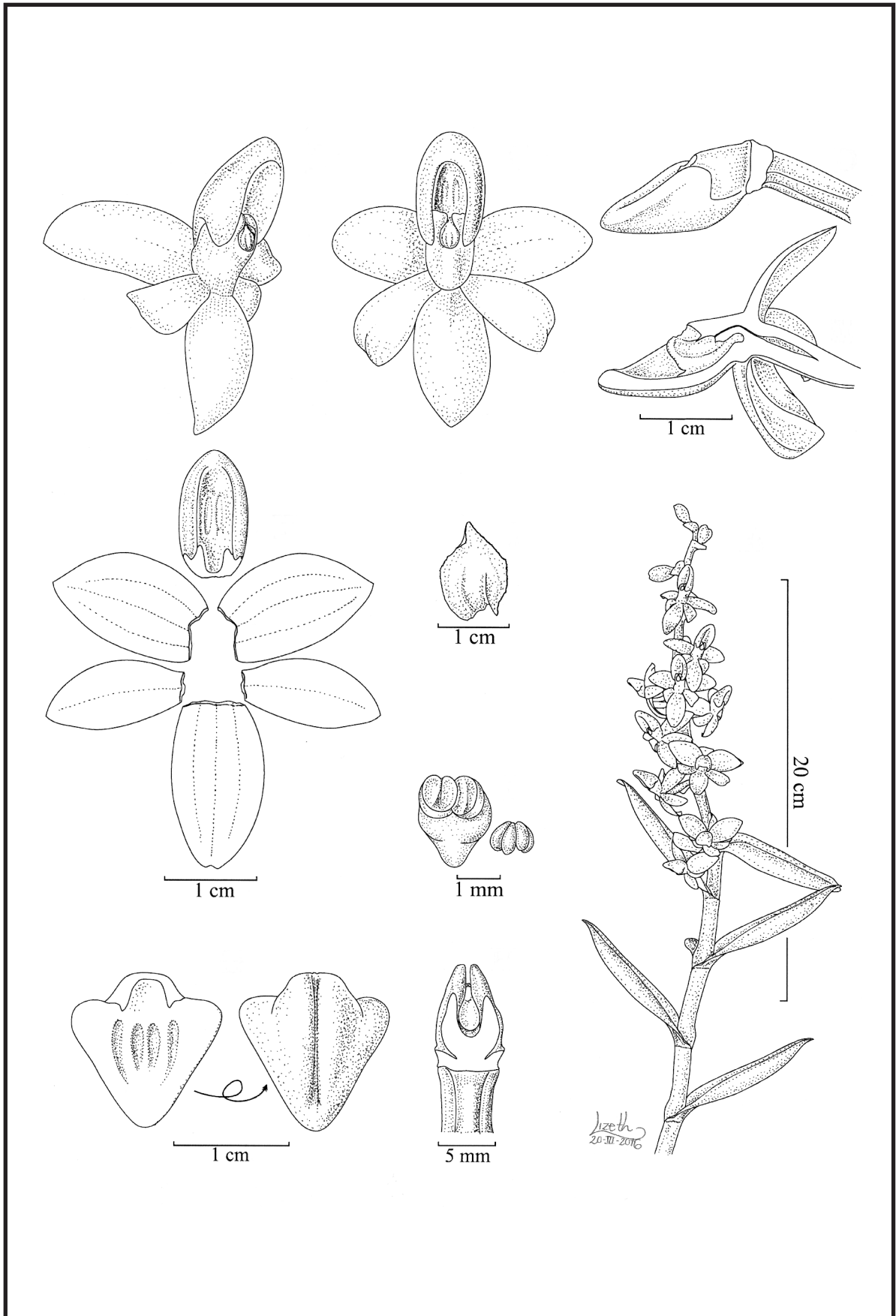
RECOGNITION: *Epidendrum chartacifolium* belongs to the Nocturnum Group which is characterized by the sympodial, caespitose plants, cane-like, non-fusiform stems, successive flowers on a short, racemose or pluri-racemose inflorescence, without spathaceous bracts, and large, star-shaped flowers, with similar sepals and petals; the flowers are mostly indistinguishable in shape. The species is recognized by the green, laterally compressed stems, with 9-12 papery, green leaves distributed throughout the stem, progressively longer towards the base of the stem, ovate-elliptic, 3 times longer than wide, (6.5-11.0 x 2.0-3.3 cm), ovary 45-57 mm long, sepals 45-47 mm long, mid-lobe of the lip 28 x 1.4 mm, column 16.5 mm long. *Epidendrum tridens* has dark green plants with the underside of the leaves and leaf-sheaths purple, stems with 4-8, coriaceous, erect leaves, length:width = 3:1-5:1 (8.5-15 x 2-5 cm), distributed along the apical 3/4 of the stem, flowers larger, ovary 60-100 [120] mm largo, sepals 42-73 mm long, mid-lobe of the lip 20-37 mm long, column 21-25 mm. *Epidendrum nocturnum* Jacq. is widely distributed from Florida to Bolivia and has green plants, terete stems, coriaceous leaves distributed along the apical 2/3 of the stem, ovary 50-80 mm long, sepals 35-75 mm long, and the mid-lobe of the lip 20-46 mm long. *Epidendrum tumuc-humaciense* (Veyret) Carnevali & G.A.Romero is endemic to the Guyana Shield and the northern Amazon basin in Colombia, Venezuela, Guyana, Surinam, French Guyana and northern Brazil; its plants are wine-red or yellowish green, with numerous short and narrow leaves (3-9.2 x 1.2-2.8 cm), distributed throughout the stems, those towards the base of the stem larger, sepals and petals 48-81 mm long, ovary generally 80-100 mm long, column 19-27 mm long, straight to arching downwards. *Epidendrum carpophorum* Barb.Rodr. is found along the Atlantic slope of Venezuela, Guyana and SE Brazil, has fewer leaves (4-6), coriaceous, distributed along the apical half of the stem, olive green, the underside purple, leaves wider, 2.5-6.0 mm wide.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Latin *chartaceus*, paper, in reference to the appearance of the leaves in herbarium specimens, as compared to most of the species of this group which are clearly leathery.

REFERENCES: Sánchez S., L. & E. Hágsater, 2010, *Epidendrum carpophorum* in E. Hágsater & L. Sánchez S. (eds.), The Genus *Epidendrum*, Part 9, **Icon. Orchid.** 13: t. 1313. Hágsater, E., & L. Sánchez S., 2015, *Epidendrum ramiro-medinae* in E. Hágsater & L. Sánchez S. (eds.), The Genus *Epidendrum*, Part 11, **Icon. Orchid.** 15(1): t. 1553. Sánchez S., L., & E. Hágsater, 2015, *Epidendrum tridens* in E. Hágsater & L. Sánchez S. (eds.), The Genus *Epidendrum*, Part 11, **Icon. Orchid.** 15(1): t. 1565. Sánchez S., L., & E. Hágsater, 2015, *Epidendrum tumuc-humaciense* in E. Hágsater & L. Sánchez S. (eds.), The Genus *Epidendrum*, Part 11, **Icon. Orchid.** 15(1): t. 1566.





EPIDENDRUM CHINGAZAËNSE Hągsater, E.Santiago & C.Uribe-Vélez

Plate 1577

EPIDENDRUM CHINGAZAËNSE Hágsater, E. Santiago et C. Uribe-Vélez, *sp. nov.*

Type: COLOMBIA: Meta: Municipio de San Juanito; Parque Nacional Natural Chingaza, vía a San Juanito, 3230 m, 11 Noviembre 2015, **Cristian Castro 371**. Holotype: COL! (illustration voucher) Isotype: COL x2!

Similar to *Epidendrum stenobractistachyum* Hágsater & E. Santiago but the flowers slightly larger, petals much wider, and the flower concolor including the column, floral bracts widely ovate.

Terrestrial, monopodial, branching **herb**, up to 300 cm tall. **Roots** thick, produced from the base of the main stem, fleshy, white. **Stems** branching above, cane-like, terete, erect, straight, the main stem up to ca. 300 cm tall, the branches 50-67 cm long; base covered by non-foliar sheaths 2.7-3.5 x 1.0-1.2 cm, tubular, striated, rugose. **Leaves** numerous, distributed throughout the main stems, distributed along the apical 1/3 of the branches, articulate, alternate, sub-coriaceous, lustrous above, glaucous on the underside, unequal in size, those of the branches smaller; sheaths 2.5-4.0 x 1.0-1.2 cm, tubular, minutely striated; blade 7.5-9.2 x 2.0-2.5 cm, lanceolate, acute, margin entire. **Spathe** lacking. **Inflorescence** 16 cm long, apical, racemose, erect, flowering only once, helicoid, lax-flowered; peduncle very short, terete, erect, straight; rachis ca. 16 cm long, terete, straight. **Floral bracts** 6-15 x 9 mm, slightly longer than to about half as long as the ovary, widely ovate, short-acuminate, embracing, spreading in relation to the rachis, margin denticulate. **Flowers** 20, simultaneous, non-resupinate, very fleshy, concolor yellow to slightly tinged brown; pollinated flowers turn reddish-purple; fragrance sweet, agreeable and intense in the evening. **Ovary** 10-14 mm long, terete, thick, striated longitudinally. **Sepals** 18 x 11.5 mm, free, spreading, convex (so as to appear slightly reflexed), elliptic, sub-acute, apical margin denticulate, spreading; lateral sepals slightly oblique. **Petals** 15.5 x 5.5-7.0 mm, free, reflexed, obliquely elliptic, acute, margin entire, spreading. **Lip** 12 x 13 mm, united to the column, entire, deltate, base truncate, apex rounded, very fleshy, margin entire; ecallose, with 4 short parallel, grooves in the disc of the lip, tapering towards the apex, the outer pair slightly longer and curved; the underside with a long narrow groove running the length of the lip. **Column** 9 mm long, straight, thick, with a pair of rounded teeth at the apex. **Clinandrium-hood** reduced, margin entire. **Anther** 4-celled, ovoid. **Pollinia** 4, ovoid, caudicles granulose, shorter than the pollinia. **Rostellum** apical, slit. **Lateral lobes of the stigma** not seen. **Nectary** not seen. **Capsule** not seen.

OTHER SPECIMENS: None seen.

OTHER RECORDS: COLOMBIA: **Meta:** Mun. de San Juanito; Parque Nacional Natural Chingaza, vía a San Juanito, 3230 m, 23 Noviembre 2015, *E. Santiago s.n.*, digital images, AMO! (photograph voucher).

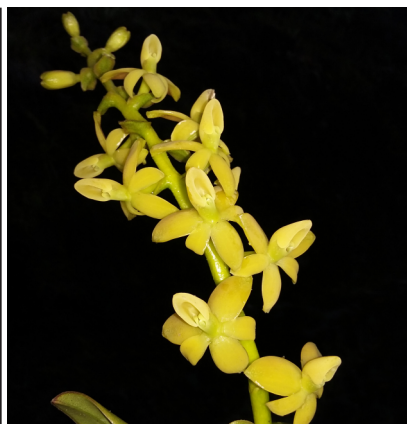
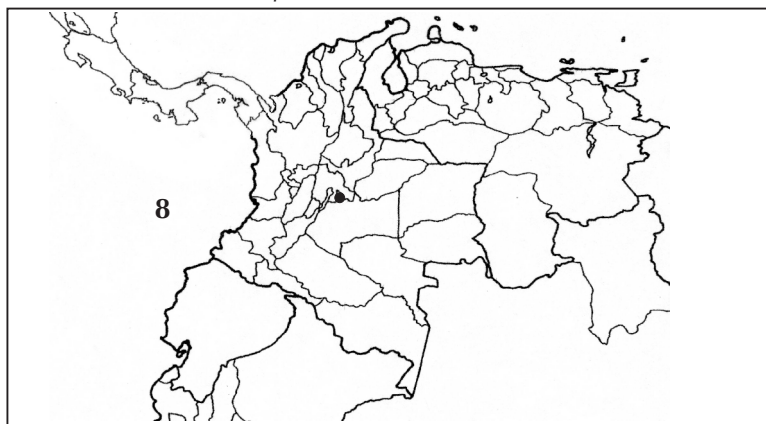
DISTRIBUTION AND ECOLOGY: Known presently only from the type locality, in the Parque Nacional Natural Chingaza, some 40 km from the entrance, on the Amazon slope of the Cordillera Oriental of the Andes, in the Municipality of San Juanito, Department of Meta; at 3230 m altitude, in wet cloud forest. Flowering in November-December.

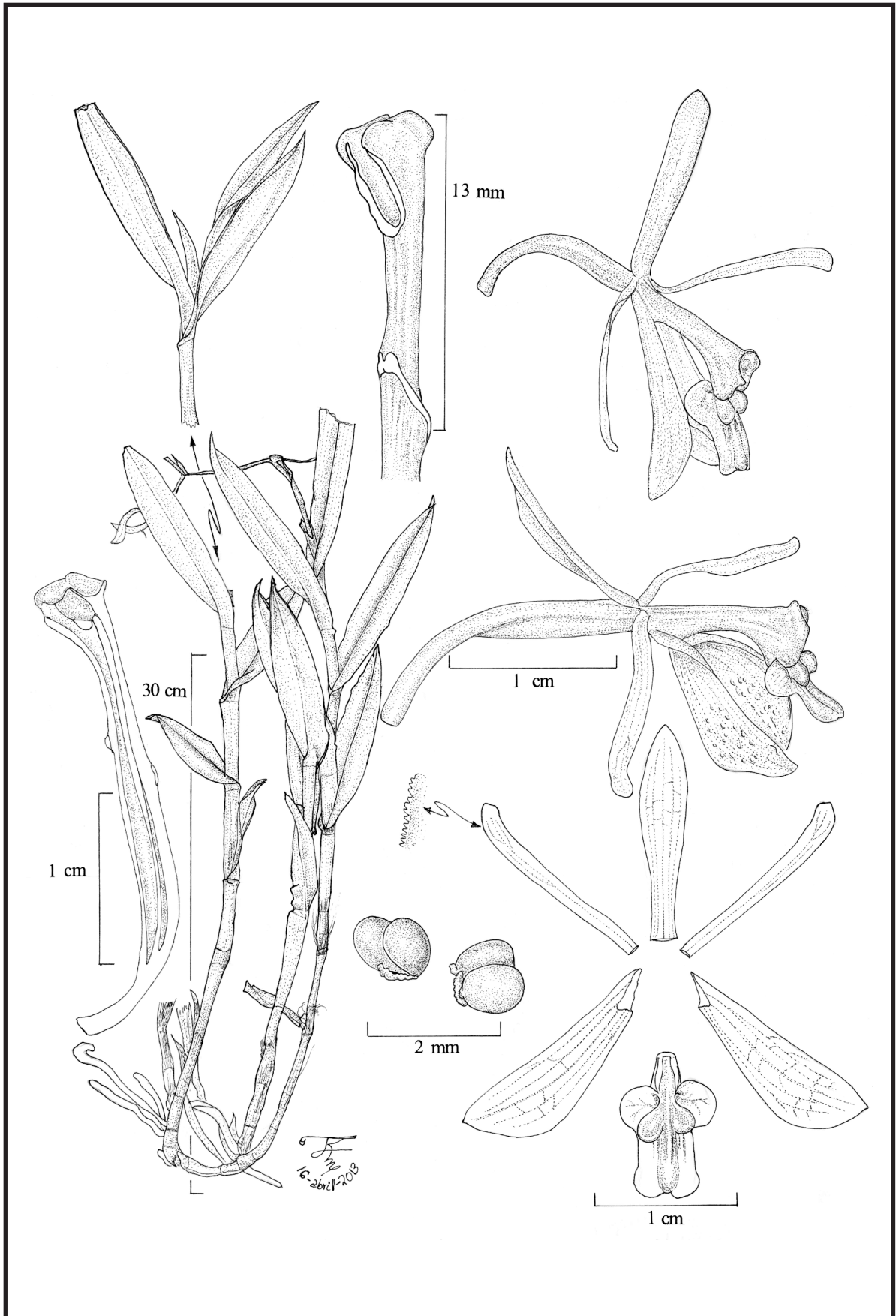
RECOGNITION: *Epidendrum chingazaense* belongs to the Macrostachyum Group, which is characterized by the monopodial plants with sub-apical branching, rugose leaf sheaths, racemose inflorescence, and fleshy flowers with a simple, conduplicate lip embracing the column, and the nectary pubescent to papillose in front of the stigmatic cavity. The species is recognized by the large plants, to 3 m tall, the inflorescence of 16 cm in length, helicoid, lax-flowered, the flowers yellow, generally concolor and very fragrant, large, sepals convex 18 x 11.5 mm, petals obliquely elliptic, wide, oblique, 15.5 x 5.5-7 mm, lip 12 x 13 mm, deltate, the base truncate, and the floral bracts 14-15 x 9 mm, widely ovate with the margin denticulate; the 4 grooves in the disc of the lip are quite unique and we have not seen them in other species. *Epidendrum stenobractistachyum* is vegetatively very similar but the flowers are yellow with the column tinged purple, somewhat smaller, sepals 14-15 x 5.7-6.7 mm, petals oblong, 13 x 2.8 mm, the lip 9 x 10.3 mm, and the floral bracts 8-18 x 4-6 mm; narrowly oblong to lanceolate-triangular. *Epidendrum humeadorensis* Hágsater & Dodson has shorter inflorescences, to 13 cm long, few-flowered, rachis sinuous, the flowers lime-green colored, with the column apple-green, sepals 15-17 x 6.5-8.0 mm, petals oblanceolate, 13 x 4 mm, and the bracts cymbiform, 10-13 x 10-14 mm, shorter than the ovary. *Epidendrum obovatipetalum* Hágsater & Dodson is endemic to Ecuador, and very densely flowered inflorescences to 13 cm long, flowers white tinged purple, sepals 15 x 8-9 mm, petals oblanceolate, 15 x 5 mm, and floral bracts cymbiform, 14 x 20 mm, much longer than the ovary.

CONSERVATION STATUS: DD. Data deficient. Found within the Parque Nacional Natural Chingaza.

ETYMOLOGY: In reference to the locality where it has been found, in the Parque Nacional Natural Chingaza. The name Chingaza, from the Muisca civilization dating back to the VI century BCE, and was integrated to the current civilization with the arrival of the Spanish. The name probably originated from Chim-gua-za, "Mountain of the God of the Night".

REFERENCES: Hágsater, E., & C. H. Dodson, 1999, *Epidendrum humeadorensis* in Hágsater, E., & L. Sánchez Saldaña (eds.), *The Genus Epidendrum*, Part 2, **Icon. Orchid.** 3: t. 335. Hágsater, E., & E. Santiago, 2013, *Epidendrum polyanthostachyum* in Hágsater, E., & L. Sánchez Saldaña (eds.), *The Genus Epidendrum*, Part 10, **Icon. Orchid.** 14: t. 1477. Hágsater, E., & L. Sánchez Saldaña (eds.), 2015, *Epidendrum stenobractistachyum* in Hágsater, E., & L. Sánchez Saldaña (eds.), *The Genus Epidendrum*, Part 11, **Icon. Orchid.** 15(1): t. 1562.





EPIDENDRUM COCUYENSE Hágsater & E.Santiago

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

Type: COLOMBIA: Boyacá: Sierra Nevada del Cocuy, below El Playón, ca. 3250 m, 11 September 1957, **P. J. Grubb, B.A.B. Curry & Álvaro Fernández-Pérez 816**. Holotype: K! Isotypes: COL! US! (illustration voucher).

Similar to *Epidendrum sismaense* Hágsater, but the flowers and plants smaller, the inflorescence racemose to paniculate, the lateral lobes of the lip orbicular and the mid-lobe oblong.

Epiphytic, sympodial, caespitose **herb**, to ca. 55 cm tall. **Roots** 2.0-3.5 mm thick, basal, white. **Stems** 28-32 x 0.2-0.8 cm, simple, cane-like, terete at the base and somewhat laterally compressed along the apical half, erect, straight, base covered with sheaths ca. 4.0-4.5 cm long, tubular, non-foliaceous, scarious, becoming fibrous with time. **Leaves** 4-5, sub-erect, alternate, articulate, sub-coriaceous, somewhat conduplicate at the base; sheath 3.5-4.5 x 0.6-0.8 cm, tubular, minutely striated; blade 6.5-13 x 1.4-2.5 cm, unequal, the lower one smaller, narrowly elliptic, apex acute, margin entire. **Spathe** 1, 11 cm long, base tubular, conduplicate along the apical half, acute, amplexicaul. **Inflorescence** 17-26 cm long, apical, racemose to paniculate, producing 3-2 short racemes at the base of the rachis of the main, larger raceme, arching-nutant, laxly few-flowered; peduncle 6.5-9.0 cm long, thin, laterally compressed, provided with a single bract near the apex, similar to the spathe but shorter, 2.8 cm long, scarious; rachis slightly flexuous. **Floral bracts** 5-10 mm long, prominent, but much shorter than the ovary, linear-triangular, acuminate, embracing. **Flowers** ca. 30, successive, resupinate, fleshy, green, tinted purple-pink, deeply so on top of the tip of the lip and the end of column; purple tinting variable, may be as flecking or almost all over the lobes; fragrance not registered. **Ovary** 25-40 mm long, elongate, terete, dilated at the apical ¼, forming a 135° angle where the thickening begins, slightly striated. **Sepals** 15-16 x 3.3-4.7 mm, slightly convex, obtuse, minutely apiculate, 5-veined, scarcely verrucose towards the apex on the dorsal surface, margin entire; dorsal sepal spreading, free, oblancoolate-spatulate; lateral sepals partly spreading, obliquely united to the base of the column, oblancoolate, oblique. **Petals** 15-16 x 1.5 mm, spreading, free, linear-oblong, somewhat curved near towards the rounded apex, 1-veined, the vein short branched about the middle, margin spreading, minutely denticulate towards the apex. **Lip** 8 x 7 mm, united to the column, 3-lobed, base cordate; bicallose, the calli prominent, laminar, fleshy, somewhat laterally compressed, divergent; disc with 3 parallel ribs, the lateral pair low, the mid-rib fleshy, wide rounded at the apex and reaching the apical sinus of the lip; lateral lobes 3 x 3 mm, small, orbicular, margin entire, spreading mid-lobe 5 x 3 mm, oblong, the apex truncate, somewhat wider, slightly emarginate, forming a pair of hemi-orbicular lobes, margin entire. **Column** 13 mm long, straight, basal half thin and gradually widened towards the apex, apical wings of the column truncate, rounded. **Clinandrium-hood** short, somewhat widened, margin entire. **Anther** not seen. **Pollinia** 4, obovoid; caudicles soft and granulose, slightly shorter than the pollinia. **Rostellum** apical, slit. **Lateral lobes of the stigma** prominent, half as long as the stigmatic cavity. **Nectary** shallow, penetrating 1/4th of the ovary, not inflated, unornamented. **Capsule** not seen.

OTHER SPECIMENS: COLOMBIA: Arauca: Sierra Nevada del Cocuy, Quebrada El Playón, Boca del Monte "El Too", 3000 m, 10 VI 1973, *Cleef 10154*, COL! U! **Boyacá:** Duitama; vereda El Carmen, 3390 m, 17 III 1994, *Rangel 11689*, COL! **Cundinamarca:** Vieja carretera a Gachetá, 3000 m, 19 I 1998, *Ospina 1498*, COL!

OTHER RECORDS: None seen.

DISTRIBUTION AND ECOLOGY: Known only from the Cordillera Oriental in northern Colombia, epiphytic growing at 3000-3390 m altitude. Flowering from January to September.

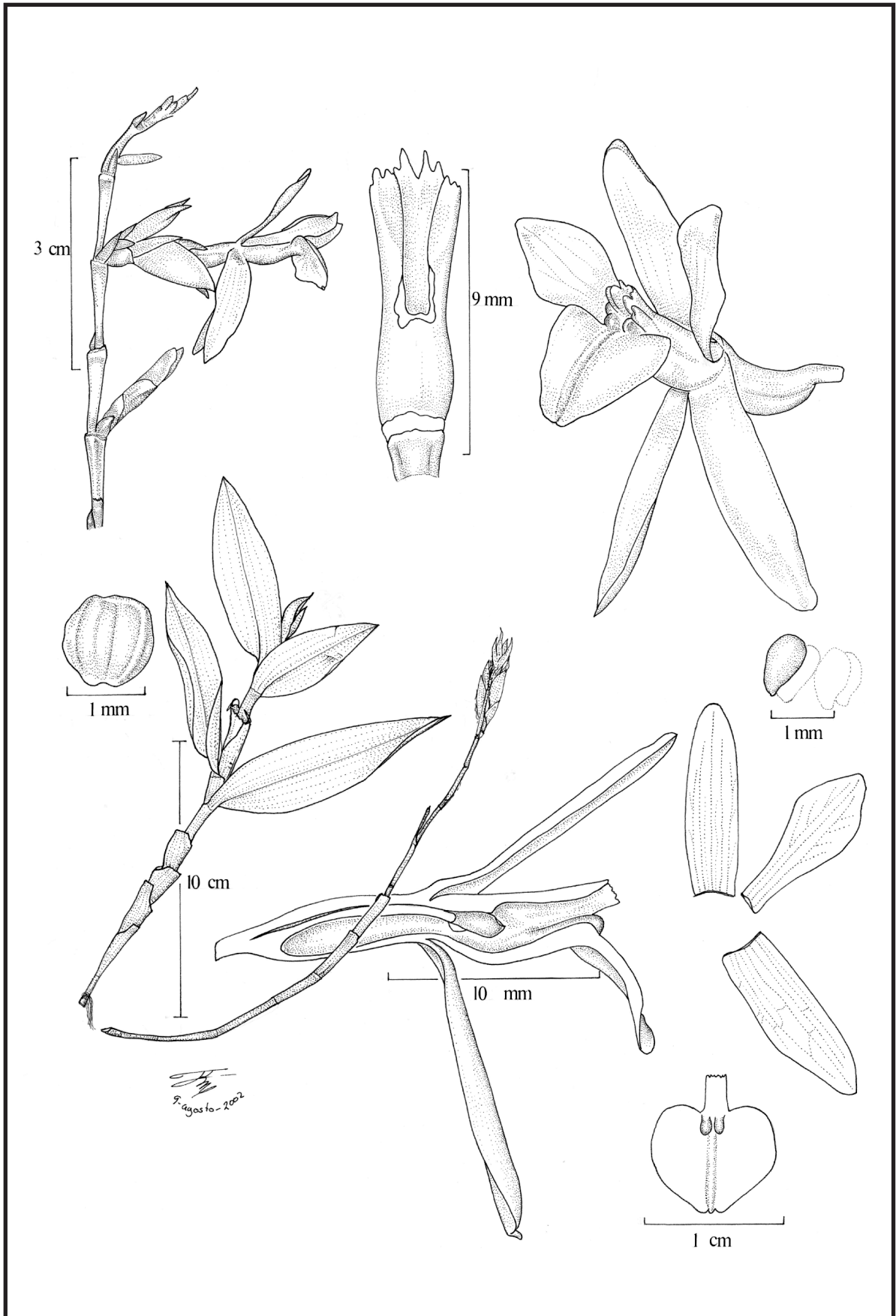
RECOGNITION: *Epidendrum cocuyense* is closely related to the Friderici-guilielmi Subgroup of the Excisum Group, recognized by the tall, unbranched stems, few (3-5), unequal leaves, and the sub-erect inflorescence with prominent spathe. The species is recognized by the lax inflorescences, sometimes with up to 2 short branches near the base of the inflorescence, successive flowers, sepals partly spreading, 15-16 mm long, the lip with a pair of small, orbicular lateral lobes, and the mid-lobe oblong with the apex bilobed, the ovary forms a 135° angle near the apex, where it is thickened. *Epidendrum sismaense* Hágsater has larger, more robust plants, a racemose inflorescence with larger flowers, sepals 19-20 mm long, the dorsal sepals reflexed, nearly parallel to the ovary, lateral lobes of the lip semi-ovoid, and the mid-lobe rectangular. *Epidendrum trulliforme* Garay & Dunsterville also has successive flowers, but the color is reddish green with the lip green and the calli white, the dorsal sepals is spreading and the lip trullate to sub-hastate with the base cuneate and the apex obtuse. *Epidendrum carlos-uribei* Hágsater & E. Santiago is vegetatively very similar, but the flowers are brownish orange with the lip and base of the petals yellow, flowers slightly larger, sepals 17-21 mm long, lateral lobes of the lip dolabriform, and the mid-lobe cuneate.

CONSERVATION STATUS: DD. Data deficient. The species occurs within the Parque Nacional El Cocuy.

ETYMOLOGY: In reference to the Parque Nacional El Cocuy, Boyacá, Colombia, where the species has been collected.



REFERENCES: Dunsterville, G. C. K., & L. A. Garay, 1976, *Epidendrum trulliforme*, **Venez. Orchid. III**: 6: 148-149. Hágsater, E., 2001, *Epidendrum sismaense*, in E. Hágsater & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 3, **Icon. Orchid.** 4: t. 485. Hágsater, E., & E. Santiago, 2016, *Epidendrum carlos-uribei*, in E. Hágsater & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 11, **Icon. Orchid.** 15(2): t.1575.



EPIDENDRUM CORYMBORKIPHYLLUM Hągsater & E.Santiago

EPIDENDRUM CORYMBORKIPHYLLUM Hágsater et E.Santiago sp. nov.

Type: COLOMBIA: Without locality data, cult. Antioquia by Edwin Granada, **Rodrigo Escobar R. 5326**. Holotype: AMO 16177! Flower in spirit: AMO A-2401! (illustration voucher); received at AMO, 1 November 1993, Color slide of pretype, AMO! (published: Escobar, 1994).

Similar to *Epidendrum tropidioides* Garay but the flowers creamy yellow, lateral sepals spreading, petals with entire margin, lip cordiform with two small calli and a very narrow mid-rib.

Epiphytic, sympodial, caespitose **herb**, ca. 40 cm tall. **Roots** basal, thin. **Stems** 15 x 0.4 cm, simple, cane-like, terete at base and laterally compressed above. **Leaves** 10, distributed throughout stem, alternate, articulate, sub-erect, at flowering from older stems the lower leaves often deciduous; sheaths 15-25 x 4.0-5.5 mm, tubular, laterally compressed, minutely striated; blade 5.5-10 x 2.1-2.5 cm, elliptic, acuminate, margin entire, spreading, foliar venation marked, evident so leaf appears somewhat plicate. **Spathes** lacking. **Inflorescence** 25 cm long, apical, racemose at first flowering, new racemes produced during successive seasons and thus pluri-racemose, distichous, few-flowered, visibly longer than apical leaf; peduncle ca. 20 cm long, elongate, laterally compressed, totally covered by tubular, scarious sheaths; rachis short, totally covered by floral bracts. **Floral bracts** 15-18 x 2-4 mm (not spread), nearly as long as the ovary, elliptic, conduplicate, apex sub-acute, imbricated, persistent on rachis after flowering. **Ovary** 10 mm long, terete, thin, slightly inflated ventrally along the apical 3/4, unornamented. **Flowers** successive, produced one at a time, resupinate, creamy yellow with apex tinged pink; fragrance not registered. **Sepals** 13.5-14 x 4-4.5 mm, free, oblong, apex rounded, 7-veined, margin entire, spreading; dorsal sepal partly spreading; lateral sepals spreading. **Petals** 12.5 x 4.7 mm, partly spreading, free, obtrullate, apex sub-acute, 3-veined, lateral veins short-branched along apical half, margin entire. **Lip** 8 x 9 mm, united to column, entire, base cordate, cordiform in general outline, apically narrowly emarginate, revolute, margin entire; bicallose, calli small, sub-spherical, parallel; disc with a thin mid-rib reaching the apical sinus. **Column** 9 mm long, straight, thin. **Clinandrium-hood** prominent, surpassing column body, margin dentate. **Anther** reniform, 4-celled. **Pollinia** 4, obovoid, somewhat laterally compressed; caudicles and viscidium not seen. **Rostellum** sub-apical, slit. **Lateral lobes of the stigma** small, about 1/3 the length of stigmatic cavity. **Nectary** wide, penetrating 3/4 of the ovary and forming an elongate vesicle, unornamented. **Capsule** not seen.

OTHER SPECIMENS: COLOMBIA: Antioquia: Cáceres, El Doce, 200-400 m, 215 km de Medellín, 28 XII 1977, *Callejas 337*, COL! HUA (sterile)!

OTHER RECORDS: COLOMBIA: Antioquia: Segovia, 769 m, *Monsalve 22*, digital image, AMO! (photo voucher).

DISTRIBUTION AND ECOLOGY: Known only from the northern slope of the Cordillera Central in the lowlands of northern Antioquia, epiphytic at 800 m altitude. Flowering time not recorded, probably during an extended period.

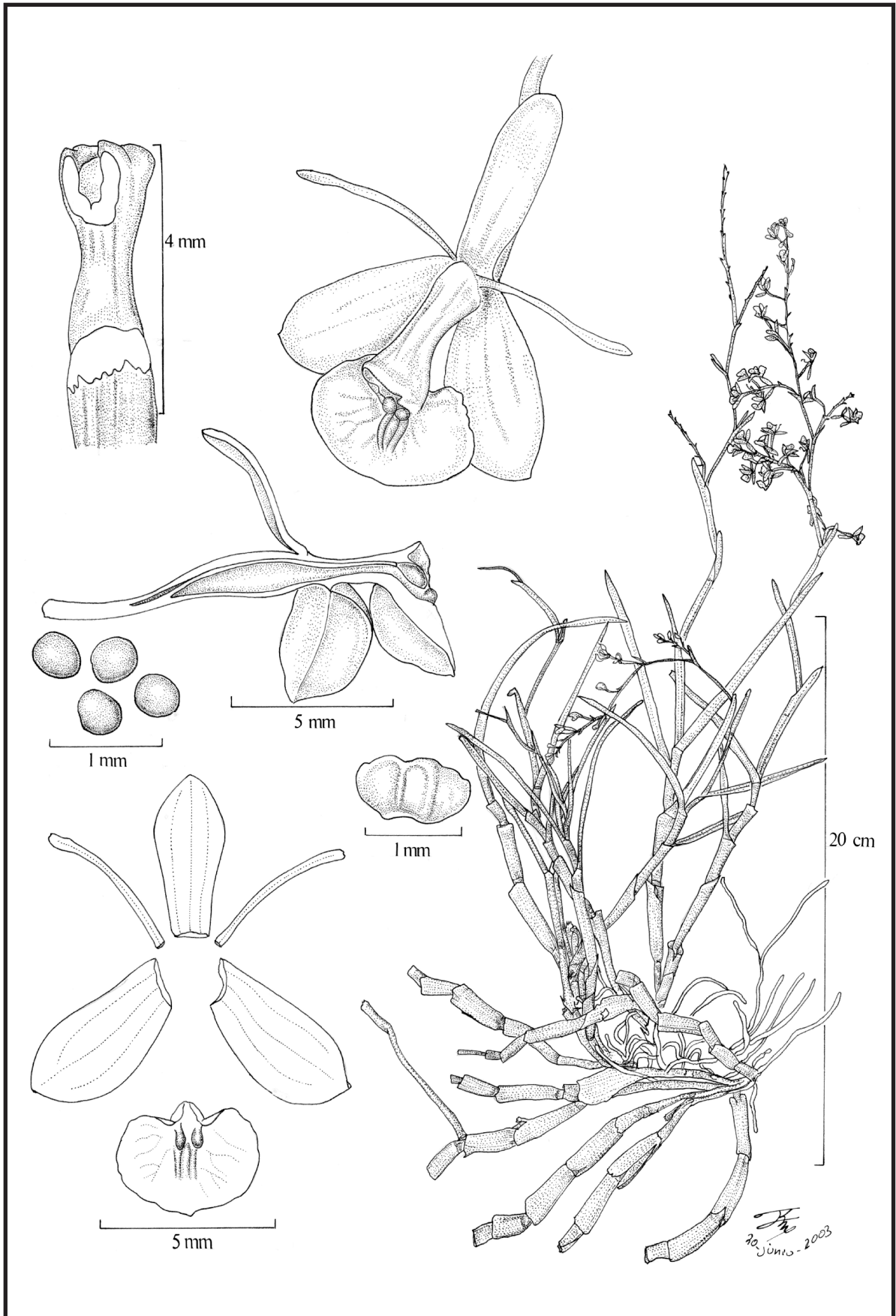
RECOGNITION: *Epidendrum corymborkiphyllum* belongs to the Albertii Group which is characterized by the sympodial habit, laterally compressed to ancipitose or somewhat fusiform-thickened stems, inflorescence apical or apical and lateral racemose, with distichous, more or less imbricating bracts on peduncle, producing one flower at a time, and the Allenii Subgroup which is characterized by stems with numerous leaves, apical inflorescence (rarely lateral), peduncle elongate, bare, non-bract bearing, two-winged, rachis short, covered by rounded, usually imbricating, bracts. The species is recognized by the creamy yellow flowers, apex tinged pink, sepals oblong apex rounded, 13.5-14 mm long, petals obtrullate, margin entire, lip cordiform with a pair of small sub-spherical calli. *Epidendrum tropidioides* Garay has green flowers, sepals narrowly lanceolate, apex acute, 22-26 mm long, petals narrowly rhombic, margin erose, lip obovate, base cuneate, with a pair of prominent, laminar calli. *Epidendrum lagenomorphum* Hágsater & Dodson has green flowers, sepals 12.5-12.9 mm long, petals narrowly oblanceolate, lip sub-orbicular, base cuneate. *Epidendrum adnatum* Ames & C. Schweinf. has green flowers, sepals hyaline, tinged with purple, sepals 9-12 mm long, oblanceolate, apex acute, petals linear-filiform, lip ovate, apex acute, and a pair of prominent calli. *Epidendrum gentryi* Dodson shares the size of the flowers, obtrullate petals, and the prominent clinandrium-hood, but the lip is wide-ovate somewhat rhombic, base cuneate, and that species has the stems somewhat fusiform-thickened in the middle, and leaves distributed only along the apical half of the stem.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek *κορυμβος*, a corymb of flowers, *ορχις*, orchid, and *φυλλον*, leaf. In reference to the leaves of the species which have prominently marked veins, so as to appear somewhat plicate, as in *Corymborkis*.

REFERENCES: Escobar, R., 1994, *Epidendrum phyllocharis* in *Orquídeas Nativas de Colombia* 5: 766, fig. 889. Hágsater, E., & C. H. Dodson, 2001, *Epidendrum lagenomorphum* in Hágsater, E. & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 3, *Icon. Orchid.* 4: t. 451. Santiago, E., & E. Hágsater, 2007, *Epidendrum adnatum* Ames & C. Schweinf., in Hágsater, E. & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 6, *Icon. Orchid.* 9: t. 901. Santiago, E., & E. Hágsater, 2008, *Epidendrum tropidioides* Garay, in Hágsater, E. & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 7, *Icon. Orchid.* 11: t. 1192.





EPIDENDRUM ERICA-MORONIAE Hágsater & E.Santiago

Plate 1580

EPIDENDRUM ERICA-MORONIAE Hágsater et E.Santiago, *sp. nov.*

Type: PERÚ: Cuzco: La Convención: Bosque de Sapansachayoce above Hacienda Potrero, in Quebrada Garavita, Río Chuyapi, 10 km above Quillabamba, 2000 m, 1 August 1947, **Francis Raymond Fosberg 28297**. Holotype: AMO (illustration voucher).

Similar to *Epidendrum gracillimum* Rchb.f. but the plants larger (20-30 cm vs 15-20 cm), the racemes densely many-flowered (8-17 vs. 3-4), and the leaves wider (to 5 mm vs. 3 mm), the petals linear (vs. filiform), and the lip entire (vs. 3-lobed).

Epiphytic, sympodial, caespitose **herb**, 20-30 cm tall. **Roots** 0.5-1.5 mm in diameter, basal, thin, white. **Stems** 7.5-9.0 x 2-3 mm, simple, short, cane-like, terete at the base, laterally compressed towards the apex, thin, the base covered by sheaths 8-12 mm long, non-foliar, tubular, minutely striated, scarious. **Leaves** 4-7, distributed throughout the stem, sub-spreading, straight; sheaths 6-20 x 2-5 mm, minutely striated; blade 3.5-8.0 x 0.2-0.5 cm, linear, acute coriaceous, margin entire, slightly revolute. **Spathes** lacking. **Inflorescence** 10-21 cm long, apical, paniculate, erect, densely many-flowered; peduncle 7.0-8.5 cm long, thin, ancipitose, fractiflex, with 2-4 bracts 14-20 mm long, distributed throughout, tubular, ancipitose at the base, conduplicate towards the apical half, the apex sub-acute; rachis 12.5-13.0 cm long, thin, terete, with 4-6 racemes 1.5-3.5 cm long, each raceme perpendicular with respect to the rachis, densely many-flowered, each subtended by a bract, similar to those of the peduncle, progressively shorter. **Floral bracts** 1-3 mm long, much shorter than the ovary, narrowly triangular, long-acuminate, embracing. **Flowers** 30-70, 8-17 per raceme, small, membranaceous, simultaneous (though the basal racemes have all their flowers open when the apical flowers are still in bud, lip always towards the rachis, greenish brown, turning purple-pink, apex of the column purple; fragrance not registered. **Ovary** 8-10 mm long, terete, thin, ventrally inflated along the apical half, forming a small vesicle. **Sepals** spreading, free, slightly convex, apex rounded, 3-veined, margin entire, slightly revolute; dorsal sepals 4.6 x 2 mm, narrowly obovate; lateral sepals 5 x 2.5 mm, obovate-elliptic, slightly oblique, apiculate. **Petals** 4.5 x 0.3 mm, free, linear (with the apex slightly wider), 1-veined, apex rounded, margin entire, spreading. **Lip** 3 x 4 mm, totally united to the column, slightly convex, entire, widely cordiform-reniform, base cordate, margin erose, spreading; bicallose, the calli small, orbicular, disc with 3 ribs, narrow, short. **Column** 4 mm long, straight. **Clinandrium-hood** short, margin entire. **Anther** reniform, 4-celled. **Pollinia** 4, obovoid, laterally compressed. **Rostellum** apical, slit. **Lateral lobes of the stigma** not seen. **Nectary** penetrating 1/2 of the ovary, slightly inflated, unornamented. **Capsule** not seen.

OTHER SPECIMENS: BOLIVIA: La Paz: Nor Yungas, Parque Nacional Cotapata, 1800 m, 10 IX 2000, *Kromer 1515*, LPB! **PERÚ: Cajamarca:** San Ignacio; San José de Lourdes, 1950 m, 10 VIII 2000, *Calatayud 638*, CUZ! Ibid. San Ignacio; San José de Lourdes, Los Llanos, 1860 m, 10 X 2006, *Perea 2781*, MO! **Cusco:** La Convención; Santa Ana; Tunquimayo, 2007 m, 19 X 2007, *Farfán 1842*, AMO! Carretera Cusco-Pilcopata, 1800 m, *Moscozo 795*, MO! La Convención; Alturas de Pintobamba, 2300 m, 3-4 III 1943, *Vargas 3268*, AMES! **Junín:** Huacapistana, 1800-2400 m, 6 VI 1929, *Killip 24225*, AMES! NY! US! **Pasco:** Oxapampa; Yaupi, 2300 m, *Bennett 1422*, UC! USM! Paucartambo; above Yaupi Bajo, 1900 m, 15 VII 1986, *Bennett 3822*, MOL! USM!

OTHER RECORDS: PERÚ: Junín: Satipo, Calabaza, near Río Pampa Hermosa, 1700 m, *Bennett 3976*, cited in text (Bennett & Christenson, 1993). Zona de Monobamba, Selva Central, 8 IX 2012, *Morón s.n.*, digital photo, flowers in spirit, AMO! Selva Cental, 17 IX 2015, *Morón s.n.*, digital photo, AMO!

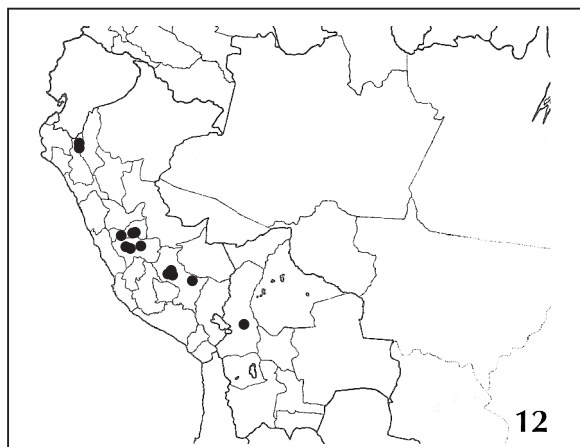
DISTRIBUTION AND ECOLOGY: Widespread along the Amazon slope of the Cordillera Oriental de los Andes from northern through southern Peru to western Bolivia, epiphytic in dry scrub forest, seasonally dry, and Andean forest, at 1700-2300 m altitude. Flowering from June to November.

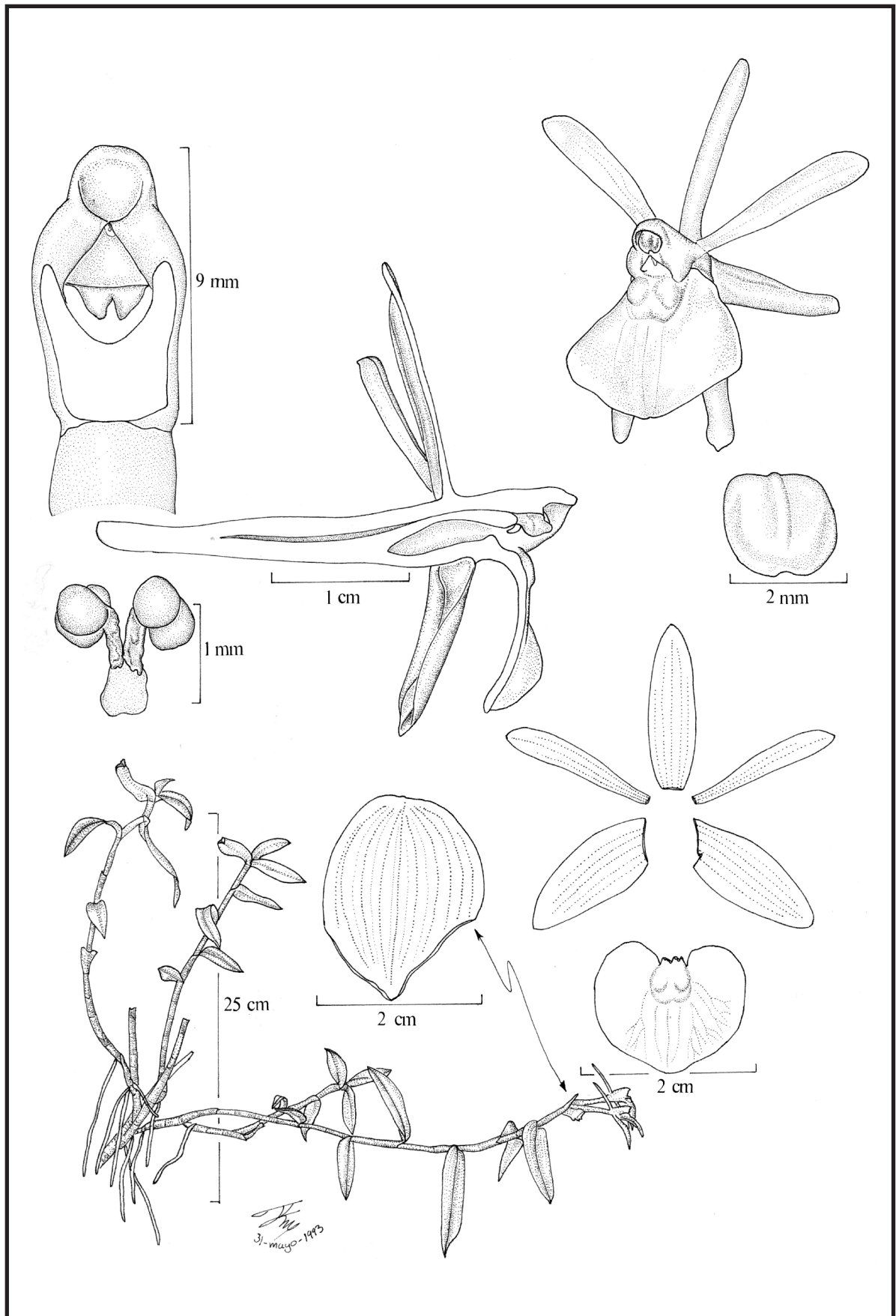
RECOGNITION: *Epidendrum erica-moroniae* belongs to the Epidendropsis Group, Gracillimum Subgroup characterized by the sympodial, caespitose, relatively small plants with non-thickened stems, long, paniculate inflorescence, delicate small flowers, and long, narrow, sub-coriaceous leaves. The species is recognized by the relatively tall plants, 20-30 cm tall, linear, wide leaves 3.5-8.0 x 0.2-0.5 cm, densely many-flowered inflorescence, with racemes 1.5-3.5 cm long, with up to 17 flowers per raceme, flowers greenish brown turning purple-pink, sepals spreading, 4.6-5.0 mm long, spreading, petals linear, and the ovary forming a elongate vesicle, and the lip entire. *Epidendrum gracillimum* has plants to 15-20 cm tall, leaves linear-lanceolate, 4.5-6.5 x 0.2-0.3 cm, a laxly few-flowered inflorescence racemes 0.8-1.5 cm long, with 3-5 flowers, petals filiform, and the lip clearly 3-lobed, the mid-lobe itself bilobulate, short and wide. *Epidendrum schlimii* Rchb.f. has plants with shorter, narrower leaves, 1-4[5.5] x 0.2-0.3 cm, inflorescence laxly few-flowered, racemes 2-flowered up to 5 cm long, dorsal sepals strongly reflexed, parallel to the ovary, and petals filiform. *Epidendrum rolfeanum* F.Lehm. & Kraenzl. has plants 12-18 cm tall, leaves acicular, 4-11 x 0.1-0.2 mm, inflorescence composed of racemes 0.5-1.5 cm long, with 3-6 flowers, the flowers purple-brown, the disc of the lip greenish yellow, dorsal sepal strongly reflexed, and petals filiform. *Epidendrum cryptorhachis* Hágsater has by far the tallest plants in the group, to 43 cm tall, leaves 2.8-10 x 0.4-0.8 cm, linear-lanceolate, a densely many-flowered inflorescence with multiple racemes parallel to the rachis, with up to 14 flowers per raceme, lip 3-lobed, petals narrowly spatulate. *Epidendrum physophorum* Schltr. has small plants, 10-15 cm tall, leaves 3.5-6.0 x 0.15-0.3 cm, racemes of the inflorescence with 5-6 flowers, dorsal sepal strongly reflexed and parallel to the ovary, petals filiform and the ovary with a very prominent inflated vesicle.

CONSERVATION STATUS: DD. Data Deficient.

ETYMOLOGY: In honor of Erica del Carmen Morón Campodónico (1951-), of Lima, Perú, avid orchid grower, photographer and propagator, she has travelled extensively photographing orchids, and supplied the first digital images of this species, and many others to the authors. She has a conservation project for the endangered *Psychopsis sanderæ* (Rolfe) Lückel & Braem.

REFERENCES: Bennett, D. E. & E. A. Christenson, 1993, *Epidendrum gracillimum* in E. A. Christenson (ed.) Orchids of Perú, **Icon. Orchid. Peruv.** t. 48. Hágsater, E., 2006, *Epidendrum cryptorhachis* in E. Hágsater & L. Sánchez S. (eds.) The Genus *Epidendrum*, Part 5; **Icon. Orchid.** 8: t. 823. Hágsater, E., & E. Santiago, 2016, *Epidendrum xerophyticum* in E. Hágsater & L. Sánchez S. (eds.) The Genus *Epidendrum*, Part 11; **Icon. Orchid.** 15(2): t. 1600. Vásquez, R., P. L. Ibsich, A. Ley & C. Nowicki, 2004, *Epidendrum gracillimum* pro parte, in R. Vásquez Ch. & P. L. Ibsich (eds.), **Orchids of Bolivia**, 2: 122.





EPIDENDRUM FALCIVESICICAULE Hágsater & E.Santiago

Plate 1581

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

Type: ECUADOR: Sucumbios; Mpio. Santa Bárbara, ca. 57 km de la desviación de la carretera Tulcán Ibarra hacia La Bonita, 1950 m, col. 8 July 1990, **Eric Hágsater, Calaway H. Dodson, Daniel Rubio & Nixon Revelo 10577**. Holotype: pressed cult. 21 May 1997, AMO! Isotypes: COL! QCNE! MO! Clonotypes: pressed cult. 3 December 1990, AMO! Flowers in spirit, pressed 31 May 1993, AMO! (illustration & photograph voucher).

Similar to *Epidendrum vesicicaule* L.O.Williams but the inflorescence elongate, two-flowered, with two imbricating spathes, sepals larger, lip widely cordiform, with a pair of globose white calli mounted on a fleshy, spongy, rounded platform, column straight, clinandrium-hood slightly incurved.

Epiphytic, sub-caespitose, somewhat repent, sub-erect **herb**, 15-27 cm tall. **Roots** 0.7-1.5 mm in diameter, basal, scarce, from the basal internodes of the stems, fleshy, thin. **Stems** 10-20 x 0.1-0.22 cm, cane-like, terete, thin, sub-erect, the base covered by sheaths 1.5 cm long, tubular, non-foliar, appressed in live plant, infundibuliform in herbarium specimens, minutely striated; blade 2.8-5.3 x 0.8-1.3 cm, lanceolate, acute, minutely apiculate, apical margin papillose, sub-coriaceous, apple green, unmarked. **Spathes** 2, 24-26 x 7-10 mm, obliquely hemi-elliptic, conduplicate, nearly circular when spread, tubular towards the base, partly imbricated, similar in size and shape. **Inflorescence** 5-7 cm long, apical, flowering only once, two-flowered; peduncle 4.5 cm long, sub-terete, nearly totally hidden by the spathaceous bracts; rachis ca. 3 mm long, very short. **Flowers** 2, simultaneous, resupinate, pale apple green, with the calli white; fragrance seminal, weak in the evening. **Floral bracts** 1 mm long, very short, triangular, acute, embracing, hidden within the spathes. **Ovary** 24 mm long, straight, thin at the base, slightly dilated behind the perianth, with 6 narrow ribs, margin somewhat finely dentate, bent lengthwise and appressed to the ovary, and only visible under microscope. **Sepals** spreading, free, 5-veined, apex rounded, margin entire, revolute; dorsal sepal 18 x 5.8 mm, oblong; lateral sepals 18 x 7 mm, narrowly elliptic, slightly oblique. **Petals** 18 x 2.5 mm, spreading, free, linear-oblancoleolate, 3-veined, slightly convex, apex rounded, margin entire, spreading. **Lip** 15.0 x 17.5 mm, united to the column, convex, widely cordiform, apex sub-obtuse, margin entire, spreading; bicallose, the calli elongate, prominent, on a thickened, rounded platform, white, spongy, and multiple, visible veins in the blade. **Column** 9 mm long, straight, thick, apex oblique. **Clinandrium-hood** prominent, fleshy, margin entire, somewhat surpassing the body of the column, slightly incurved. **Anther** sub-reniform, 4-celled, with a low dorsal rib. **Pollinia** 4, sub-spherical, somewhat laterally compressed; caudicles soft and granulose, somewhat longer than the pollinia. **Rostellum** apical, slit. **Lateral lobes of the stigma** small, occupying 1/5 of the stigmatic cavity. **Nectary** short, penetrating 1/6" of the ovary, inflated, unornamented. **Capsule** not seen.

OTHER SPECIMENS: ECUADOR: Hort. Ecuagenera, 8 III 2003, *Medina sub Hágsater 13865*, AMO! **Zamora-Chinchipe:** from Yangana to Valladolid, 2000-2700 m, 24 III 1986, *Hirtz 2324*, MO! **COLOMBIA:** Barbacoas, *Andrés s.n.*, K! **PERU:** **Junin:** Tarma, Utcuyacu, 1900 m, 20 II 1948, *Woytkowski 35353*, AMES! UC! *ibid.* Agua Dulce, 2400 m, 12 III 1948, *Woytkowski 35455*, AMES! MO! UC!

OTHER RECORDS: ECUADOR: Without locality, *Hirtz 8005*, slide, AMO! **COLOMBIA:** Without locality data, *Uribe, s.n.* digital image, AMO! **PERU:** Without locality, *Morón s.n.*, digital photo, AMO!

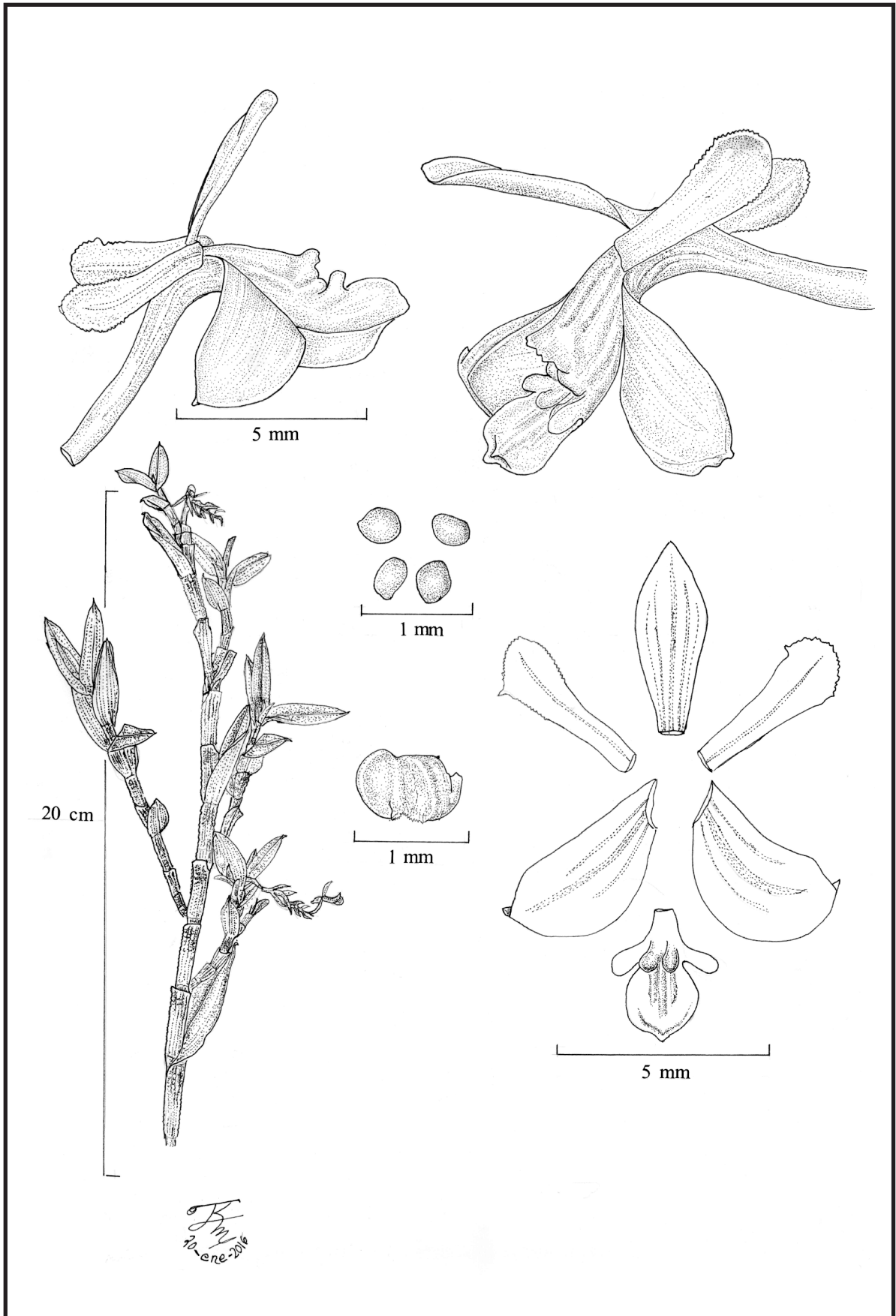
DISTRIBUTION AND ECOLOGY: Ranging along the Cordillera Oriental of the Andes in Colombia, Ecuador and Peru, epiphytic in tropical rainforest, at 1900-2700 m altitude. Flowering from February to July.

RECOGNITION: *Epidendrum falcivesicicaule* belongs to Megalospathum Group characterized by the caespitose but branching habit, many-leaved stem, fleshy, oblique leaves, a short, few flowered, raceme subtended by large semi-ovate spathaceous bracts, resupinate flowers, the column more or less united to the lip, and the Vesicicaule Subgroup which has a sympodial habit, numerous leaves throughout the stems, the leaves concolor, green, lip cordiform and bicallose. The species is recognized by the lanceolate leaves 2.8-5.3 x 0.8-1.3 cm, inflorescence elongate and two-flowered, with two imbricated spathes, flowers apple green, the calli and disc of the lip white, sepals 18 mm long, lip widely cordiform, with a pair of calli, elongate, prominent, on a thickened, rounded platform, white, spongy; growing at 1900-2700 m altitude; column straight, clinandrium-hood slightly incurved. *Epidendrum vesicicaule* has narrowly lanceolate leaves 3.5-6.0 x 0.4-0.8 cm, an orbicular-cordiform lip with a pair of small, parallel, low calli, extended into an elliptic fleshy, thickened disc which nearly reaches the apex of the lip; column slightly upturned towards the basal half, clinandrium-hood fleshy, truncate, straight; growing at 3500-3800 m altitude. *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 shorter linear-lanceolate leaves, 25 x 8 mm, a two-flowered inflorescence, flowers smaller, greenish white, sepals 13 mm long, lip sub-orbicular, with a pair of short, globose calli. *Epidendrum cardiomorphum* Hágsater & E.Santiago has somewhat larger leaves, 4.0-8.6 cm long, a single spathe subtending the inflorescence, pale green, membranaceous flowers, the lip cordiform with multiple thickened veins and two small calli, laterally compressed, the disc with three very thin, low, parallel ribs which disappear before the middle of the lip, and with multiple radiating thickened veins; clinandrium-hood slightly surpassing the body of the column, fleshy, straight. *Epidendrum platypetalum* Hágsater has narrowly ovate leaves, 0.5-4.6 x 0.3-1.1 cm, sessile inflorescence subtended by a single spathe, reddish green flowers, the disc of the lip with small calli and white ribs, growing at 2500 m altitude. *Epidendrum pachyclinium* Hágsater & E.Santiago has obliquely lanceolate leaves, 2.8-8.3 x 0.6-1.1 cm, a sessile, two-flowered inflorescence, sepals 17 mm long, the lip orbicular-cordiform with 2 laminar calli and 2 short, inconspicuous ribs; column arched, clinandrium-hood very fleshy, prominent and slightly upturned. *Epidendrum lagotis* Rchb.f. has ovate-elliptic leaves 2-6 x 1.0-2.3 cm, a single obliquely semi-ovate spathe, sepals 17-25 mm long, petals widely spatulate, 21 x 8 mm, and the lip orbicular, with a pair of small sub-spherical calli.

ETYMOLOGY: from the Latin *falci*, false, *vesi-* vesicle and *caule*, stem, in reference to the inflated leaf sheaths clearly visible in pressed material, and the fact that this species has been consistently mis-identified as *E. vesicicaule*, the rarer species from higher altitude.

REFERENCE: Dodson, C.H., & D.E. Bennett, 1989, *Epidendrum miradoranum*, in *Orchids of Peru*, **Icon. Pl. Trop.** ser. II, 1: pl. 66. Dodson, C.H., & R. Vásquez, 1989, *Epidendrum chaparensis* in *Orchids of Bolivia*, **Icon. Pl. Trop.** ser. II, 4: pl. 327. Hágsater, E. 2001, *Epidendrum platypetalum*, in E. Hágsater & L. Sánchez S. (eds.) *The Genus Epidendrum*, Part 3, **Icon. Orchid.** 4: t. 472. Santiago, E., & E. Hágsater, 2015, *Epidendrum lagotis*, in E. Hágsater & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 11, **Icon. Orchid.** 15(1): t. 1532. Hágsater, E., & E. Santiago, 2016, *Epidendrum cardiomorphum*, in E. Hágsater & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 11, **Icon. Orchid.** 15(2): t. 1574. Hágsater, E., & E. Santiago, 2016, *Epidendrum pachyclinium*, in E. Hágsater & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 11, **Icon. Orchid.** 15(2): t. 1590. Santiago, E., & E. Hágsater, 2016, *Epidendrum vesicicaule*, in E. Hágsater & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 11, **Icon. Orchid.** 15(2): t. 1599.





EPIDENDRUM FARALLOCERUUM Hágater & E.Santiago

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

Type: COLOMBIA: Valle del Cauca: Mun. Cali, Cordillera Occidental, Los Farallones de Cali, 0.5 km al Norte de "Los Lagos", el nacimiento del Río Pichinde, 3600 m, 29 January 1977, **Daniel Hartman 816**. Holotype: CUVCI (illustration voucher).

Similar to *Epidendrum angeloglossum* Hágsater & Dodson but the inflorescence shorter, rachis zig-zag, smaller flowers yellow (vs. apple green, the sepals tinged purple), the lateral lobes of the lip obliquely oblong, apically rounded (vs. obliquely ovate, apically acute).

Epiphytic, branching **herb**, more than 20 cm tall (only an apical part of the stem seen). **Roots** not seen. **Stem** branching, cane-like, terete, thin, the main stem not seen, branches 3.5-7.0 x 0.2-0.5 cm; base covered by sheaths 5-7 mm long, tubular, non-foliar, rugose. **Leaves** 5-7, distributed throughout the branches, alternate, sub-erect; sheaths 1-2-cm long, tubular, striated, rugose; blade 1.1-4.0 x 0.5-1.0 cm, lanceolate, sub-acute, apiculate, sub-coriaceous, apical margin crenate. **Spathes** lacking. **Inflorescence** 2.0-2.5 cm long, apical, flowering only once, racemose, nutant, few-flowered; peduncle 7 mm long, terete, thin, without bracts; rachis 13-18 mm long, thin, laterally compressed, zig-zag. **Floral bracts** 2-5 mm long, the basal ones nearly as long as the ovary, triangular-lanceolate, acuminate, embracing. **Flowers** 8, simultaneous, resupinate, small, yellow; fragrance not registered. **Ovary** 6 mm long, terete, thin, smooth, not inflated, unornamented. **Sepals** partly spreading, acute, margin entire, spreading; dorsal sepal 4.5 x 1.7 mm, free, narrowly obovate, 5-veined; lateral sepals 4.7 x 2.3, obliquely united to the column, elliptic, 3-veined, minutely apiculate, oblique. **Petals** 4 x 1.4 mm, free, reflexed, oblanceolate-spatulate, the apex rounded, 1-veined, apical margin erose, spreading. **Lip** 2.5 x 2.5 mm, united to the column, 3-lobed, base cuneate, margin entire, spreading; bicallose, the calli small, globose; disc provided with 3 ribs that disappear towards the middle of the mid-lobe; lateral lobes 0.8 x 0.5 mm, obliquely oblong, apex rounded; mid-lobe 1.9 x 1.7 mm, orbicular, minutely apiculate. **Column** 3 mm long, thick, apex slightly turned upwards. **Clinandrium-hood** short, margin erose. **Anther** reniform, 4-celled. **Pollinia** 4, obovoid, laterally compressed; caudicles not seen. **Rostellum** apical, slit. **Lateral lobes of the stigma** not seen. **Nectary** not seen. **Capsule** not seen.

DISTRIBUTION AND ECOLOGY: Presumably endemic to Colombia. Known presently only from the Farallones de Cali, eastern flank of the Cordillera Oriental in southern Colombia; epiphytic in montane rain forest, at 3600-3650 m altitude. Flowering from January to July.

OTHER SPECIMENS: COLOMBIA: Valle del Cauca: Los Farallones, cuenca del Río Pance, vert. oriental cuchilla de Hato Viejo, 3650 m, 27 VII 1991, *Calderon 55C*, COL!

RECOGNITION: *Epidendrum farallocernuum* belongs to the Andean Group, Cernuum Subgroup, characterized by the cane-like, subapically branched stems, the branches much shorter than the main stem, coriaceous to sub-coriaceous leaves and fleshy flowers. The species is recognized by the lanceolate leaves, short nutant inflorescences 2.0-2.5 cm long, rachis zig-zag, flowers simultaneous, floral bracts nearly as long as the ovary, flowers yellow, small, sepals 4.5-4.7 mm long, petals oblanceolate-spatulate, with the apical margin erose; lateral lobes of the lip very small, obliquely oblong, the mid-lobe orbicular with the apex minutely apiculate. *Epidendrum angeloglossum* has a 5 cm long inflorescence, rachis straight, successive flowers, the floral bracts shorter than the ovary, flowers apple green, sepals tinged purple, sepals 14.0-16.5 mm long, margin entire and revolute; lateral lobes of the obliquely ovate, mid-lobe not apiculate. *Epidendrum zipaquiranum* Schltr. is vegetatively very similar, but is found on the Cordillera Oriental of northern Colombia, has 4-10 cm long inflorescences, rachis straight, up to 35 successive, greenish yellow flowers, sepals 8-11 mm long, and the lateral lobes of the lip are obliquely semi-ovate, and the mid-lobe widely ovate.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From, the Spanish *Farallón*, cliff, and Latin *cernuus*, nodding, in reference to the Farallones de Cali, where this species was collected, and the subgroup to which this species belongs.

REFERENCES: Hágsater, E., & C.H. Dodson, 2009, *Epidendrum angeloglossum*, in E. Hágsater & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 8, **Icon. Orchid.** 12: t. 1205. Santiago, E., & E. Hágsater, 2009, *Epidendrum zipaquiranum*, in E. Hágsater & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 8, **Icon. Orchid.** 12: t. 1300.



Authors: E. Hágsater & E. Santiago

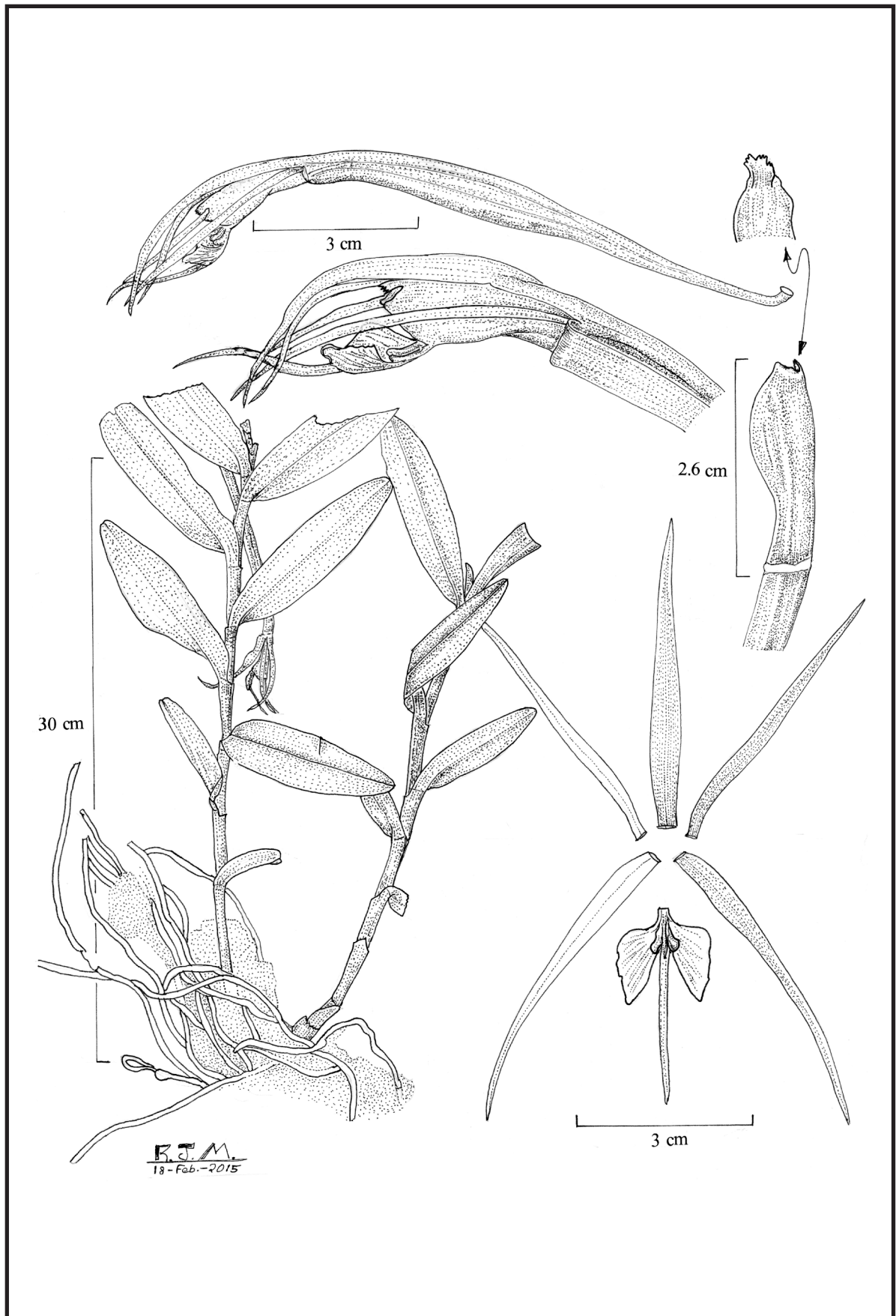
Illustrator: R. Jiménez M.

Editors: E. Hágsater & L. Sánchez S.

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ICONES ORCHIDACEARUM 15(2). 2016. Plate 1582



EPIDENDRUM FUCHSII Hágsater & L.Sánchez

Plate 1583

EPIDENDRUM FUCHSII Hágsater et L. Sánchez, sp. nov.

Type: COLOMBIA: Chocó: Bocana Río Baudó, margen opuesta y diagonal a Pizarro; al principio de la Trocha, 0 m, 16 II 1967, **Hans Peter Fuchs, L. Zanella & J. H. Torres 21865**. Holotype: S! (illustration voucher). Isotypes: COL 137838! MO 3131852! U 447826!

Similar to *Epidendrum buenaventurae* F. Lehm. & Kraenzl., but the leaves wider, distributed throughout the stems, ovary and column longer; body of the capsule located towards the apex of the pedicelate ovary.

Epiphytic, sympodial, caespitose **herb**, 40-64 cm tall including the inflorescence. **Roots** 3-4 mm in diameter, basal, fleshy. **Stems** 22-55 x 0.3-0.5 cm, simple, cane-like, terete at the base, laterally compressed towards the apex, straight, green. **Leaves** 8-9, distributed throughout the stems, erect, coriaceous, green; foliar sheaths 2-3 cm long, tubular; blade 6.5-16 x 1.4-3.5 cm, lanceolate to elliptic, (length:width = 3-5:1), apex unequally bilobed, minutely mucronate, venation and dorsal keel evident, green. **Spathe** lacking. **Inflorescence** apical, racemose to pluriracemose, producing one flower at a time and flowering several years from the same stem; peduncle 3-4 mm long, reduced, rachis 7-9 mm long. **Floral bract** 3-5 x 1.0-1.5 mm, much shorter than the ovary, triangular, acuminate, embracing. **Ovary** 80-118 x 3.0-5.0 mm, much longer than the apical leaf, terete, inflated towards the apex, unornamented. **Flowers** successive, one at a time from each raceme, resupinate, sepals and petals lime-yellow tinged dorsally violet; lip and column greenish white; fragrance not registered. **Sepals** 54 x 5 mm, spreading, linear-lanceolate, acuminate, 7-9 veined, with numerous secondary veins, margin entire, revolute. **Petals** 50 x 2 mm, partly spreading, linear-lanceolate, acuminate, 3-5-veined, with numerous secondary veins, margin entire, spreading. **Lip** 35 x 16 mm, united to the column, 3-lobed, margin entire; bicallose the calli laminar, prominent; lateral lobes 13 x 7 mm, semi-ovate, rounded, exterior margin undulate: mid-lobe 33 x 1.8 mm, ensiform, acute, margin entire. **Column** 26 mm long, straight to slightly arching, dilated towards the apex. **Clinandrium-hood** slightly surpassing the apex of the column, shallowly dentate. **Anther** obovoid, 4-celled. **Pollinia** 4, semi-obovoid, laterally compressed, caudicles soft and granulose, similar in length to the pollinia; viscidium semi-liquid, transparent. **Rostellum** apical, slit. **Lateral lobes of the stigma** reduced. **Nectary** penetrating about half the length of the pedicelate ovary, unornamented. **Capsule** the body located at the apical half of the ovary.

OTHER SPECIMENS: COLOMBIA: Chocó: Area of Baudó. On left bank of Río Baudó, about 1.5 km upstream of estuary, slightly above estuary of Estero del Medio, 0 m, 11 II 1967, *Fuchs 21848*, COL! MO!

DISTRIBUCIÓN & ECOLOGY: Species endemic to Colombia. Known presently only from the Department of Chocó, in the area of Baudó, at sea level; in the fluvial-marine zone of influence (estuaries). As per the bioclimatic conditions of the type locality, this species could be present in other localities along the Pacific platform of Colombia (biogeographic Chocó), a region dominated by trees of the genera *Brosimum*, *Carapa*, *Campnosperma*, *Avicenia*, *Virola*, *Otoba*, *Cedrela*, *Prioria*, *Coussapoa*, *Jacaranda* and shrubs of *Bellucia*, *Tovomita*, *Miconia*, *Palicourea*, *Eschweilera*, *Grias*, as well as herbs of *Heliconia*, *Calathea*, *Anthurium*, *Renealmia*. The zone reaches a temperature of 26°C and annual rainfall of 6706 mm. (Reina-Rodríguez, 2016 *com. pers.*) Flowering from February to March.

RECOGNITION: *Epidendrum fuchsii* belongs to the Nocturnum Group which is characterized by the sympodial, caespitose plants, cane-like, non-fusiform stems, successive flowers on a short, racemose or pluri-racemose inflorescence, without spathaceous bracts, and large, star-shaped flowers, with similar sepals and petals; the flowers are mostly indistinguishable in shape. The species is recognized by the green plants, with 6-9 leaves distributed throughout the stems, ovary 80-118 mm long, sepals 54 mm long, column 26 mm long, body of the capsule located at the apical half of the pedicelate ovary, sepals and petals lime-yellow tinged dorsally violet, lip and column greenish-white. It is similar to *Epidendrum buenaventurae* which grows along the Pacific lowlands in Mexico (Isthmus of Tehuantepec), Honduras, Nicaragua, Costa Rica, Panama and Colombia, from sea level to 1420 m altitude, has green leaves occasionally tinged purple dorsally, flowers smaller, sepals and petals 25-46 mm long, ovary short, 35-50 mm long, column short, 9-17 mm long, sepals and petals greenish brown to yellowish green, lip and column white, the mid-lobe of the lip rarely yellow; body of the capsule at the center of the pedicelate ovary. *Epidendrum nocturnum* Jacq. is widely distributed in the Neotropics, has terete stems, leaves distributed along the apical 2/3 of the stem, ovary 50-70 mm long, column 15-20 mm long, sepals and petals yellowish green, lip and column white; the body of the capsule in the middle and occupying nearly the total length of the pedicelate ovary. *Epidendrum pseudonocturnum* Hágsater & Dodson grows along the Pacific slope of the Andes in Colombia and Ecuador, has terete stems, leaves distributed throughout the length of the stems, ovary 60-80 mm long, column 18-22 mm long, and the body of the capsule located at the middle of the pedicelate ovary. *Epidendrum cocornocturnum* Hágsater, endemic to the Cordillera Central of Colombia has 4-5 leaves, 2.8-4.6 cm wide, distributed along the apical half of the stem, ovary 60-90 mm long, sepals 64-90 mm long, body of the capsule at the middle of the pedicelate ovary, sepals and petals green, lip white at the base and green towards the apex, column white.

CONSERVATION STATUS: DD. Data deficient. Presently the population of *E. fuchsii* is found in extensive areas which maintain their vegetation, which would suggest that its populations are not under any apparent threat. Notwithstanding, the effects of mining and selective lumber extraction in that area could be of consequence to the populations.



ETYMOLOGY: In honor of Hans Peter Fuchs-Eckert (1928-1999), Swiss botanist and pteridologist, who collected the type.

REFERENCES: Hágsater, E. & C. H. Dodson, 1993, *Epidendrum pseudonocturnum* in E. Hágsater & G. A. Salazar (eds.), *The Genus Epidendrum*, Part 1, **Icon. Orchid. 2**: t. 178. Hágsater, E., 1999, *Epidendrum cocornocturnum* in E. Hágsater, L. Sánchez S. & J. García-Cruz (eds.), *The Genus Epidendrum*, Part 2, **Icon. Orchid. 3**: t. 326. Sánchez S. L. & E. Hágsater, 2008, *Epidendrum buenaventurae* in E. Hágsater & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 7, **Icon. Orchid. 11**: t. 1107.

Authors: E. Hágsater & L. Sánchez S.

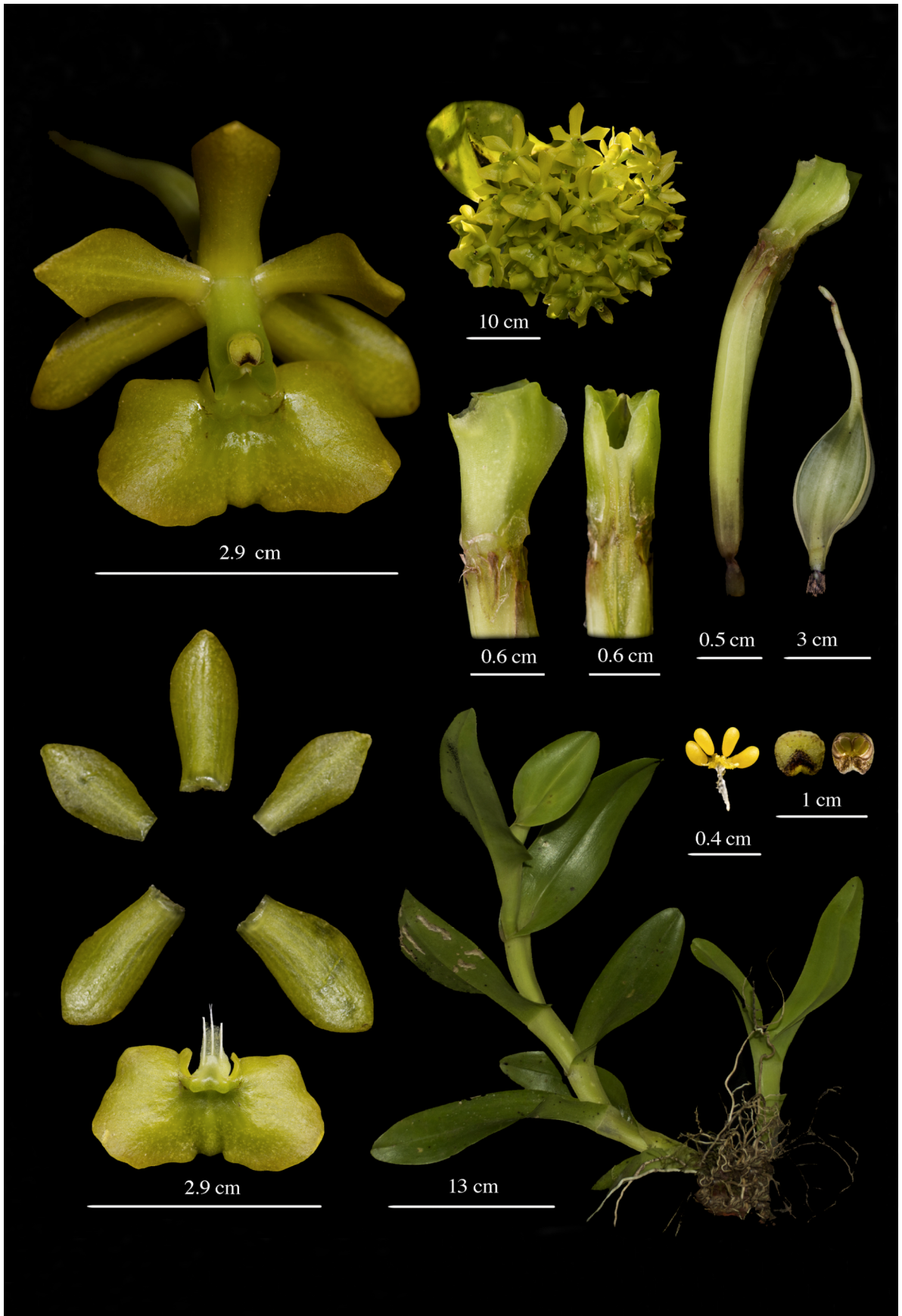
Illustrator: R. Jiménez M.

Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 15(2). 2016. Plate 1583



EPIDENDRUM HARDINGII J.S.Moreno, Hágsater & L.Sánchez

EPIDENDRUM HARDINGII J.S.Moreno, Hágsater et L.Sánchez, *sp. nov.*

Type: COLOMBIA: [Antioquia]: Jardín, Támesis, 2111 m, 5°38'24.1"N 75°49'13.3"W, 22 September 2015, **Juan Sebastián Moreno 276**. Holotype: ICESI! (color plate, digital images of pretype AMO!)

Similar to *Epidendrum pseudapaganum* D.E.Benn. & Christenson but the leaves wider (10-17 x 5-6 cm vs. 12 x 4.5 cm) flowers larger (sepals 20-21 mm long vs. 10-12 mm long), petals obovate (7-8 mm wide vs. elliptic-obovate, 3 mm wide), lip callus a single fleshy, elevated plate, with a shallow sinus at the apex (vs. a pair of fleshy, divergent laminar calli).

Epiphytic, sympodial, caespitose **herb**, 48-52 cm tall including the inflorescence. **Roots** 1.0-2.8 mm in diameter, basal, fleshy, thin. **Stems** 38-40 x 2.5-2.8 cm, simple, cane-like, ancipitose, flexuous. **Leaves** 5-7, spreading throughout the stem, coriaceous; foliar sheaths 3-6 x 2.5-2.8 cm, laterally compressed, ancipitose, smooth; blade 10-17 x 5-6 cm, elliptic, apex unequally bilobed to obtuse, coriaceous, with a prominent dorsal keel, margin entire, spreading. **Spathe** lacking. **Inflorescence** 10-12 cm long, apical, from the mature stem, sub-corymbose, sessile. **Floral bracts** much shorter than the ovary. **Ovary** 37 x 5 mm, terete, unornamented, inflated towards the apex. **Flowers** 30-35, resupinate, simultaneous, green; fragrance sweet during the morning. **Sepals** 20-21 x 8-9 mm, spreading, free, elliptic, obtuse, coriaceous, glabrous, 7-veined, margin entire, revolute; lateral sepals oblique. **Petals** 17-20 x 7-8 mm, spreading, obovate-obtrullate, rounded, margins entire, spreading, 5-veined. **Lip** 15 x 29 mm, united to the column, bilobed, margin entire, slightly undulate; callus a single fleshy, elevated plate, with a shallow sinus at the apex; disc of the lip fleshy, especially below the callus, with a drop of nectar at the base, in front and below the callus, with a wide central rib running the apical sinus of the lip and forming a wide, rounded mucro; lobes of the lip 15 x 14 mm, sub-orbicular-quadrate, the corners rounded, lip widest at the apical 2/3. **Column** 12 x 6 mm, straight, except for the apical 1/3 which is slightly arched upwards. **Clinandrium-hood** short, margin undulate. **Anther** sub-spherical, 4-celled, minutely papillose. **Rostellum** apical, slit. **Capsule** 115 x 30 mm, ellipsoid, the body located at the apical half of the fruit, with a long pedicel; pedicel 50 mm long, body 60 x 30 mm, apical neck 5 mm long.

OTHER SPECIMENS: None seen.

OTHER RECORDS: None seen.

DISTRIBUTION AND ECOLOGY: Known presently only from Jardín, Antioquia on the road to Támesis, 2111 m altitude, epiphytic at edge of wet forest. Flowering in September.

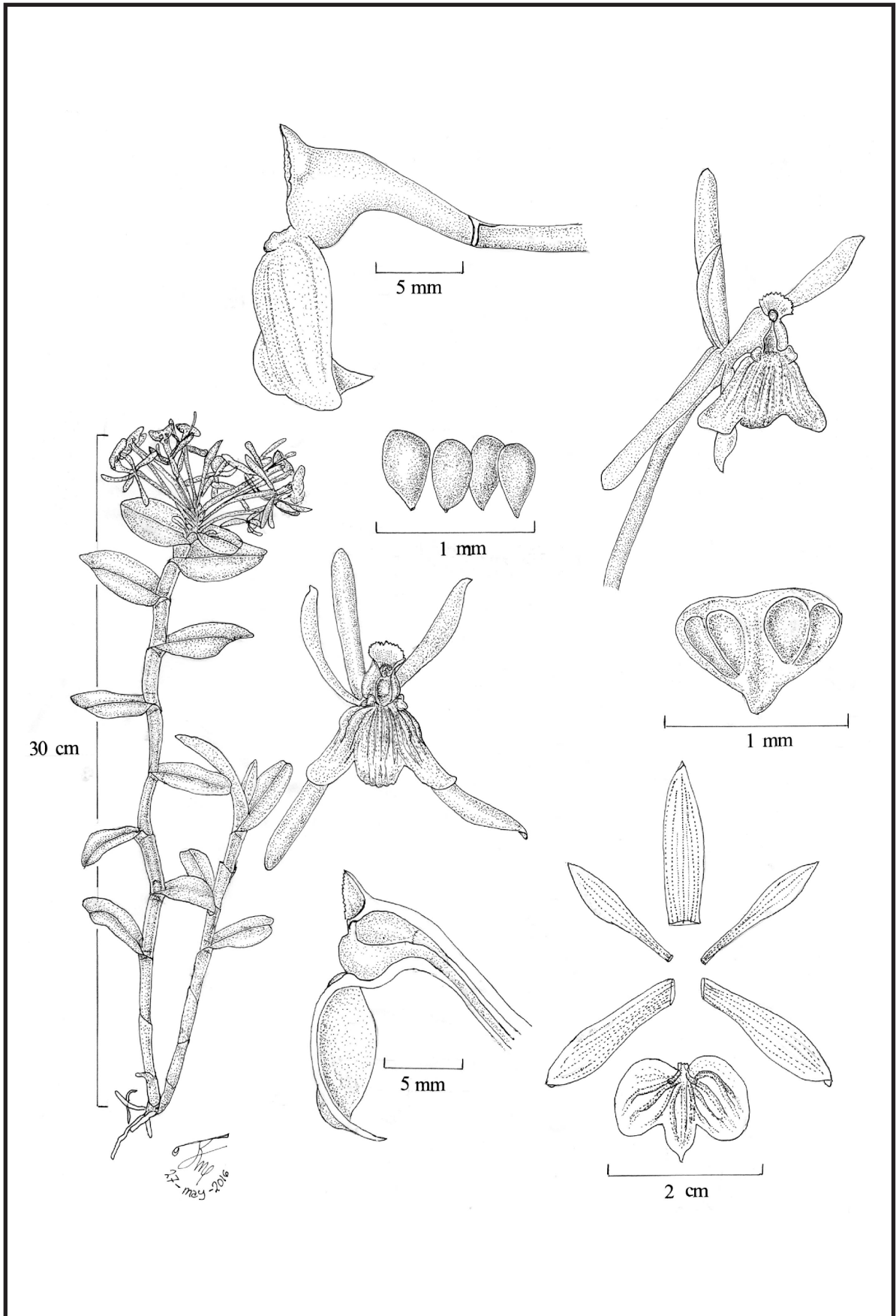
RECOGNITION: *Epidendrum hardingii* belongs to the Difforme Group which is characterized by the caespitose, sympodial plants, fleshy light green to glaucous leaves, apical inflorescence without any spathe, sessile, rarely with a short peduncle, one-flowered to corymbose, fleshy, and flowers green to yellowish-green, rarely white. The species is recognized by the ancipitose stems, leaves large and wide (10-17 x 5-6 cm), a 30-35-flowered inflorescence, sepals 20-21 mm long, the lip bilobed, with a long wide, fleshy mid-rib running to the apical sinus, and the single callus, a fleshy, elevated plate, with a shallow sinus at the apex, with a drop of nectar in front on the disc of the lip. It is similar to *Epidendrum pseudapaganum* from southern Ecuador and Peru, which has narrower leaves (12 x 4.5 cm), smaller flowers, sepals 10-12 mm long, an entire, reniform lip without any evident ribs, bicallose, calli separate and divergent. *Epidendrum apaganum* Mansf., from the basin of the Río Marañón in Peru, has shorter plants, (16-26 cm tall), shorter, narrower leaves (2.5-7.0 x 2.5-4.5 cm), a 1-5-flowered inflorescence, flowers smaller (sepals 14-16 mm long), petals linear-oblancoolate, lip 3-lobed, with numerous thickened veins. *Epidendrum fusagasugaense* E.Parra, Hágsater & L.Sánchez, endemic to the departments of Cundinamarca, Huila and Santander in Colombia, on the Eastern Cordillera has leaves shorter and wider, (8-12 x 2.5-7.3 cm), inflorescence 3-5-flowered, sepals are similar in size, but the ovary is longer (47-60 mm long), lip also has a thickened, fleshy mid-rib, but the disc is thickened and dark green, and bicallose, the calli separate and sub-globose. *Epidendrum melistagum* Hágsater from Mexico shares a single callus, and the drop of nectar on the disc of the lip, but is otherwise smaller overall.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In honor of Patricia Ann Harding (1954-), botanist and grower of orchids, accredited judge of the American Orchid Society; she worked closely with Dr. Carl L. Withner, especially on Laelinae. Patricia was the first to see this plant in flower in the forest.

REFERENCES: Bennett, D.E., Jr. & E.A. Christenson, 1998, *Epidendrum pseudapaganum* in Christenson, E. A. (edit). **Icon. Orchid. Peruv.** Pl. 468. Hágsater, E., 1990, *Epidendrum melistagum* in E. Hágsater & G.A. Salazar (eds.) **Icon. Orchid.** 1: t. 35. Parra, E., E. Hágsater & L. Sánchez S., 2013, *Epidendrum fusagasugaense* in E. Hágsater & L. Sánchez S. (eds) **Icon. Orchid.** 14: t. 1430.





EPIDENDRUM IANG-RONDONII M.Bonilla, Hágater & L.Sánchez

Plate 1585

EPIDENDRUM IANG-RONDONII M. Bonilla, Hágsater et L. Sánchez, *sp. nov.*

Type: COLOMBIA: Meta: Mpio. Acacias, 3°58'52.42"N, 73°45'5.35"O, 500 m de altitud, relicto de bosque cerca de la ciudad y al río Acacias. 31 December 2012, **Miguel Macgayver Bonilla-Morales 175**. Holotype: VALLE! (illustration voucher). Isotipo: CUVCI!

Similar to *Epidendrum macarense* Hágsater & L. Sánchez but the stems laterally compressed, inflorescence with an evident rachis, lip 3-lobed, calli elongate and compressed.

Epiphytic, sympodial, caespitose, erect **herb**, 30-35 cm tall including the inflorescence. **Roots** 0.7-1.5 mm in diameter basal, fleshy, thin. **Stems** 15-21 x 0.6-1.2 cm, simple, cane-like, laterally compressed. **Leaves** 4-8, distributed throughout the stem; foliar sheath 1.4-3.6 cm long, tubular, laterally compressed, smooth; blade 2.2-6.5 x 1-2 cm, oblong-elliptic, coriaceous, green, apex generally rounded, sometimes emarginate, margin entire. **Spathe** lacking. **Inflorescence** apical, from the mature stem, sub-corymbose, flowering only once; peduncle 0.7 cm long, rachis very evident 4.3 cm long. **Floral bracts** 3-12 mm long, shorter than the ovary, progressively shorter towards the apex of the rachis, ovate, acute to acuminate. **Flowers** 12-14, simultaneous, resupinate, pale green; fragrance nocturnal, sweet. **Ovary** 25-33 x 2-3 mm, terete, slightly inflated. **Sepals** 19-21 x 5-6 mm, spreading, glabrous, free, elliptic, acuminate, 5-7-veined, two of them evident, sub-coriaceous, margin entire, revolute; lateral sepals oblique. **Petals** 17-20 x 3.0-3.3 mm, partly spreading, linear-lanceolate, acuminate, 3-veined, with additional secondary veins, margin entire, spreading. **Lip** 10-12 x 12-17 mm, united to the column, 3-lobed, base cordate, margin entire; bicallose, the calli small, elongate, laterally compressed, divergent; disc with radiating, thickened veins; lateral lobes 7-9 x 10-11 mm, ovate-elliptic, entire; mid-lobe 4.3-4.5 x 2.7-3.0 mm, ovate, cuspidate, separated from the lateral lobes by shallow sinuses. **Column** 9-12 mm long, arching along the apical half, obconical. **Clinandrium-hood** prominent, conical, margin dentate. **Anther** 4-celled. **Pollinia** 4, obovoid. **Rostrum** sub-apical, slit. **Lateral lobes of the stigma** prominent, half as long as the stigmatic cavity. **Nectary** penetrating more than 1/3 of the length of the pedicelate ovary. **Capsule** not seen.

OTHER SPECIMENS: None seen.

OTHER RECORDS: COLOMBIA: META: Mun. Acacias. 500 m, alrededores de la ciudad, 29 XII 2013, *Bonilla 620*, digital image, AMO!

DISTRIBUTION AND ECOLOGY: Known presently only from Colombia, Meta, found in the municipality of Acacias, in the lower foot-hills of the eastern slope of the Cordillera Oriental of the Andes, at 500 m altitude. Rainfall in the area is between 3000-4000 mm, average temperatures above 24°C. Following Holdridge (1987) the vegetation is a transition between humid tropical forest (Bh-T) and dry tropical forest (Bs-T), with marked rainy/dry seasons, in wooded grassland, and phorophytes of the Fabaceae family. Flowering from December to February, coinciding with the lowest rainfall period (120 mm/month).

RECOGNITION: *Epidendrum iang-rondonii* belongs to the Difforme Group which is characterized by the caespitose, sympodial plants, fleshy light green to glaucous leaves, apical inflorescence without the spatheous bract, sessile, rarely with a short peduncle, one-flowered to corymbose, fleshy, and flowers green to yellowish-green, rarely white. The species is recognized by the laterally compressed stems, sub-corymbose inflorescence with an evident 4.3 mm long rachis, 12-14 flowers, lip 3-lobed, disc with thickened radiating veins, calli elongate, divergent, column arching towards the apex. It is similar to *Epidendrum macarense*, also endemic to Colombia, and Meta, but that species has acaespitose stems, a compact corymbose inflorescence, rachis reduced, ca. 9 flowers, and an entire lip. In the Difforme Group there are other species with radiating thickened veins on the disc of the lip, but they all have a reduced rachis which is generally covered by the base of the apical leaf.

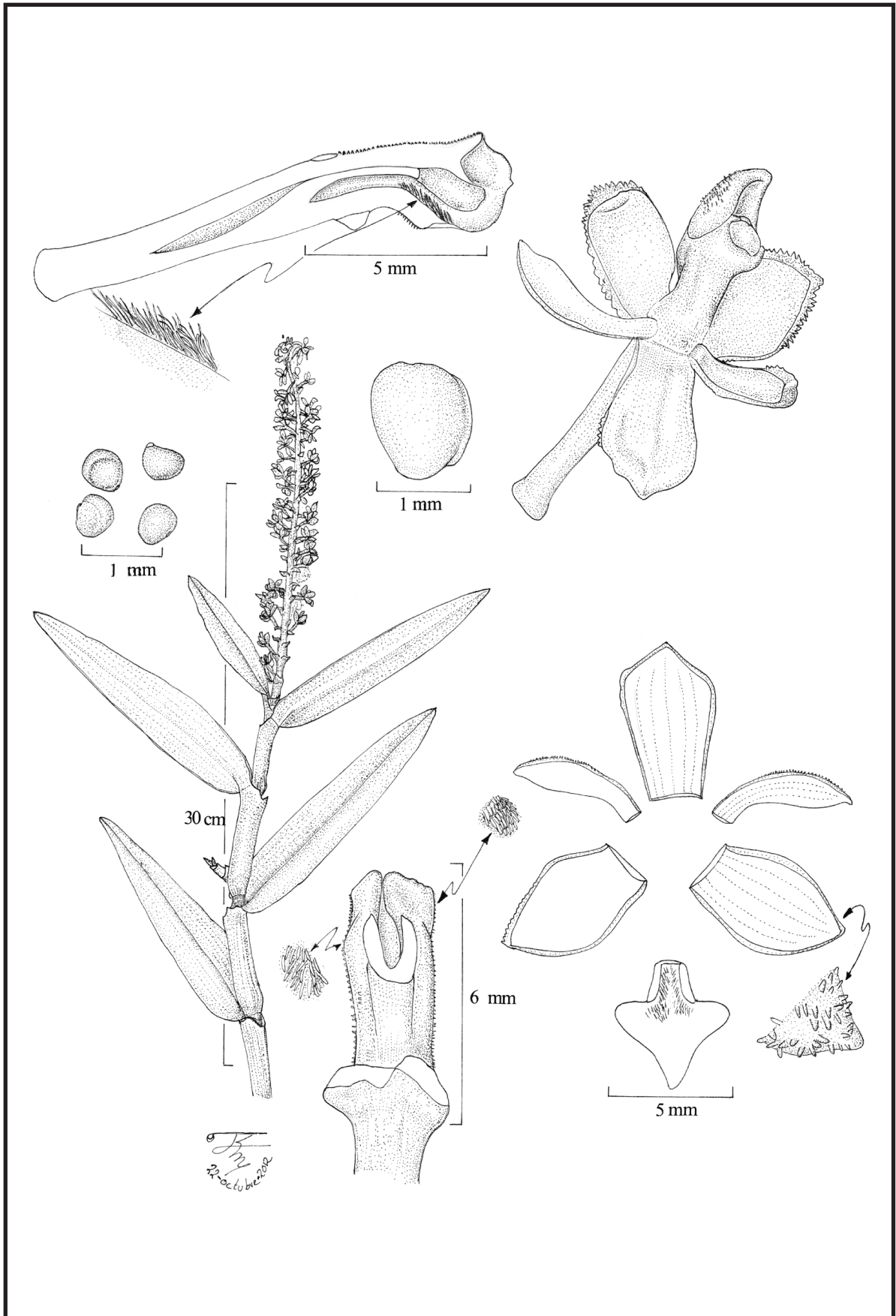
CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In honor of Professor Iang Schroniltgen Rondón Barragán (1984-), of the Universidad del Tolima, and expert in animal immunology and microbiology, who through his teaching of biological sciences has promoted the process of scientific thinking amongst his students.

REFERENCES: Jiménez, C., 2011, **Orquídeas del departamento del Meta**, pg. 72, Colombia. Bonilla, M., J. Mosquera & J. Otero, 2013, **Distribución espacial de la orquideoflora del Meta**. Memorias VII Congreso Colombiano de Botánica, 51 pp. Bonilla, M., O. Hernández, J. Mosquera, & J. Otero, 2013. **Inventario orquideológico del piedemonte andino, sierra y sabana del Meta**. Memorias VII Congreso Colombiano de Botánica. 546 pp. Calderón-González, A., M. Casas-Bello, E. Barrera-Torres, L.E. Caballero, N.H. Ospina-Calderón, V.E. Calero, S.S. Cordero, O.E. Meneses, C.I. Pinzón & G.A. Reina-Rodríguez, 2013, **Guía ilustrada de las plantas epífitas encontradas en el tramo Araguañey-Banadía. Arauca-Casanare**. Proyecto Oleoducto Bicentenario. Fotosíntesis. Sicim Colombia. 116 pp. Holdridge, L., 1987, **Ecología basada en zonas de vida**. IICA. San José. Costa Rica. 216 pp. Hijmans, R.J., S. Cameron, J. Parra, P. Jones, A. Jarvis & K. Richardson, 2014, **WorldClim**. Available from: <http://www.worldclim.org/current> (accessed 15 January 2016). Sánchez, L.S., 2004, *Epidendrum macarense* in E. Hágsater & L. Sánchez Saldaña (eds.), *The Genus Epidendrum*, Part 4, **Icon. Orchid.** 7: t. 757.



Authors: M. Bonilla, E. Hágsater & L. Sánchez S. Illustrator: R. Jiménez M. Photo: M. Bonilla Editors: E. Hágsater & L. Sánchez S.
Herbario AMO México, D.F. MÉXICO ICONES ORCHIDACEARUM 15(2). 2016. Plate 1585



EPIDENDRUM IONOSTACHYUM Hágsater, E.Santiago & García-Revelo

Plate 1586

EPIDENDRUM IONOSTACHYUM Hágsater, E.Santiago et García-Revelo, *sp. nov.*

Type: COLOMBIA: Chocó: San José del Palmar; vereda Las Amarillas, carretera Boquerón-Río Blanco, 2300 m, 2 April 1996, **Nestor Paz, F. Castro, A. Fajardo & P. Grant 530**. Holotype: AMO! (illustration voucher). Isotype: CUVC!

Similar to *Epidendrum palaciosii* Hágsater & Dodson, but the flowers pale purple in the ventral surface, greenish dorsally, petals falcate, apex acute, lip deltate, base truncate.

Terrestrial, monopodial, branching **herb**, ca. 100 cm tall. **Roots** not seen. **Stems** branching when mature, cane-like, laterally compressed erect, straight, the main stem ca. 80 x 1.0 cm, the branches shorter. **Leaves** numerous, distributed throughout the main stem and the branches, articulate, alternate, sub-coriaceous; sheath 56 x 12 mm, tubular, minutely striated, rugose; blade 7.5 x 1.7-3.5 cm, elliptic-lanceolate, acute, margin entire, spreading. **Spathes** lacking. **Inflorescence** ca. 20 cm long, apical, racemose, erect, flowering only once, cylindrical, densely many-flowered; peduncle 7 mm long, sub-terete, thin; rachis 19.3 cm long, terete, straight. **Floral bracts** 5 mm long, shorter than the ovary, triangular, short-acuminate, embracing. **Flowers** 50-60, simultaneous, non-resupinate, fleshy, dorsally green, ventrally pale purple, column entirely purple; fragrance not registered. **Ovary** 8 mm long, green, terete, thin, longitudinally striated. **Sepals** 6 x 4 mm, free, spreading, slightly concave, apex acute, 5-veined, dorsally densely echinate, margin entire, spreading; dorsal sepal obovate; lateral sepals elliptic. **Petals** 5.7 x 1.3 mm, spreading, oblanceolate, falcate, apex acute, dorsally puberulent, margin entire, spreading. **Lip** 4.0 x 4.6 mm, united to the column, entire, deltoid, base truncate, apex acute, very fleshy, ecallose and without ribs, pubescent in front of the column, cymbiform in natural position, embracing the apex of the column in natural position, dorsally puberulent, margin entire, spreading. **Column** 5 mm long, straight, thin at the base, gradually thickened towards the apex, apex with a pair of rounded teeth, surface minutely puberulent. **Clinandrium-hood** reduced, margin entire. **Anther** 4-celled, ovoid, apex truncate. **Pollinia** 4, ovoid, unequal in shape: caudicles and viscidium not seen. **Rostellum** sub-apical, slit. **Lateral lobes of the stigma** not seen. **Nectary** short, without penetrating the ovary, puberulent in front of the stigmatic cavity, reclining inwards. **Capsule** not seen.

OTHER SPECIMENS: COLOMBIA: Chocó: Mun. San José del Palmar, carretera límite departamental-La Florida, 2163 m, 13 VII 2011, *García-Revelo 28*, CUVC! digital image, AMO! **Risaralda:** Mun. Pueblo Rico, Cerro Montezuma, ca. 2500 m, 31 IX 2006, *Arévalo 668*, COL!

OTHER RECORDS: COLOMBIA: without locality, *C. Uribe s.n.*, digital images, AMO!

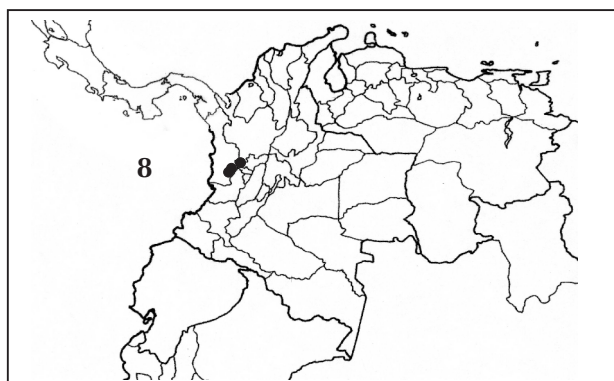
DISTRIBUTION AND ECOLOGY: presently known only from the upper Pacific slope of the Cordillera Occidental in south-central Colombia, at 2163-2500 m altitude. Flowering from July to April.

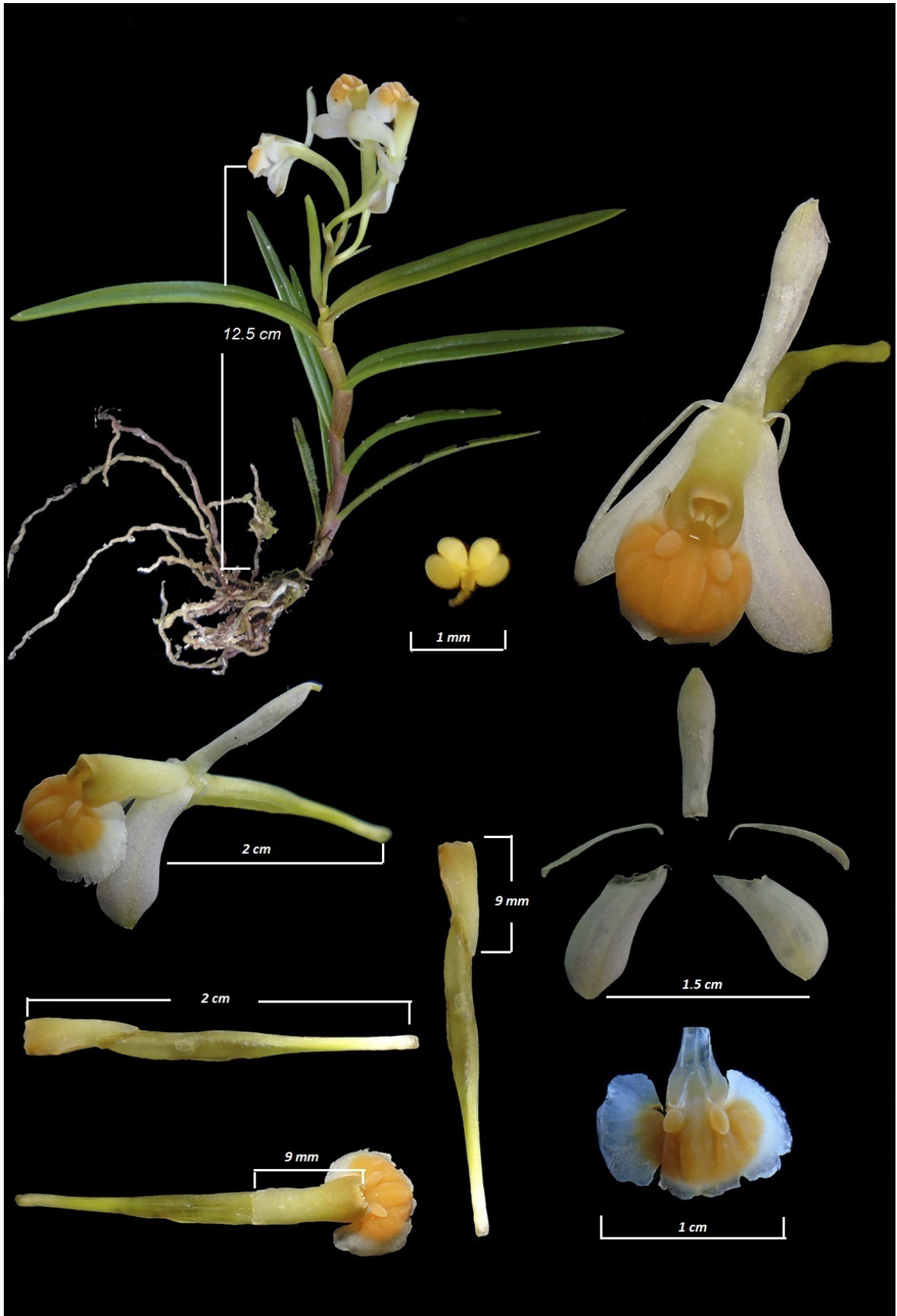
RECOGNITION: *Epidendrum ionostachyum* belongs to the Macrostachyum Group, which is characterized by the monopodial plants with sub-apical branching, rugose leaf sheaths, racemose inflorescence, and fleshy flowers with a simple, conduplicate lip embracing the column, and the nectary pubescent to papillose in front of the stigmatic cavity. The species is recognized by the cylindrical, densely many-flowered inflorescence, flowers pale purple ventrally, dorsally green, sepals 6 mm long, dorsally echinate, petals falcate, apex acute, lip deltate, base truncate. *Epidendrum palaciosii* Hágsater & Dodson is vegetatively very similar, but the flowers are gray, sepals 8 mm long, dorsally muricate, petals oblanceolate, apex rounded, and the lip is cordiform. *Epidendrum polyanthostachyum* Hágsater, E.Santiago & García-Revelo has cylindrical inflorescences, green flowers with turn yellow with age, sepals 10 mm long, dorsally glabrous, petals oblong-oblanceolate and the lip widely deltate, base cordate. *Epidendrum borealistachyum* Hágsater & E.Santiago has pyramidal inflorescences, the flowers laxly distributed along the rachis, flowers grayish lilac, lip white, sepals 8-9 mm long, unornamented, petals oblong with the apex rounded, not falcate.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek *ιον*, violet, and *σταχυς*, ear of corn, in reference to the purple flowers and the Macrostachyum Group where this species belongs.

REFERENCES: Hágsater, E., & C. H. Dodson, 1993, *Epidendrum palaciosii* in E. Hágsater & G.A. Salazar (eds.) *The Genus Epidendrum*, Part 1, **Icon. Orchid.** 2: t. 171. Hágsater, E., E. Santiago & D. García-Ramírez, 2013, *Epidendrum polyanthostachyum* in E. Hágsater & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 10, **Icon. Orchid.** 14: t. 1477. Hágsater, E. & E. Santiago, 2015, *Epidendrum borealistachyum* in E. Hágsater & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 11, **Icon. Orchid.** 15(1): t. 1505.





EPIDENDRUM JOAQUIN-ORTIZII Hágsater, E.Santiago & M.Salas

EPIDENDRUM JOAQUIN-ORTIZII Hágsater, E.Santiago et M.Salas, *sp. nov.*

Type: PERU: Amazonas: Leimebamba, Albazo-Cordillera de Yasgolga, 3000 m, October 2015, **Marcos Salas 125**.

Holotype: USM! (plate and photo voucher).

Similar to *Epidendrum llactapataense* D.E.Benn. & Christenson but the inflorescence very short (1.7 cm vs 5-6 cm tall), flowers white with the disc of the lip orange-yellow (vs. flowers ochre-yellow, concolor), flowers larger, sepals 10-11 mm long (vs. 6 mm long).

Epiphytic, caespitose, sympodial **herb** 13 cm tall. **Roots** 1 mm in diameter, basal, thin, white. **Stems** 6.5 x 0.4 cm, erect, simple, short, cane-like, terete at base, to laterally compressed above, thin. **Leaves** 9, distributed throughout the stem, spreading, straight; sheath 5-10 x 4 mm; blade 2.2-6.3 x 0.4-0.5 cm, linear, acute, coriaceous, margin entire, spreading. **Spathe** lacking. **Inflorescence** 1.7 cm long, apical, racemose, erect, laxly few-flowered; peduncle 0.7 cm long, thin, straight, without any bracts; rachis 1.0 cm long, thin, terete. **Floral bracts** 4.5-8.0 mm long, much shorter than the ovary, narrowly triangular, long-acuminate, embracing. **Flowers** 3, simultaneous, resupinate, white, the column green, the apex yellow-green, and the disc of the lip orange-yellow; fragrance reminiscent of grapefruit, citric. **Ovary** 20 mm long, terete, thin, slightly inflated ventrally along the apical half, forming an incipient vesicle. **Sepals** free, apex rounded, 3-veined, margin entire, revolute; dorsal sepal 13.0-13.5 x 4.1-4.5 mm, narrowly oblanceolate, reflexed in mature flowers; lateral sepals 13.1-14.0 x 4.5-5.0 mm, partly spreading, obliquely united to the column, obovate-elliptic, strongly oblique. **Petals** 12.5-13.0 x 1.0-1.1 mm, free, parallel to the lateral sepals, filiform, somewhat wider towards the rounded apex, 1-veined, margin entire, spreading. **Lip** 7 x 10 mm, united to the column, convex, entire, reniform, base deeply cordate, margin erose; bicallose, the calli prominent, globose, somewhat divaricate; disc fleshy thickened into a wide mid-rib, and two lesser ribs in front of the calli from which 4 branches radiate. **Column** 9 mm long, straight, thin, somewhat thickened progressively towards the truncate, apex. **Clinandrium-hood** short, margin entire. **Anther** not seen. **Pollinia** 4, lenticular; caudicles soft and granulose, shorter than the pollinia. **Rostellum** apical, slit. **Lateral lobes of the stigma** not seen. **Nectary** penetrating ½ of the ovary, slightly inflated, unornamented. **Capsule** not seen.

OTHER SPECIMENS: None seen.

OTHER RECORDS: None seen.

DISTRIBUTION AND ECOLOGY: Presently known from a single collection from Peru, Department of Amazonas, District of Leimebamba, east of Leimebamba, near El Albazo, on the road to Valle de los Chilchos, Cordillera Yasgolga, a branch of the Cordillera Oriental of the Andes, epiphytic in wet montane forest, at 2500-3000 m altitude. Flowering in October.

RECOGNITION: *Epidendrum joaquin-ortizii* belongs to the Epidendropsis Group, Gracillimum Subgroup characterized by the sympodial, caespitose, relatively small plants with non-thickened stems, long, paniculate inflorescence, delicate small flowers, and long, narrow, sub-coriaceous leaves. The species is recognized by the small plants (13 cm tall), short, racemose, few-flowered inflorescence, the white flowers with the disc of the lip bright orange-yellow and fleshy thickened with multiple ribs, sepals 10-11 mm long. *Epidendrum gracillimum* Rchb.f. has larger plants (20 cm tall), paniculate inflorescence, smaller flowers, sepals 5-0-6.3 mm long, and the lip with a single thickened mid-rib. *Epidendrum llactapataense* D.E.Benn. & Christenson has similar-sized plants (ca. 13 cm tall) but the inflorescence is paniculate, 5-6 cm long, with 10-12 concolor, ochre-yellow flowers, the sepals 6 mm long. *Epidendrum erica-moroniae* Hágsater & E.Santiago has much larger plants, 20-30 cm tall, a large paniculate inflorescence, 10-21 cm long, densely many-flowered, the flowers greenish brown, sepals 4.6-5.0 mm long, and the lip with 3 narrow, thin, parallel ribs. *Epidendrum schlimii* Rchb.f. is a delicate plant, paniculate inflorescences with 2-flowered racemes, the flowers pale red to purple-brown, lip entire, widely cordiform, and with a single, narrow mid-rib.

NOTE: The correct spelling for *Epidendrum "llactapataensis"* is *E. llactapetaense*, and according to the rules of botanical nomenclature is to be corrected, and is so found at IPNI, the International Plant Name Index.

CONSERVATION STATUS: DD. Data Deficient.

ETYMOLOGY: In honor of Joaquín Briones Ortíz (1947-), Cajamarca, Peru, a field guide for the third author, who has covered the southern areas of the Departments of Amazonas, Libertad, Cajamarca and San Martín. He is particularly interested in archaeology and conservation.

REFERENCES: Bennett, D. E., & E. A. Christenson, 2001, *Epidendrum llactapataense* in E. A. Christenson (ed.) Orchids of Peru, **Icon. Orchid. Peruv.** t. 641. Hágsater, E., & E. Santiago, 2016, *Epidendrum erica-moroniae* in E. Hágsater & L. Sánchez S. (eds.) The Genus *Epidendrum*, Part 11; **Icon. Orchid.** 15(2): t.1580.



Authors: E. Hágsater, E. Santiago & M. Salas

Plate: M. Salas

Photo: M. Salas

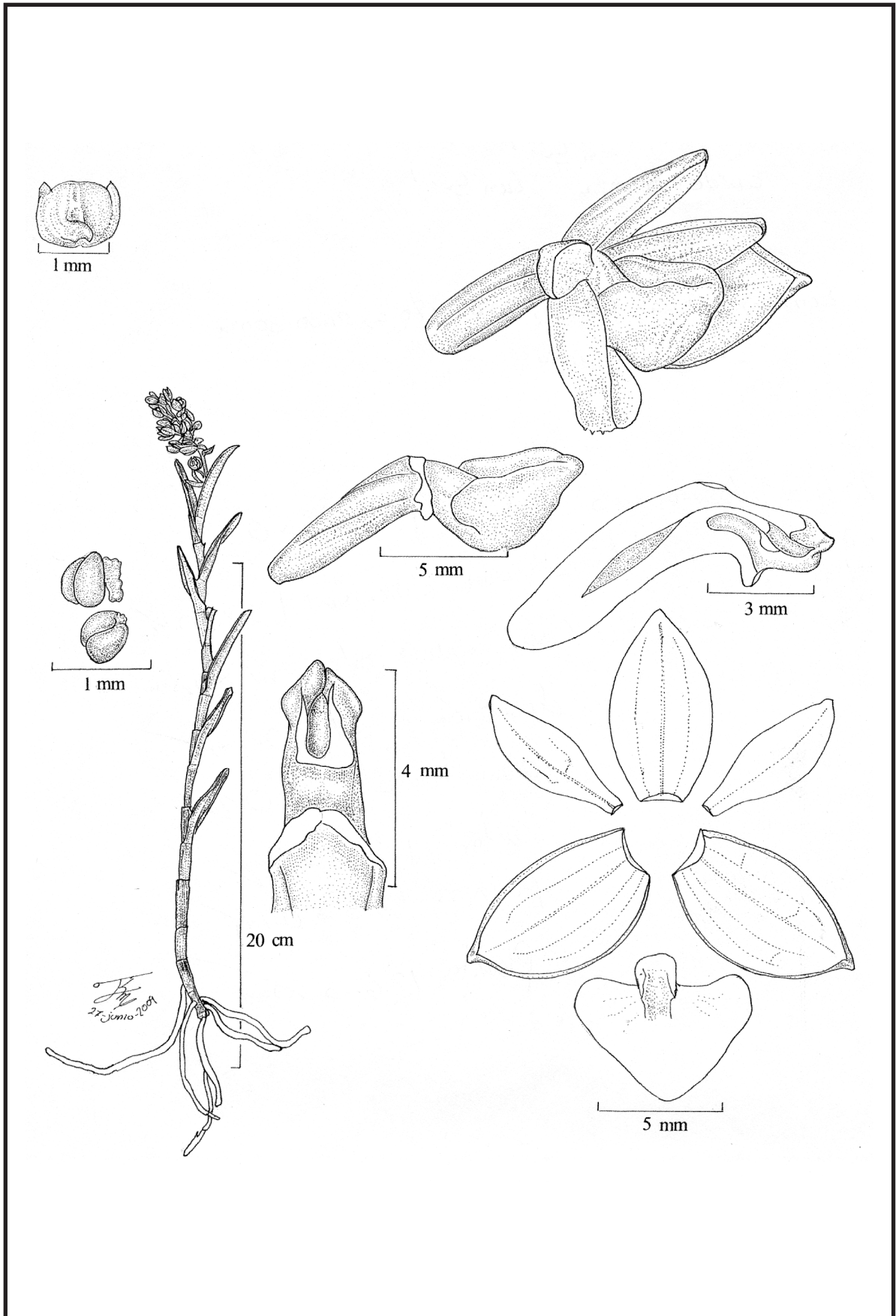
Editors: E. Hágsater & L. Sánchez S.

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ICONES ORCHIDACEARUM 15(2). 2016.

Plate 1587



EPIDENDRUM MINIATUM Schltr.

Plate 1522a

EPIDENDRUM MINIATUM Schltr., Repert. Spec. Nov. Regni Veg. Beih. 8:75.1921.

Type: ECUADOR: Loja: Zwischen Gestrüpp am Bodem, um Los Hornillos, Ost-Andes von Loja, 2600-3000 m, **Friedrich Carl Lehmann 6858**. Holotype: B, destroyed. Isotypes: AMES x3! K! L! NY! W! (illustration voucher). Synonym: *Epidendrum erytropachytilum* Hágsater & E.Santiago, Icon. Orchid. 15(1): t.1522. 2015. ECUADOR: Azuay: Oriente Border: Eastern Cordillera, between Oña and the río Yacuambí, 10 September 1945, *Francisco Prieto P-308*. Holotype: NY! (illustration, AMO!). Isotypes: AMES! S!

Terrestrial, monopodial, **herb** 14-120 cm tall, branching above. **Roots** 0.7-2.0 mm in diameter, basal, thin, fleshy. **Stems** branching towards the apex, erect ascending, cane-like, terete; primary stem 12-60 x 0.3-0.6 cm; branches 7-10 x 0.2-0.4 cm, produced from the sub-apical internodes of the previous stems; the base covered by sheaths 0.5-3.3 cm long, tubular, non-foliar, scarious. **Leaves** 11-17 or more on the primary stem, 6-9 on the branches, distributed throughout the stems, sub-parallel to the stem, slightly conduplicate at the base, partly imbricated, coriaceous, similar amongst themselves in size and shape; sheaths 1-2.4 cm long, tubular striated, verrucose, tinged reddish purple; blade 1.5-6 x 0.5-0.9 cm, lanceolate, acute, minutely apiculate with a low dorsal keel, margin crenate. **Spathe** lacking. **Inflorescence** 3.5-7 cm long, apical, racemose, erect, many-flowered, dense, a helicoid; peduncle 13-15 mm long, terete, thin, without bracts. **Floral bracts** 4.2-8.5 x 4-7 mm, prominent, as long as the ovary, widely triangular when spread, acute, cymbiform in natural position, green, the margins denticulate, tinged reddish. **Ovary** 7.5-8 mm long, short, sub-triquetrous, thick, not inflated, clearly striated, reddish. **Flowers** 10-15, non-resupinate, most open simultaneously, reddish pink, sepals internally reddish orange, ovary reddish pink; fragrance not registered. **Sepals** 6.2-7.5 x 3.5-4.5 mm, partly spreading, free, fleshy, elliptic, apex subacute, minutely apiculate, 3-4 veined, margin entire, spreading; lateral sepals slightly oblique. **Petals** 5.5-6.6 x 1.8-2.5 mm; partly spreading, free, oblanceolate, apex subacute, 1-veined, margin entire, spreading. **Lip** 4-5 x 5-7 mm, entire, widely sub-triangular when spread, in natural position embracing the apex of the column, base sub-cordate, very fleshy (especially towards the apex), margin entire; bicallose, the calli small, thin, elongate, parallel. **Column** 3.5-4 mm long, short, slightly arched at the base, and the arched upwards towards the apex which is blunt, without teeth. **Clinandrium-hood** reduced, margin entire. **Anther** ovoid, 4-celled. **Pollinia** 4, obovoid, unequal. **Rostellum** apical, slit. **Lateral lobes of the stigma** small, 1/3 de length of the stigmatic cavity. **Nectary** short, without penetrating the ovary, not inflated, unornamented. **Capsule** 18-20 x 8-9 mm, ellipsoid, perianth persistent; body 11-13 x 8-9 mm; pedicel 2-3 mm long, thin, short; apical neck 4-6 mm long.

OTHER SPECIMENS: ECUADOR: Loja: Páramo of Loja, 12000 ft, without collector, W-R 10877! Parque Nacional Podocarpus, Cajanuma, 3000 m, 14 XI 2008, *Werner 2718*, AMO x2! (spirit and digital image, AMO!, photo voucher). **Morona-Santiago:** Área de Bosque Vegetación Protectora Tambillo, 3050 m, 12 III 2001, *Linder Suin 848*, AMO! **BOLIVIA: La Paz:** Nor-Yungas, PN-ANMI Cotapata, sendero Chojllapata, 3420 m, 23 X 2009, *Jiménez 5497*, LPB. Ibid. 3294 m, 18 XI 2005, *Miranda 1003*, LPB. **PERU: Amazonas:** Bagua; Cordillera Colán NE of La Peca, ca. 10400 ft, 9 IX 1978, *Barbour 3437*, MO! SEL! **Pasco:** Oxapampa: Dist. Huancabamba. Parque Nacional Yanachaga-Chemillén, cercanías al macizo de la Cordillera Yanachaga, 3330 m, 24 IV 2007, *Monteagudo 13809*, AMO! HOXA, HUT, MO, USM. Ibid. La Colmena-trocha Erica, 3320 m, 19 VIII 2008, *Valenzuela 11560*, AMO! HOXA, HUT, MO, USM.

OTHER RECORDS: BOLIVIA: La Paz: Parque Nacional Cotapata y alrededores, http://fm2.fieldmuseum.org/plantguides/guide_pdfs/361-03.pdf photo 55 as *E. pachytilum* (seen 22 X 2014). **PERU: Pasco:** Parque Nacional Yanachaga Chemillén, *Becerra s.n.*, digital images, AMO!

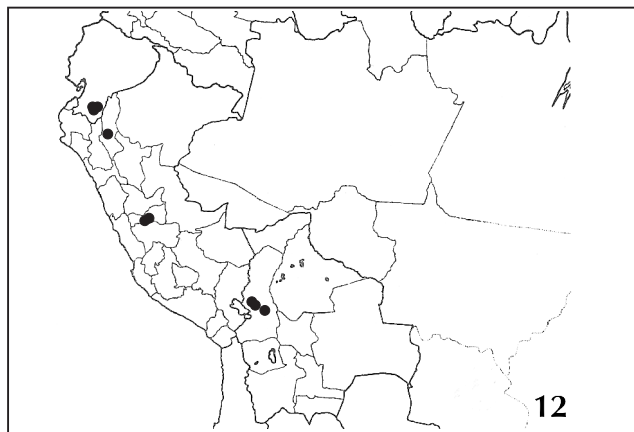
DISTRIBUTION AND ECOLOGY: Widespread along the upper slopes of the Cordillera Oriental of the Andes, from southern Ecuador through Peru to western Bolivia, terrestrial at 3000-3600 m altitude. Flowering from September to March.

RECOGNITION: *Epidendrum miniatum* belongs to the Pachytilum Group which is characterized by the monopodial plants with sub-apical branching, rugose leaf sheaths, by the relatively small leaves, parallel to the stem, the short, racemose, erect inflorescence, brightly colored flowers, yellow to orange to reddish pink, with an entire, conduplicate, lip embracing the column, without any pubescence in front of the stigmatic cavity nor on the lip, but generally with two small calli. The species is recognized by the small plants, up to 120 cm tall, leaves lanceolate, 1.5-6 x 0.5-0.9 cm, parallel to the stem and partly imbricating; inflorescence dense, with 10-15, reddish-pink flowers, including the ovary, sepals 6.2-7.5 x 3.5-4.5 mm; apex of column blunt, without teeth. *Epidendrum pachytilum* Kraenzl. is vegetatively very similar, but the inflorescence few-flowered, with up to 8, sulfur-yellow to green flowers, sepals ca. 11 mm long, and the lip widely triangular when spread, column with an uncinuate tooth each side at the apex. *Epidendrum incapachytilum* Hágsater & E.Santiago has taller plants, to 1.5 m tall, leaves 2.4-5.5 cm long, inflorescence generally lax, with 7-9 [12] flowers colored reddish orange to yellowish orange with the ovary green, sepals 8-9.4 x 4.2-5.1 mm, and the lip widely hemi-orbicular to widely triangular when spread, with a wide apicule, apex of the column with a pair of long straight teeth.

CONSERVATION STATUS: DD. Data deficient. Widespread and apparently frequent in various protected areas.

ETYMOLOGY: From the Latin *miniatus*, rust-red, in reference to the color of the flowers.

REFERENCES: Hágsater, E. & E. Santiago, 2015, *Epidendrum erytropachytilum* in Hágsater, E., & L.Sánchez Saldaña, (eds). The Genus *Epidendrum*, **Icones Orchid.** 15(1): t. 1522. Hágsater, E. & E. Santiago, 2015, *Epidendrum incapachytilum* in Hágsater, E., & L.Sánchez Saldaña, (eds). The Genus *Epidendrum*, **Icones Orchid.** 15(1): t. 1528. Jiménez Pérez, I., 2011, Registros nuevos de orquídeas de los bosques montanos de Bolivia, parte 2, **Ecología en Bolivia** 46(2): 62-66. Santiago, E., & E. Hágsater, 2015, *Epidendrum pachytilum* in Hágsater, E., & L.Sánchez Saldaña, (eds). The Genus *Epidendrum*, **Icones Orchid.** 15(1): t. 1549. Schweinf., C., 1943, *Epidendrum pachytilum* var. *pusillum*, **Bot. Mus. Leaff.** 11: 82. 1943. Schweinfurth, C., 1959, *Epidendrum pachytilum* in *Orchids of Peru, Fieldiana, Bot.* 30(2): 486-487.



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Illustrator: R. Jiménez M.

Photo: F. Werner

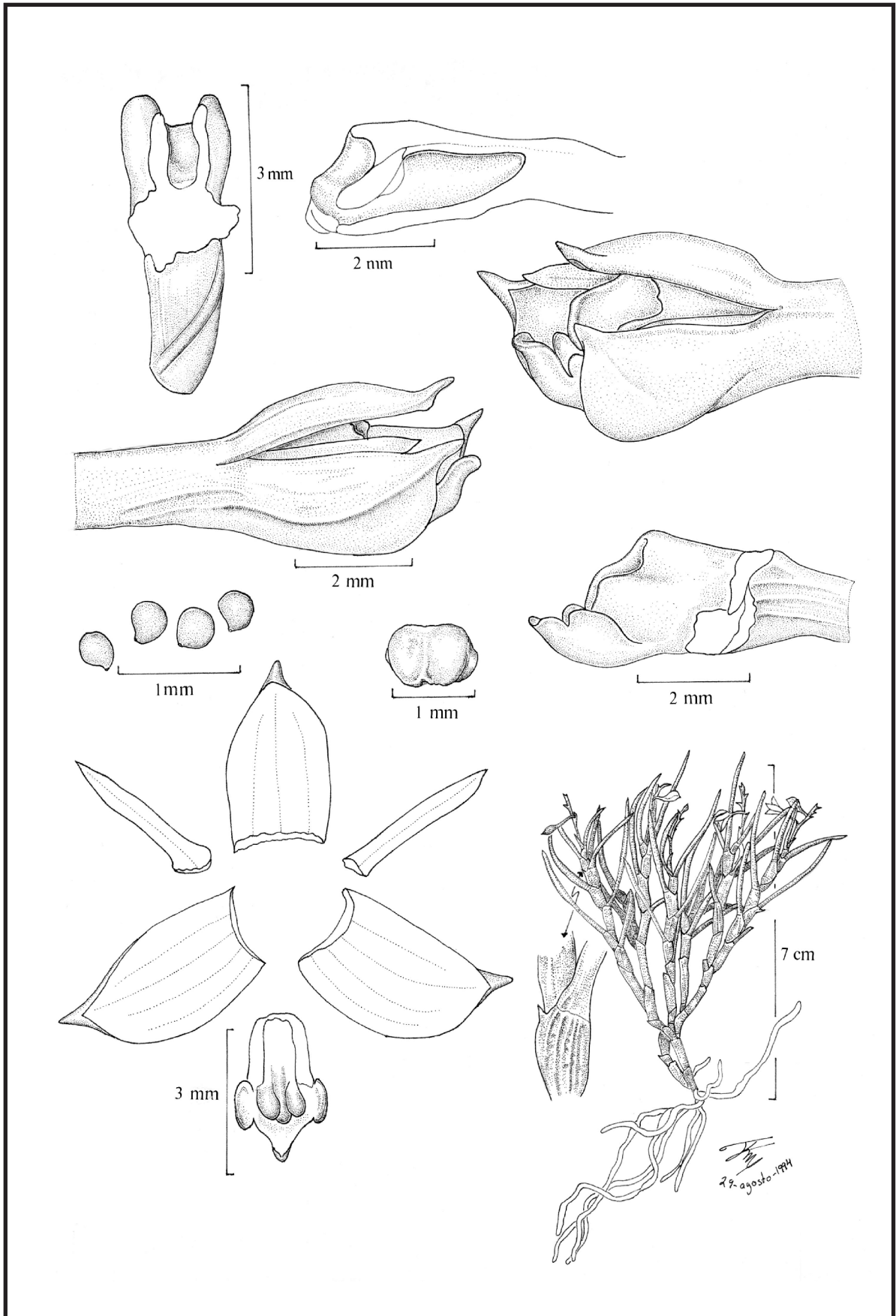
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ICONES ORCHIDACEARUM 15(2). 2016.

Plate 1522a



EPIDENDRUM MINUTIFLORUM C.Schweinf.

Plate 1588

EPIDENDRUM MINUTIFLORUM C.Schweinf., Bot. Mus. Leafl. 11: 100, tab. 11, fig. 1-9. 1943.

Type: PERU: Cajamarca: Prov. Cutervo; 10 km NW of Socota, ceja de la montaña, 3200 m, epiphytic, 10 December 1938, **Harvey E. Stork & O. B. Horton 10140**. Holotype: F 1051150! Isotypes: AMO 22236! K! UC 655808!

Epiphytic, sympodial, somewhat repent, short **herb**, 7-20 cm tall. **Roots** 0.5-1.0 mm in diameter, basal, scarce at the base of some upper stems, fleshy, filiform. **Stems** 2.5-8.5 x 0.1-0.3 cm, terete, arching, produced in succession from the basal internodes of the previous stem; sheaths to 11-17 mm long, scarious and striated when dry. **Leaves** 3-8 distributed along the upper 2/3 of the stems; sheaths 5-17 mm long, tubular, minutely striated and rugose, reddish; blade 17-53 x 0.8-1 mm, fleshy, terete, rigid, erect. **Spathe** single, 11-32 mm long, tubular, narrow, apex rounded; spathe is sometimes lacking in some stems. **Inflorescence** 3.0-4.5 cm long, apical from the mature stems, racemose, erect, lax-flowered, secund; peduncle frequently totally covered by the spathe. **Flowers** 7-19, successive, though several open at one time, non-resupinate, white to green-white, with the anther rose-purple, the disc sometimes with a few rose-purple dots. **Floral bracts** 2-3 mm long, much shorter than the ovary, narrowly triangular, acuminate. **Ovary** 3-4 mm, thin, terete, striated. **Sepals** 3.5-3.8 x 2.2 mm, partly spreading, free, ovate, acute, with a dorsal keel forming a prominent apicule, 3-veined, margin entire, spreading; lateral sepals oblique. **Petals** 3.0 x 0.5 mm, partly spreading, free, linear, slightly widened at the base, acute, 1-veined, margin entire, spreading. **Lip** 1.9 x 1.7 mm, united to the column, entire to incipiently 3-lobed, ovate-cordiform, concave in natural position, margin entire; disc bicallose, the calli prominent, parallel, with a thickened rounded short keel in between the calli, of about the same width as the calli; lateral lobes (when present) 0.5 x 1.0 mm, transversely oblong, apical lobe 1.0 x 1.2 mm, widely triangular, obtuse. **Column** 2.7 mm long, short, thick, the apex wide, with a pair of sub-quadrate, fleshy wings. **Clinandrium** short, margin entire. **Rostellum** near the middle of the column, slit. **Anther** reniform, 4-celled. **Pollinia** 4, obovoid, laterally compressed, caudicles shorter than the pollinia. **Nectary** short, without penetrating the ovary, wide, unornamented. **Capsule** not seen.

OTHER SPECIMENS: COLOMBIA: Nariño: SE of Ipiales towards La Victoria, 3000-3200 m, 22 II 1978, *Luer 2723*, SEL! **ECUADOR:** Without locality, hort. Mexico, 20 XII 1994, *Hirtz sub Hágsater 11431*, AMO! (illustration, AMO!) **Loja:** Yangana-Zumba road km 15-20 N slopes of Cordillera de Sabanilla, 2550 m, 31 XII 1980, *Balslev 1305*, AMES! Vilcabamba, Parque Nacional Podocarpus/ Reserva El Bosque, above San Pedro de Vilcabamba, 2350 m, 1 XII 1994, *Borgtoft 104140*, LOJA! Along river at Vilcabamba, 1500 m, 1 VII 1982, *Dodson 13298*, SEL! Nudo de Sabanilla, W slope on road to Yangana, 2600 m, 6 II 1985, *Harling 21687*, AMES! GB! QCA! Cordillera de Sabanilla, ca. 15 km S of Yangana, wet montane forest, 2480 m, 31 XII 1980, *Madison 7473*, SEL! (illustration voucher). Trails ca. 5 km ENE of San Pedro de Vilcabamba; Loma Solamanco to upper Quebrada Romerillos, 2300-2400 m, 1 XII 1994, *Ølgaard 105994*, QCA! **Morona-Santiago:** Macas to Guamote, 1800 m, 5 II 1987, *Hirtz 3146*, MO! **Tungurahua:** Baños-Tunguragua, 5500 ft, 10 VII 1878, *Lehmann s.n.*, W 69290! **Zamora-Chinchipec:** Old Loja-Zamora road, section just east of El Tiro Pass, 2750 m, 30 March 2008, *Werner 2520*, AMO! (illustration and digital image, AMO!).

OTHER RECORDS: ECUADOR: Morona-Santiago: Road Macas-Guamote, 2200 m, III 1999, *Hirtz 7221*, slide, AMO! **PERU: Lambayeque:** Tungula-Incahuasi, Region Lambayeque, 3100 m, *García s.n.*, digital image, AMO! (photo voucher). **Cajamarca:** Chota, *Huamantupa s.n.* digital image, AMO!

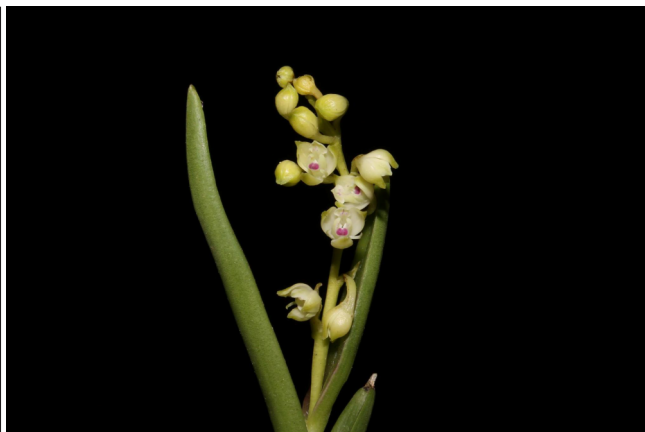
DISTRIBUTION AND ECOLOGY: Known from the Cordillera Oriental of the Andes from southern Colombia to northern Peru, in cloud elfin forest, wet montane forest, and riparian forest, at 1800-3200 m altitude. Flowering from December to July.

RECOGNITION: *Epidendrum minutiflorum* appears to belong to the Alpicolum Group and Subgroup which is characterized by the simple, cane-like stems, 1-2 long, narrow, spatheous bracts, fox-tail-like inflorescence and numerous flowers with fleshy lip, triangular mid-lobe and roundish lateral lobes. The species at first sight looks somewhat like *Epidendrum gracillimum* Rchb.f. & Warsz., but the inflorescence is simple, racemose, erect, straight, flowers secund, non-resupinate, white to green-white, the anther rose-purple, and the thickened mid-rib about equal to the calli, fits in very well with the alpicolum group, though this species seems to be in the process of losing the spathe and the lateral lobes of the lip. *Epidendrum gracillimum* and related species have flowers that are much more delicate, thinner, somewhat hyaline, and purplish, and the inflorescence is paniculate, arching, with short, several-flowered racemes. *Epidendrum schlimii* Rchb.f. is vegetatively very similar, but the inflorescence is paniculate to racemose, much longer than the stems, the peduncle flexuose provided with 2-3 ancipitose bracts. *Epidendrum rolfeanum* F.Lehm. & Kraenzl. has linear leaves 5-6 cm long, and a flexuose, paniculate inflorescence, filiform petals, lip reniform, and the nectary forming a large inflated ventral vesicle behind the perianth. *Epidendrum boscoense* Hágsater & Dodson, of the Alpicolum Group is vegetatively very similar, but the flowers are green, and the lip trulliform, with the base obtuse, and the mid-rib of the lip reaching its apex. *Epidendrum selaginella* Schltr. and *Epidendrum miserrimum* Lindl. also have small plants, but these species have caespitose, unbranched plants and the inflorescence longer than the leaves.

CONSERVATION STATUS: DD. Data deficient. The species has a wide range of distribution, and is found in wet cloud forests often on peat bogs.

ETYMOLOGY: From the Latin *minutus*, very small, minute, and *flos*, flower, and indeed this is one of the species in *Epidendrum* with the smallest flowers.

REFERENCES: Dunsterville, G.C.K., & L.A.Garay, 1979, *Epidendrum schlimii*, in **Orchids of Venezuela; An Illustrated Field Guide**, A-G: t. 279. Hágsater, E., & C. H. Dodson, 2001, *Epidendrum boscoense*, in Hágsater & L. Sánchez S. (eds.) *The Genus Epidendrum*, Part 3; **Icon. Orchid.** 4: t. 419. Santiago, E., & E. Hágsater, 2007, *Epidendrum selaginella* in E. Hágsater & L. Sánchez S. (eds.) *The Genus Epidendrum*, Part 6; **Icon. Orchid.** 9: t. 984. Santiago, E., & E. Hágsater, 2016, *Epidendrum miserrimum* in E. Hágsater & L. Sánchez S. (eds.) *The Genus Epidendrum*, Part 6; **Icon. Orchid.** 9: t. 959. Schweinfurth, C., 1959, *Orchids of Peru*, **Fieldiana: Bot.** 30(2): 261-531.



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Photo: L. F. García

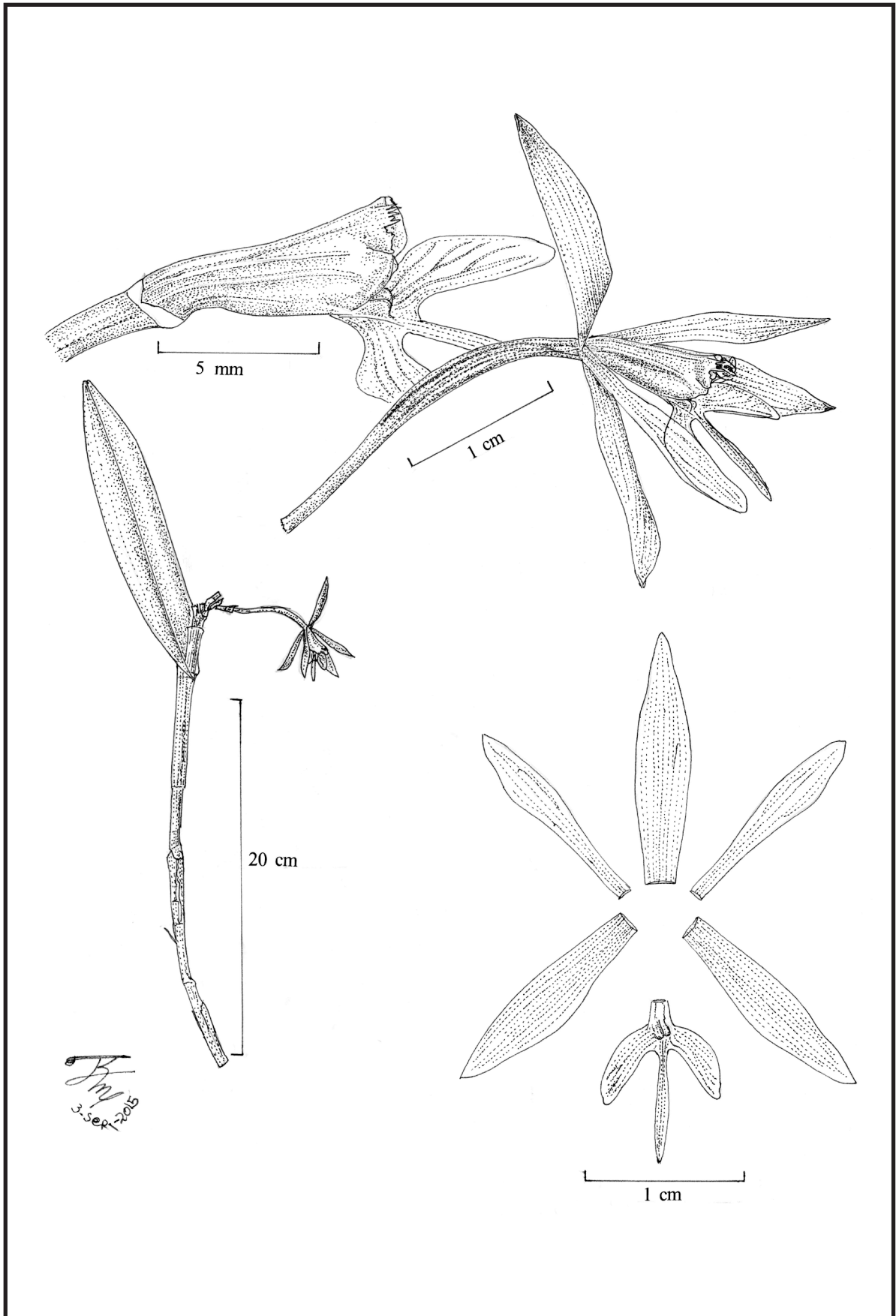
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Plate 1588



EPIDENDRUM NOCTEVA Hágsater & L.Sánchez

EPIDENDRUM NOCTEVA Hágsater et L.Sánchez, *sp. nov.*

Type: COLOMBIA: [Risaralda]: Cult. Orquídeas Eva, Pereira; received 25 March 1996, flowered in cult. in Mexico City, 1997, *Orquídeas Eva, Shigenobu Tsubota 67 sub Eric Hágsater 11633*. Holotype: AMO 18265! (illustration voucher).

Similar to *Epidendrum mininocturnum* Dodson, but the flowers smaller and sepals and petals greenish ochre, lateral lobes of the lip semi-elliptic, mid-lobe linear elliptic, column straight.

Epiphytic, lithophytic or terrestrial, sympodial, caespitose **herb**, 17-19 cm tall including the inflorescence. **Roots** basal, thick. **Stems** 11-14 x 0.2-0.3 cm, simple, cane-like, laterally compressed, erect. **Leaves** 6-7, distributed throughout the stem, coriaceous, green; foliar sheath 1.6-2.0 cm long, tubular; blade 7.5-9.0 x 1.5-1.7 cm, (length:width = 3-4:1), elliptic-lanceolate, apex unequally bilobed, minutely mucronate, dorsal keel evident. **Spathe** lacking. **Inflorescence** apical, racemose, becoming pluri-racemose with time, producing one flower at a time, and thus several from the same stem over the years: peduncle 0.5-1.0 cm long, reduced; rachis 2.4 mm long. **Floral bracts** 2-3 x 0.5-1.0 mm, much shorter than the ovary, triangular, acute, embracing. **Ovary** 22 x 1.5 mm, much shorter than the apical leaf, terete, slightly inflated, unornamented. **Flowers** 1-2, successive, one at a time from each raceme, resupinate, sepals and petals greenish ochre, lip white with the apex of the lobes tinged ochre, column green towards the base, white towards the apex; calli dark yellow; fragrance not registered. **Sepals** 15-16 x 3-4 mm, spreading, narrowly elliptic, acute, 7-veined, with numerous secondary veins, margin entire, revolute. **Petals** 14-15 x 2-3 mm, partly spreading, narrowly elliptic, acute, 3-veined, with 2 secondary veins, margin entire, spreading. **Lip** 10 x 7, united to the column, 3-lobed, margin entire, spreading; bicallose, the calli prominent; lateral lobes 5 x 1.7 mm, semi-elliptic, corners rounded; mid-lobe 6.8 x 0.6 mm, linear-elliptic, wider at the middle, acute. **Column** 9 mm long, straight, dilated towards the apex. **Clinandrium-hood** slightly surpassing the apex of the column, erose-dentate. **Anther** obovoid, 4-celled. **Pollinia** 4, semi-obovoid, laterally compressed; caudicles soft and granulose, similar in length to the pollinia; viscidium semi-liquid, transparent. **Rostellum** apical, slit. **Lateral lobes of the stigma** reduced, 1/3 the length of the stigmatic cavity. **Nectary** penetrating 2/3 of the pedicelate ovary, unornamented. **Capsule** ovoid, body of the capsule located near the middle of the pedicelate ovary, pedicel 10 mm long, body 29 mm long, apical neck 4 mm long.

OTHER SPECIMENS: COLOMBIA: Antioquia: Ituango, cultivado por Francisco Villegas en Copacabana, 1000 m, (received 1 XI 1993) *Escobar 5184*, AMO! flowers in spirit AMO!

OTHER RECORDS: COLOMBIA: Antioquia: Ituango, cultivado por Francisco Villegas en Copacabana, 1000 m, *Escobar 5184*, digital photo AMO! (published, Escobar, 1994; photo voucher).

DISTRIBUTION AND ECOLOGY: Endemic from Colombia, Risaralda and Antioquia, 1000 m altitude. Flowering probably in March.

RECOGNITION: *Epidendrum nocteva* belongs to the Nocturnum Group which is characterized by the sympodial, caespitose plants, cane-like, non-fusiform stems, successive flowers on a short, racemose or pluri-racemose inflorescence, without spathaceous bracts, and large, star-shaped flowers, with similar sepals and petals; the flowers are mostly indistinguishable in shape. The species is recognized by the short plants, 17-19 cm tall, stems laterally compressed, 6-7 green leaves, flowers small, basically ochre colored, lip white, sepals 15-16 mm long, short ovary, 22 mm long, straight column 9 mm long, the lateral lobes of the lip semi-elliptic, mid-lobe linear-elliptic, body of the capsule located near the middle of the pedicelate ovary. *Epidendrum mininocturnum* ranging along the lower slopes of the Andes in southern Colombia and northern Ecuador, at 80-650 m altitude, has larger flowers sepals 27-28 mm long, ovary 27-30 mm long, mid-lobe ensiform, column slightly arched, 12 mm long, sepals reddish green to pink, petals pale green, column greenish at base, red towards the apex. *Epidendrum buenaventurae* F.Lehm. & Kraenzl. has somewhat taller plants, 17-30 cm tall, the leaves green to yellowish green tinged purple, sepals 25-46 mm long, ovary 35-50 mm long, the lateral lobes of the lip ovate-triangular, mid-lobe ensiform, and the body of the capsule in the middle of the pedicelate ovary. *Epidendrum nocturnum* Jacq. is widely distributed in the Neotropics, has terete stems, leaves distributed along the apical 2/3 of the stem, ovary 50-70 mm long, column 15-20 mm long, sepals and petals yellowish green, lip and column white; the body of the capsule in the middle and occupying nearly the total length of the pedicelate ovary.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In reference to the Orquidario Eva, in Pereira, Colombia, property of Shigenobu Tsubota, who provided the type material, preceded by the first letters of *nocturnum*, the group of species where this one belongs.

REFERENCES: Cervantes, L., E. Hágsater & M. Soto, 2003, *Epidendrum nocturnum* in E. Hágsater & M. Soto (eds.), *Orchids of Mexico*, Parts 2-3, **Icon. Orchid.** 5-6: t. 578. Escobar, R., 1994, **Native Orchids of Colombia** 5: 770, photo 905. Sánchez S., L. & E. Hágsater, 2008, *Epidendrum buenaventurae* in E. Hágsater & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 7, **Icon. Orchid.** 11: t. 1107. Sánchez S., L. & E. Hágsater, 2010, *Epidendrum mininocturnum* in E. Hágsater & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 9, **Icon. Orchid.** 13: t. 1357.



Authors: E. Hágsater & L. Sánchez S.

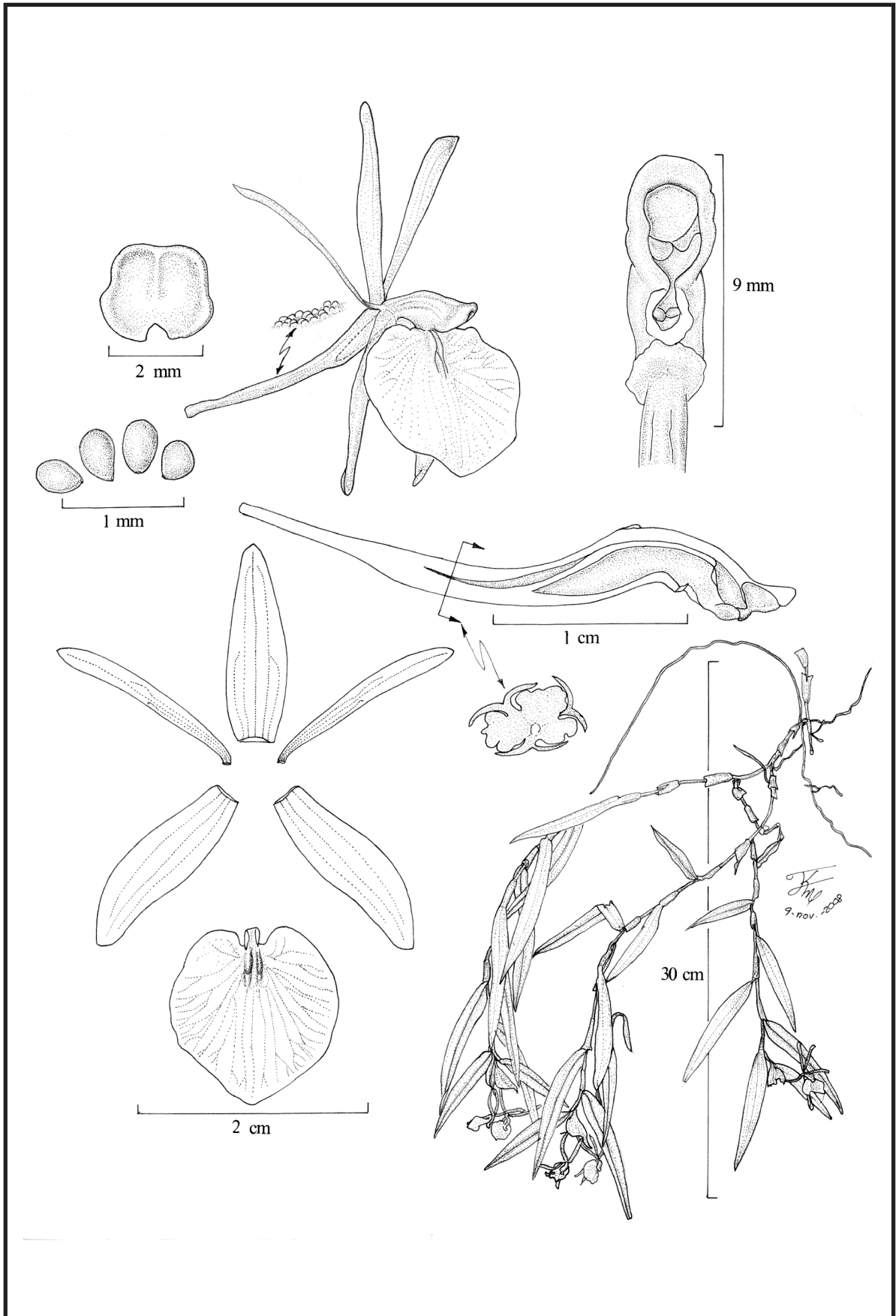
Illustrator: R. Jiménez M. Photo: R. Escobar

Editors: E. Hágsater & L. Sánchez S.

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ICONES ORCHIDACEARUM 15(2). 2016. Plate 1589



EPIDENDRUM PACHYCLINIUM Hágsater & E.Santiago

Plate 1590

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

Type: COLOMBIA: Antioquia: Municipio de Cocorná, Autopista Medellín-Bogotá, km 63, quebrada El Bihao [El Viao], ca. 1900 m, 26 April 1980, **Rodrigo Bernal, Gloria Galeano & Cano 168**. Holotype: COL! (illustration voucher). Isotype: HUA!

Similar to *Epidendrum vesicicaule* L.O.Williams but with 2 larger flowers, the 3-veined petals, an orbicular-cordiform lip, bicallose, calli laminar, parallel, disc with 3 very short, low, inconspicuous ribs, in front of the calli, column arched, and the clinandrium-hood very fleshy, prominent and slightly upturned.

Epiphytic, pendent **herb**, ca. 30 cm long. **Roots** ca. 1 mm in diameter, basal, very thin, white. **Stems** 16-30 x 0.1-0.2 cm; simple, cane-like, originating from the basal internodes of the previous stem, terete, thin, pendent; the base with infundibuliform, non-foliar sheaths, 0.6-1.3 x 0.4-0.6 cm. **Leaves** 7-10, distributed along the upper 2/3 of the stems, unequal in size (the basal ones generally smaller), alternate, articulate; sheaths 1.0-1.6 x 0.3-0.4 cm, infundibuliform, only covering about half of the internode, minutely striated; blade 2.8-8.3 x 0.6-1.1 cm; obliquely narrowly lanceolate, short acuminate, margin entire. **Spathe** 1[2], 1.8-2.2 x 1.0-2.0 cm (spread), hemi-ovate, acute, conduplicate, oblique, widely ovate when spread. **Inflorescence** apical sessile; peduncle and rachis ca. 6 mm long, terete, thin. **Floral bracts** totally hidden within the spathe. **Ovary** 20-25 mm long, thin, slightly inflated along the apical half, triquetrous, with three longitudinal, two-winged ribs. **Flowers** 2, resupinate, simultaneous, green, calli white; fragrance not registered. **Sepals** 17 x 5 mm, spreading, free, sub-obtuse, margin entire, revolute; dorsal sepals, ovate-lanceolate, 5-veined, the lateral veins half as long as the rest; lateral sepals oblong-elliptic, oblique, 3-veined. **Petals** 17 x 2 mm, spreading, free, slightly oblique at base, linear-oblancoate, sub-obtuse, 3-veined, margin entire, spreading. **Lip** 15 x 15 mm, united to the column, entire, orbicular-cordiform, base slightly cordate, apex sub-obtuse, margin entire; bicallose, the calli laminar, parallel; disc with 2 very short, low, inconspicuous ribs, in front of the calli, and multiple visible veins in the lip. **Column** 9 mm long, arched. **Clinandrium-hood** prominent, surpassing the body of the column, very fleshy, upturned, margin entire. **Lateral lobes of the stigma** very small, occupying 1/4 the length of the stigmatic cavity. **Anther** reniform, 4-celled. **Pollinia** 4, obovoid; caudicles not seen. **Nectary** shallow, penetrating 1/5th of the ovary, not inflated, unornamented. **Capsule** not seen.

OTHER SPECIMENS: COLOMBIA: Antioquia: Cocorná, Río Viao, pressed 29 VII 1996, hort. Colomporquídeas, Hágsater 11667, AMO! Alto de Toyo, Westandes von Antioquia, 1600-2000 m, IX 1906, *Lehmann 8338*, K! **Tolima:** bei Inzá, 2000 m, 10 XI 1882, *Lehmann 2137*, AMES! G! LE! US! [**Nariño**]: prope Pasto, V 1876, *André 3203*, NY!

OTHER RECORDS: COLOMBIA: Antioquia: Cocorná; Quebrada El Viao, ca. 2000 m, *Sebastian Vieira s.n.*, digital image AMO! (photograph voucher). **Quindío:** Mun. Filandia, *Moreno s.n.*, digital photo, AMO! **Risaralda:** Río Otún, Cordillera Central, *Diego Calderón*, digital image Flickr. **Valle del Cauca:** Cerro del Inglés, 19 XII 2011, *Arango-Bermúdez s.n.*, digital image, AMO!

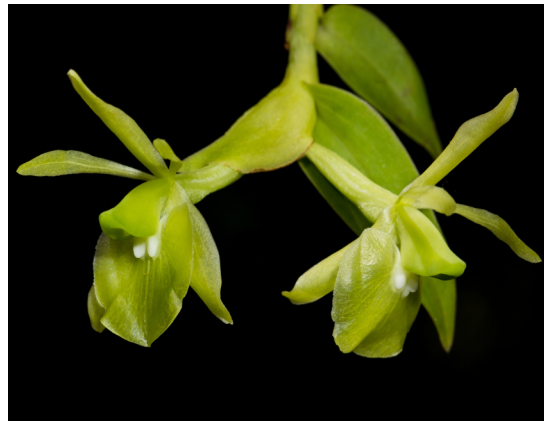
DISTRIBUTION AND ECOLOGY: Known presently only from the Cordillera Central and the Cordillera Occidental of the Andes in Colombia, from Antioquia to Nariño; epiphytic at 1600-2000 m altitude. Flowering in October to April.

RECOGNITION: *Epidendrum pachyclinium* belongs to Megalospatham Group characterized by the caespitose but branching habit, many-leaved stem, fleshy, oblique leaves, a short, few flowered, raceme subtended by large semi-ovate spathaceous bracts, resupinate flowers, the column more or less united to the lip, and the Vesicicaule Subgroup which has a sympodial habit, numerous leaves throughout the stems, the leaves concolor, green, lip cordiform and bicallose. The species is recognized by narrowly lanceolate, oblique leaves 2.8-8.3 x 0.6-1.1 cm, 2, large flowers, sepals 17 mm long, the 3-veined petals, and the orbicular-cordiform lip, bicallose, the calli white, laminar, parallel, and the disc with 2 very short, low, inconspicuous ribs, in front of the calli; column arched, clinandrium-hood is prominent, fleshy and upturned; found at 1600-2000 m altitude. *Epidendrum vesicicaule* has pendent plants, leaves narrowly lanceolate, 3.5-6.0 x 0.4-0.8 cm, inflorescence 4-flowered, sepals 12-13 mm long, petals straight, neither falcate nor oblique, lip cordiform with a pair of fleshy calli, with the disc prominently fleshy; column slightly upturned along the basal half, clinandrium-hood fleshy, truncate, straight; found at 3300-3800 m altitude. *Epidendrum cardiomorphum* Hágsater & E.Santiago is vegetatively very similar but the leaves are 4.0-8.6 x 0.5-1.0 cm, inflorescence 2-flowered, sepals 14-18 mm long, petals slightly falcate, lip triangular-cordiform with a pair of small, laterally compressed, parallel calli, the disc of the lip thin, not fleshy thickened, with three very thin, low, parallel ribs which disappear before the middle of the lip, and with multiple radiating thickened veins; clinandrium-hood slightly surpassing the body of the column, fleshy, straight; growing at 1500-2000 m altitude. *Epidendrum falcivesicicaule* Hágsater & E.Santiago has been confused with this species, but has a two flowered inflorescence with 2 obliquely hemi-elliptic, oblique imbricating spathes, the cordiform lip with a pair of calli, elongate, prominent, on a thickened, rounded white, spongy, platform; clinandrium-hood prominent, slightly incurved; it is also found at lower altitudes, 1900-2700 m. *Epidendrum platypetalum* Hágsater has narrow, ovate leaves, 0.5-4.6 cm long, the lip cordiform, with a thin mid-rib, and elliptic petals, 7.7 mm wide. *Epidendrum tigriphyllum* Hágsater has ovate-lanceolate leaves 1.6-3.8 cm long, grayish green with transverse purple bands, sepals are 22-23 mm long, callus a single prominent mass divided into 4 lobes in two superimposed pairs. *Epidendrum lagotis* Rchb.f. has ovate-elliptic leaves 2-6 x 1.0-2.3 cm, the apex sub-obtuse, sepals 17-25 mm long, petals widely spatulate, 21 x 8 mm, and the lip orbicular, the disc with a short mid-rib.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek, μαχς thick, and κληη bed, in reference to the very fleshy clinandrium-hood, which is characteristic of this species.

REFERENCES: Hágsater, E., 2001, *Epidendrum platypetalum*, in E. Hágsater & L. Sánchez S. (eds.), The Genus *Epidendrum*, Part 3, **Icon. Orchid.** 4: t. 472. Hágsater, E., 2001, *Epidendrum tigriphyllum*, in E. Hágsater & L. Sánchez Saldaña & Javier García-Cruz (eds.), The Genus *Epidendrum*, Part 2, **Icon. Orchid.** 3: t. 387. Santiago, E., & E. Hágsater, 2015, *Epidendrum lagotis*, in E. Hágsater & L. Sánchez S. (eds.), The Genus *Epidendrum*, Part 11, **Icon. Orchid.** 15(1): t. 1532. Hágsater, E., & E. Santiago, 2016, *Epidendrum cardiomorphum*, in E. Hágsater & L. Sánchez S. (eds.), The Genus *Epidendrum*, Part 11, **Icon. Orchid.** 15(2): t. 1574. Hágsater, E., & E. Santiago, 2016, *Epidendrum falcivesicicaule*, in E. Hágsater & L. Sánchez S. (eds.), The Genus *Epidendrum*, Part 11, **Icon. Orchid.** 15(2): t. 1581. Santiago, E., & E. Hágsater, 2016, *Epidendrum vesicicaule*, in E. Hágsater & L. Sánchez S. (eds.), The Genus *Epidendrum*, Part 11, **Icon. Orchid.** 15(2): t. 1599.



Authors: E. Hágsater & E. Santiago

Illustrator: R. Jiménez M.

Photo: S. Vieira

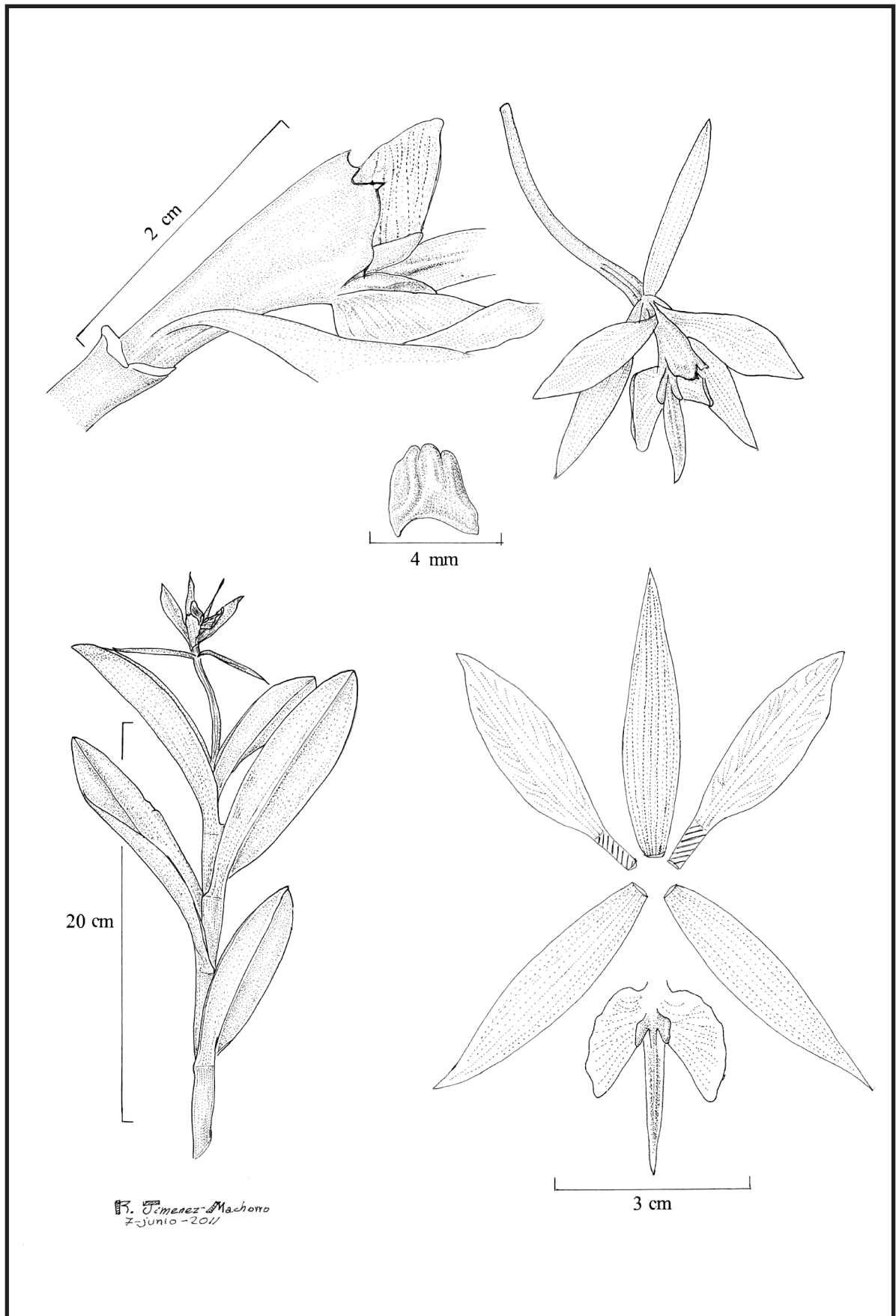
Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 15(2). 2016.

Plate 1590



EPIDENDRUM PLATYPETALONOTURNUM Hågsater & L.Sánchez

Plate 1591

EPIDENDRUM PLATYPETALONOCURNUM Hágsater et L.Sánchez, *sp. nov.*

Type: PERU: [Ucayali] "Loreto": Coronel Portillo: [Padre Abad:] Divisoria, 59 km from Tingo Maria on highway to Pucallpa, about 1600 m, 17 November 1949, **Harry Ardell Allard 21777**. Holotype US 2025149! (illustration voucher).

Similar to *Epidendrum tridens* Poepp. & Endl., but the flowers "pure white", the sepals proportionately wider, petals adnate to the base of the column, clinandrium-hood somewhat surpassing the apex of the body of the column.

Terrestrial, sympodial, caespitose, erect **herb**, ca. 27 cm tall including the inflorescence. **Roots** basal, fleshy. **Stems** 17.5 x 0.5-0.6 cm, simple, cane-like, laterally compressed, ancipitose towards the apex. **Leaves** 5, distributed along the apical $\frac{3}{4}$ of the stem,; foliar sheath 3.0-3.6 cm long, laterally compressed, ancipitose; blade 9.4-13 x 2.4-3.5 cm, length/width: 3-4:1, ovate-elliptic, apex bilobed, with an evident dorsal keel, margin entire, spreading. **Spathe** lacking. **Inflorescence** apical, racemose, producing one flower at a time. **Floral bracts** very small, much shorter than the ovary. Flowers successive, one at a time, resupinate, "pure white" [according to the collector, see discussion under recognition]; fragrance not registered. **Ovary** 65 mm long, terete, not thickened. **Sepals** 40-44 x 8.5-9.0 mm, spreading, free, narrowly ovate, acuminate, margin entire, revolute. **Petals** 40-42 x 9-10 mm, spreading, adnate to the base of the column, elliptic, acute, margin entire, spreading. **Lip** 29 x 21 mm, united to the column, 3-lobed, bicallose, the calli prominent, laminar, oblong, mid-rib prominent at base, prolonged to the middle of the mid-lobe of the lip and the disappearing towards the apex; lateral lobes 17-18 x 7.5-8.0 mm, narrowly semi-ovate, inner side straight, apex rounded, outer margin undulate; mid-lobe 18.5-20.0 x 2.3-3.0 mm, linear, acuminate. **Column** 20-22 mm long, straight, dilated towards the apex, clinandrium hood surpassing the truncate apex. **Clinandrium-hood** prominent but short, forming a prominent acute tooth on each side, with a wide sinus in between. **Anther** cuneate, 4-celled. **Pollinia** not seen. **Rostellum** apical, slit. **Lateral lobes of the stigma** not seen. **Nectary** not seen. **Capsule** not seen.

OTHER SPECIMENS: None seen.

OTHER RECORDS: None seen.

DISTRIBUTION AND ECOLOGY: Known presently only from the type, Cordillera Azul, northern Peru, straddling the Departments of Huánuco & Ucayali, and dividing the basins of the Huallaga and Ucayali rivers; terrestrial at ca. 1600 m de altitude. Flowering in November.

RECOGNITION: *Epidendrum platypetalonocurnum* belongs to the Nocturnum Group which is characterized by the sympodial, caespitose plants, short, racemose or pluri-racemose inflorescence, without spathaceous bracts, usually large, star-shaped flowers, with similar sepals and petals, and the Nocturnum Subgroup which has cane-like stems, non-thickened towards the middle, and usually successive flowers; the flowers are mostly indistinguishable in shape. The species is recognized by the laterally compressed stems, ancipitose towards the apex, flowers described by the collector as "pure white", ovary 65 mm long, sepals and petals comparatively wide, sepals narrowly ovate 40-44 x 8.5-9.0 mm, petals adnate to the base of the column. Other species in the nocturnum group have the petals totally free of the column, sepals and petals linear-lanceolate, and generally not white, but greenish to yellow to brownish, only the lip and column white, the calli usually yellow, and the mid-lobe, linear, acuminate. *Epidendrum tridens* has the ovary 60-100 mm long, narrower floral segments, sepals 42-75 x 5-8 mm, green to yellow; petals 2.5-3.0 mm wide, linear lanceolate, free from the column. *Epidendrum nocturnum* Jacq. is widely distributed from Florida to Bolivia, has terete stems, ovary 50-70 mm long, about as long as the sepals which are 35-75 mm long, petals free from the column and narrower, 40-60 x 2-3 mm, column 15-20 mm long, body of capsule occupying nearly the full length, centered.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek, $\lambda\alpha\tau\upsilon\varsigma$, wide, broad, $\pi\epsilon\tau\alpha\lambda\omicron\nu$, leaf, in modern botany petal, and *nocturnum*, in reference to the group in *Epidendrum* to which this species belongs.

REFERENCES: Cervantes, L., E. Hágsater & M. Soto, 2002, *Epidendrum nocturnum* in E. Hágsater & M. Soto (eds.) Orchids of Mexico, Part 2-3, **Icon. Orchid.** 5-6: t. 578. Sánchez S., L., & E. Hágsater, 2015, *Epidendrum tridens* in E. Hágsater & L. Sánchez S. (eds.) The Genus *Epidendrum*, Part 11, **Icon. Orchid.** 15(1): t. 1565.



Authors: E. Hágsater & L. Sánchez S.

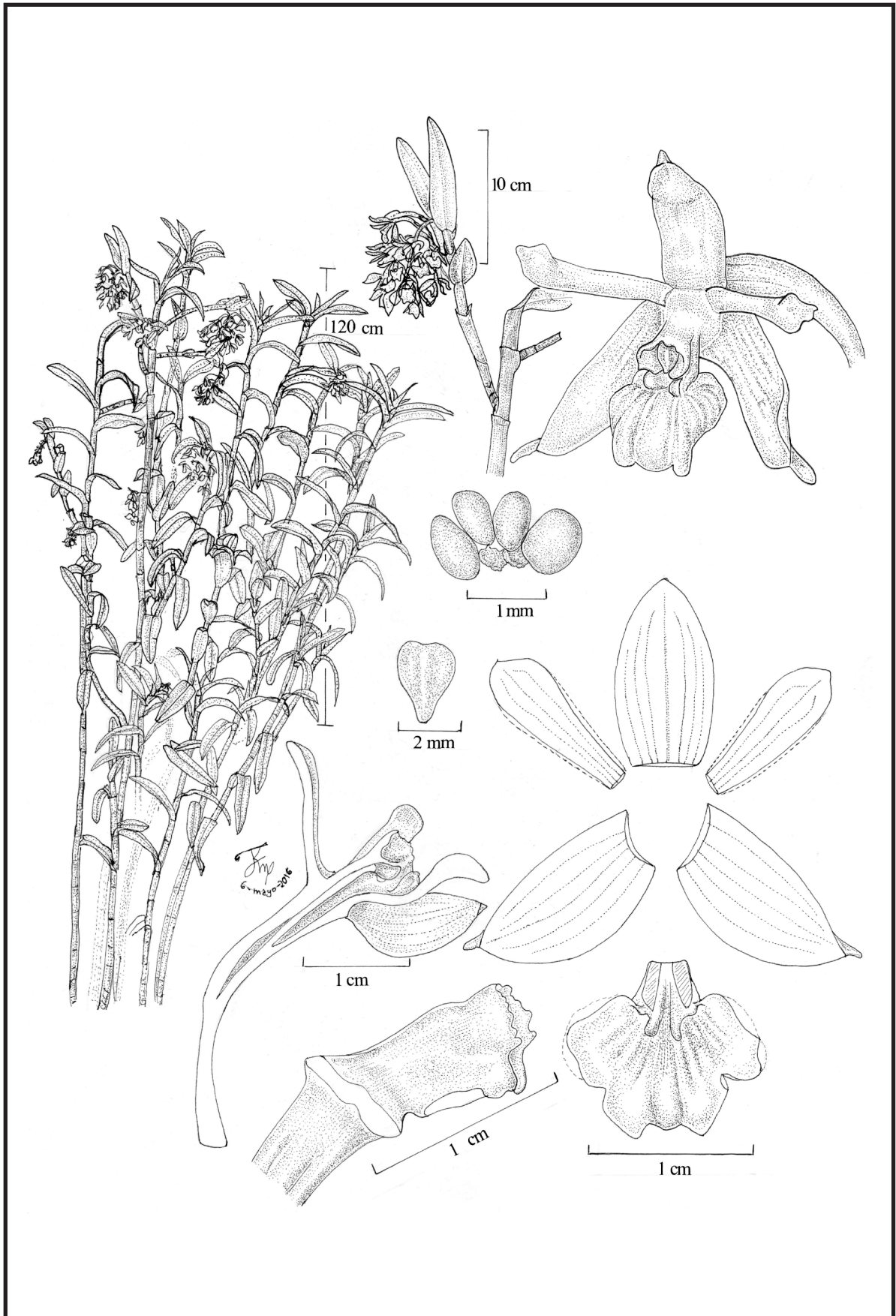
Illustrator: R. Jiménez M.

Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 15(2). 2016. Plate 1591



EPIDENDRUM PLATYPLEUROMEGALOCLINIUM Hágsater, C.Uribe-Vélez & E.Santiago Plate 1592

EPIDENDRUM PLATYPLEUROMEGALOCLINIUM Hágsater, C. Uribe-Vélez et E. Santiago sp. nov.

Type: COLOMBIA: Nariño: Mun. Samaniego: sector Nuevo Samaniego, cerca de Pasto, 2800 m, Septiembre 2015, **Carlos Uribe Vélez 3334**. Holotype: HPUJ! (illustration and photograph voucher).

Similar a *Epidendrum megaloclinium* Hágsater & Dodson but the flowers smaller, the inflorescence racemose, not branched, and the lip clearly 3-lobed with a wide mucro at the apex.

Terrestrial, caespitose, branching **herb**, 75-180 cm tall. **Roots** 7-9 mm in diameter, basal, thick, white. **Stems** branching above, cane-like, terete, the main stem 180 x 1.5 cm, the branches 10-25 x 1.2 cm, covered by sheaths 6-8 cm long, tubular, non-foliar, striated, rugose. **Leaves** 25-28 on the main stem, 3-7 on the branches, distributed along the apical half of the stems, alternate, articulate, spreading; sheaths 1.5-5 cm long, tubular, minutely rugose and striated, pale green; blade 12-13 x 4 cm (on the main stems), 2.2-9.2 x 1.8 cm (on the branches), elliptic, apex rounded, sub-coriaceous, margin entire. **Spathes** lacking, **Inflorescence** 9 cm long, apical, arching-nutant, racemose, densely few-flowered; peduncle 5 mm long, terete. **Floral bracts** ca. 10 mm long, much shorter than the ovary, triangular, long acuminate, embracing. **Ovary** 23-28 mm long, terete, thick, not inflated. **Flowers** ca. 18, opening progressively from the base towards the apex of the rachis, eventually most open simultaneously, resupinate, greenish white, the dorsal surface of sepals and petals tinged pale purple, the column sub-apically slightly tinged purple; without odor. **Sepals** partly spreading, free, convex, elliptic, 5-veined, the apex rounded, margin entire; dorsal sepals 12 x 6 mm, lateral sepals 14 x 6 mm, oblique, aristate. **Petals** 11.5 x 4.5 mm, partly spreading, free, oblanceolate, 3-veined, the apex rounded, margin entire, revolute. **Lip** 9 x 13 mm, united to the column, 3-lobed, convex, margin revolute, minutely erose; bicallose, the calli small, sub-globose, disc with multiple radiating ribs on the whole surface of the lip, the apical sinus with a wide, fleshy rib; lateral lobes 4 x 6 mm, trapezoid, the apical margin curved, to transversely elliptic; mid-lobe 4 x 8 mm, 2-lobed, the lobes transversely rectangular, the apices right-angled, separated by a wide sinus forming a knob by the apex of the mid-rib which is wide and fleshy. **Column** 8 mm long, straight thick. **Clinandrium-hood** prominent, margin erose-denticulate. **Rostellum** sub-apical, slit. **Lateral lobes of the stigma** small, 1/3 the length of the stigmatic cavity. **Nectary** shallow, without penetrating the ovary, not inflated, unornamented. **Capsule** not seen.

OTHER SPECIMENS: None seen.

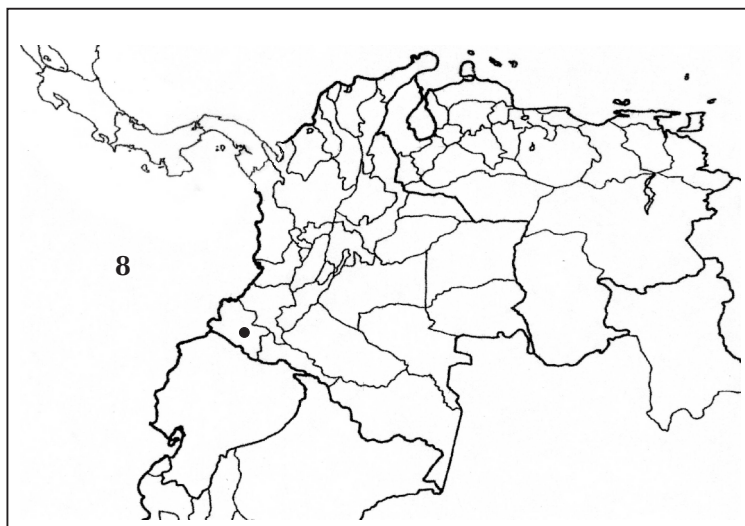
DISTRIBUTION AND ECOLOGY: Presently known only from the type, from southern Colombia, near Pasto, Nariño, terrestrial at 2800 m altitude. Flowering from July to November.

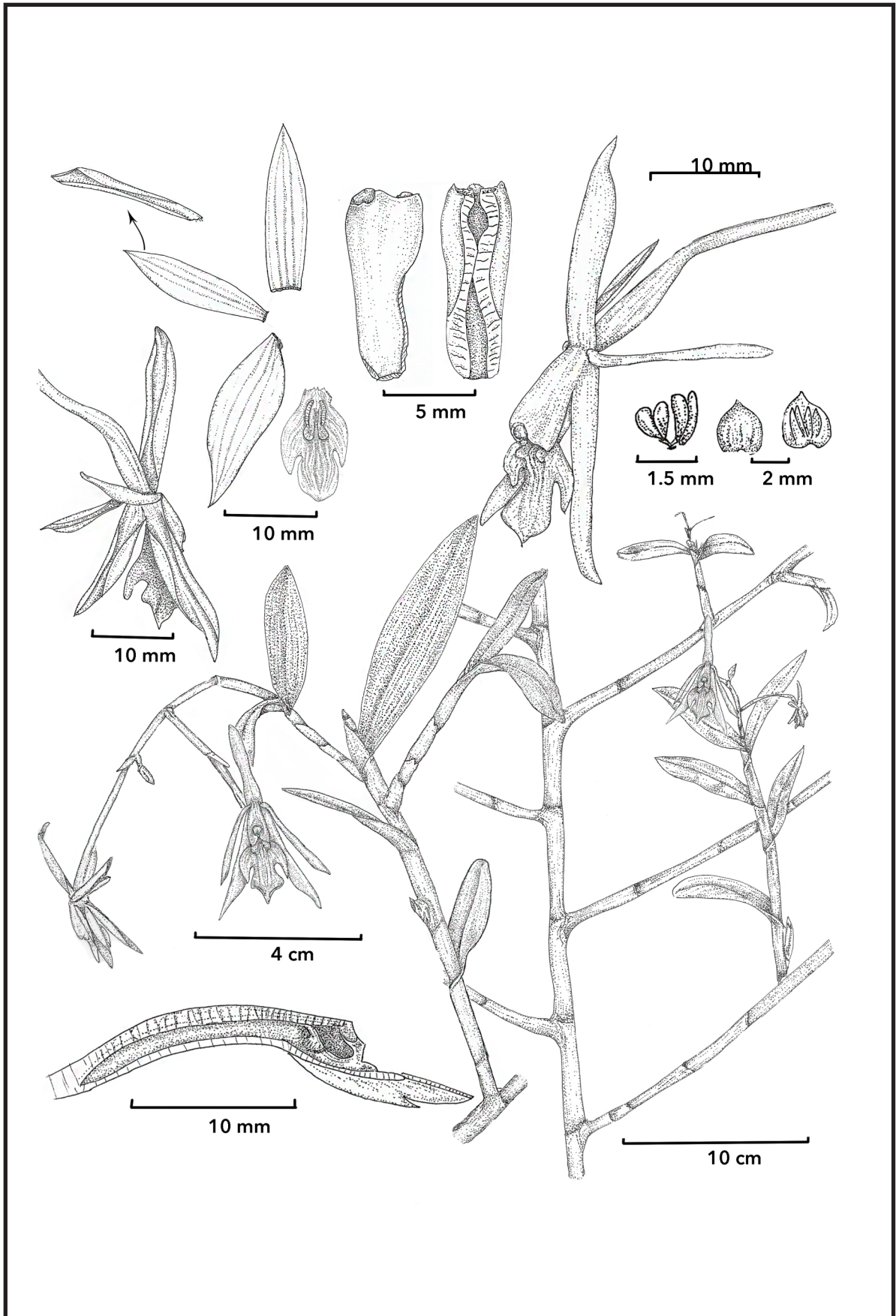
RECONGITION: *Epidendrum platypleuromegaloclinium* belongs to the Andean Group and Cernuum subgroup, which is characterized by the monopodial, branching habit, the erect cane-like stems with sub-apical branching, racemose, nutant inflorescence, compact, fleshy flowers, lip three-lobed. The species is recognized by the greenish white flowers, dorsally tinged pale purple, the floral segments partly spreading, sepals 12-14 mm long (including the aristate apex), petals with the margin strongly revolute, lip clearly 3-lobed with multiple radiating ribs covering the whole surface, apex a wide sinus with a fleshy knob formed by the apex of the mid-rib which is wide and fleshy. *Epidendrum megaloclinium*, endemic to Ecuador, is vegetatively very similar, and shares the large clinandrium-hood, but the inflorescence, is paniculate, the flowers larger, sepals 24-25 mm long (including the aristate apex), petals with the margins slightly revolute, lip entire, cordiform, with thickened ribs, and minutely mucronate. *Epidendrum cuicochaense* Hágsater & Dodson also has a large clinandrium-hood, but has greenish yellow, slightly larger flowers, sepals 15-19 mm long, the petals acuminate, 3-lobed lip with the latera lobes much smaller than the mid-lobe, the lip minutely apiculate.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek πλατυς wide, πλευρα rib, μεγαλο large, and κληνη couch, in reference to the wide mid-rib of the lip which distinguishes this species from the closely related *Epidendrum megaloclinium* which shares the large clinandrium hood.

REFERENCES: Hágsater, E., & C. H. Dodson, 2001, *Epidendrum megaloclinium* in Hágsater, E., & L. Sánchez Saldaña (eds.), *The Genus Epidendrum*, Part 3, **Icon. Orchid.** 4: t. 457. Hágsater, E., & E. Santiago, 2009, *Epidendrum cuicochaense* in Hágsater, E., & L. Sánchez Saldaña (eds.), *The Genus Epidendrum*, Part 8, **Icon. Orchid.** 12: t. 1232.





EPIDENDRUM POLYTHALLUM Est.Domínguez, J.S.Moreno, Hágsater & E.Santiago

EPIDENDRUM POLYTHALLUM Est. Domínguez, J.S. Moreno, Hágsater et E. Santiago, *sp. nov.*

Type: COLOMBIA: Antioquia: Municipio de Urrao; Cordillera Occidental, camino entre Urrao y el Carmen de Atrato (Chocó), Alto de la M, La Fragua, 2500 m, 21 February 2016, **Esteban Domínguez Vargas 396**. Holotype: JAUM! (illustration voucher and photo).

Similar to *Epidendrum amplexisaraldense* Hágsater & E. Santiago, but the stems much branched, from a tall primary stem, secondary, tertiary and flowers branches progressively smaller (vs. an unbranched habit, where the new stem originates from a middle internode of the previous stem, all stems basically all similar), flowers 3-4 per raceme (vs. 20-30 on a panicle), flowers pale yellow with the lip wine-red except for the calli and apices of the lobes (vs. greenish), disc of the lip with 5 raised ribs (vs 3 ribbed).

Epiphytic, monopodial, branching **herb**, 130-150 cm tall. **Roots** basal, thick, from the base of the primary stem, rarely from the base of a secondary branch. **Stems** much branched, cane-like, terete; **primary stem** 130-150 x 0.8-1.0 cm, very rigid, erect, glabrous, with visible scars from old leaves, some vestiges of leaf-sheaths 4.4 x 2 cm; **secondary stems** 40-70 x 0.4-0.6 cm, numerous, alternate, distichous, ascendant, arising from nearly every internode, spaced about 5 cm apart, with vestiges of foliar sheaths 2.2 x 1 cm; **tertiary branches** 13-25 x 0.3-0.5 cm, from secondary stems, without any order, ochre-yellow, base covered by non-foliar sheaths 17-22 x 11 mm, rugose, ochre-green; **flowering branches** 3-6 x 0.3 cm, base covered by non-foliar sheaths 8-14 x 7 mm, tubular, rugose, ochre-green, flowering branches are produced from secondary, tertiary and other flowering branches. **Leaves** of primary and secondary stems not present; 2-6 on tertiary and flowering stems 2.3-6.5 x 0.4-1.4 cm, oblong, apically unequally bilobed, chartaceous, upper surface rugose, sulcate at the mid-vein, dark green, 8 veins marked pale green, 4 on each side of the mid-vein; underside smooth, pale green. **Spathe** lacking. **Inflorescence** 4.0-5.5 cm long, apical, racemose, pendant, nodding, laxly few-flowered; peduncle 7-8 x 1.5 mm; rachis 3.2-4.7 long, very short, thin, somewhat laterally compressed. **Ovary** 20-38 mm long, ventrally inflated along apical 1/3, terete. **Floral bracts** 4 x 3 mm, much shorter than the ovary, triangular, acute, embracing. **Flowers** 3-4, simultaneous, resupinate, pale yellow, lip wine-red except for the calli and the apices of the lobes which are pale yellow; fragrance none. **Sepals** acute, glabrous, margin entire, strongly revolute; **dorsal sepal** 20 x 4 mm, free, oblong-elliptic, 5-veined, reflexed; **lateral sepals** 20 x 6 mm, narrowly ovate, oblique, obliquely united to the column, connate at the base, partly spreading, 5-veined, 3 main veins and 2 secondary veins. **Petals** 18-20 x 2.5 mm, free, reflexed, narrowly elliptic, apex oblique, acute, margin entire, strongly revolute. **Lip** 12 x 7 mm, united to the column, deeply 3-lobed, base cuneate, margins entire; bicallose, calli prominent, parallel at base, diverging apically, laterally compressed; disc with 5 prominent, elevated ribs, parallel, which converge towards the apex of the mid-lobe, and a pair of shorter veins radiating at the base of the lateral lobes; lateral lobes 2.7 x 6.8 mm, obliquely triangular, margin revolute; mid-lobe 5.4 x 4 mm, rectangular-oblong, apex slightly expanded, truncate, with a prominent apiculum, apical margins involute. **Column** 11 x 3 mm, straight, thin, dilated towards the apex. **Clinandrium-hood** reduced, margin entire. **Anther** sub-spherical, face puberulent, white, greenish towards the base, 4-celled. **Pollinia** 4, dark yellow. **Rostellum** apical, slit. **Nectary** narrow, penetrating 2/3 of the ovary glabrous, with a prominent callosity in front of the stigmatic cavity. **Capsule** not seen.

OTHER SPECIMENS: None seen.

OTHER RECORDS: None seen.

DISTRIBUTION AND ECOLOGY: Known presently only from Colombia, Antioquia, along the summit of the Cordillera Occidental, near the border of the Chocó, epiphytic near the base of a bush at the edge of a wet montane forest, on cliffs and road-side slopes, at 2500 m altitude. Flowering in February.

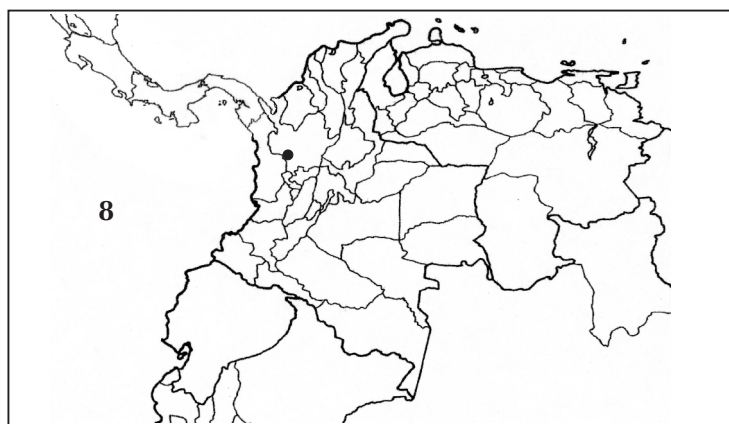
RECOGNITION: *Epidendrum polythallum* is not clearly related to any known group, so we place it in its own Polythallum Group, recognized by the much branched stems, with a tall primary stem, numerous secondary and tertiary stems and the numerous shorter flowers stems, the nodding inflorescence bears only 3-4 pale yellow flowers, lip wine-red except for the calli and apices of the lobes which are pale yellow, sepals connate at base, narrowly oblanceolate, petals linear, obliquely acute at the apex, lip deeply 3-lobed, with 5 parallel ribs on the disc and a pair of radiating shorter ribs on the lateral lobes which are obliquely triangular. The flowers are reminiscent of *Epidendrum amplexisaraldense* Hágsater & E. Santiago, but the plant habit of that species is not branched, the new stem originating from a sub-apical internode of the previous stem; flowers are greenish. The plant habit of the new species is reminiscent of *Epidendrum paraguastigma* Hágsater & García-Cruz which also has a tall primary stem, numerous, progressively smaller secondary stems and numerous smaller flowers stems, but that species has 7-9, simultaneous, concolor, white flowers, sepals 6.5-7.6 mm long, and an entire, cordiform lip with a "Y" shaped callus.

CONSERVATION STATUS: DD. Data deficient.

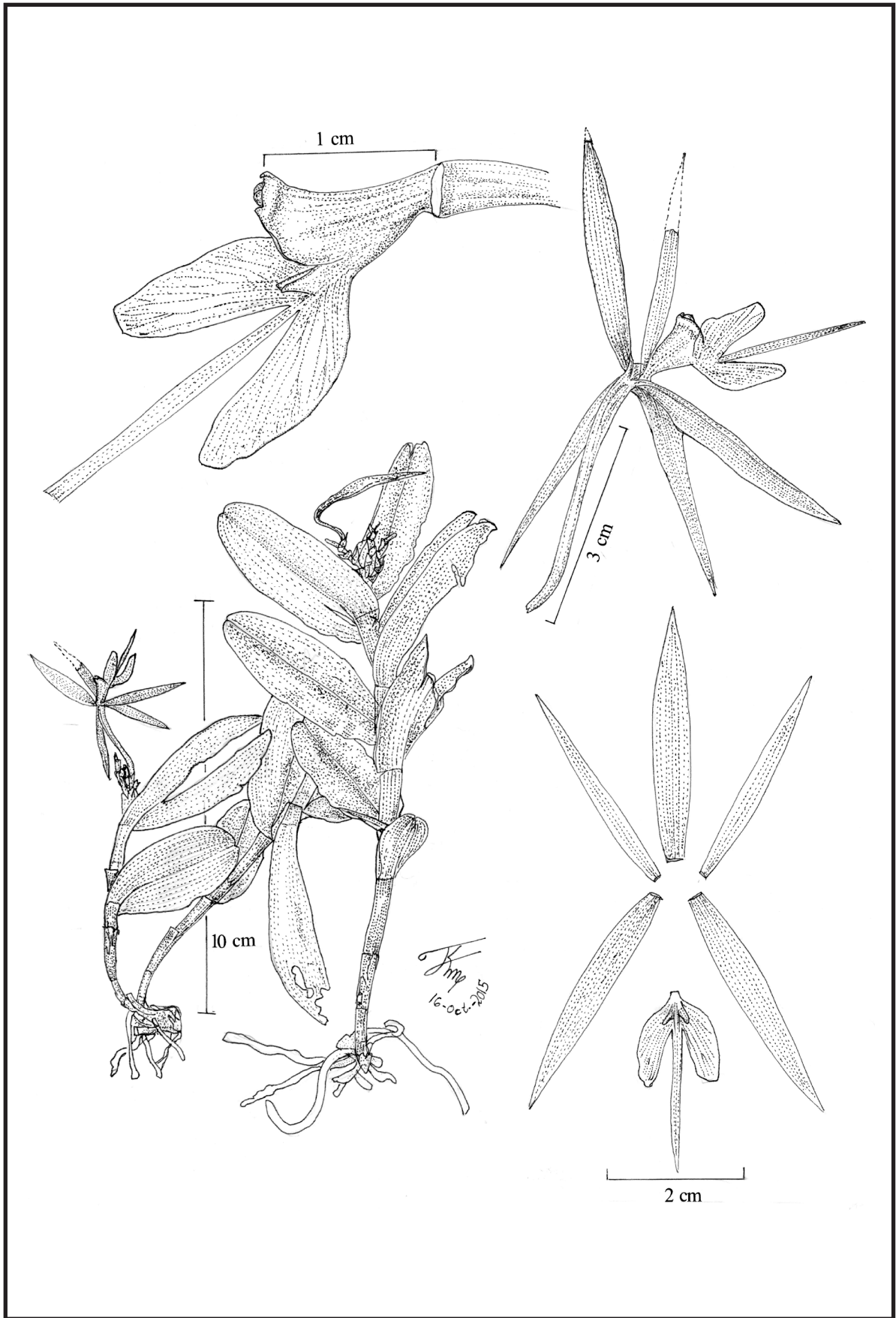
ETYMOLOGY: From the Greek πολυ, many, and θαλλος, branch; in reference to the much branched plant habit characteristic of this species.

ACKNOWLEDGMENTS: We would like to thank Astrid L. Erazo for pointing out the plant in the field. We also wish to thank the staff at the Jardín Botánico de Medellín, and its herbarium JAUM, for their technical guidance in preparing the herbarium material.

REFERENCES: Hágsater, E., & E. Santiago, 2013, *Epidendrum amplexisaraldense* in E. Hágsater & L. Sánchez S. (eds.), The Genus *Epidendrum*, Part 10, **Icon. Orchid.** 14: t. 1406. Hágsater, E., & J. García-Cruz, 1999, *Epidendrum paraguastigma* in E. Hágsater, L. Sánchez S. & J. García-Cruz (eds.), The Genus *Epidendrum*, Part 2, **Icon. Orchid.** 3: t. 367.



Authors: E. Domínguez V., J. S. Moreno, E. Hágsater & E. Santiago. Illustrator: E. Domínguez V. Photo: E. Domínguez V. Editors: E. Hágsater & L. Sánchez S.



EPIDENDRUM PRANCEI Hágsater & L.Sánchez

EPIDENDRUM PRANCEI Hágsater et L. Sánchez, *sp. nov.*

Type: BRAZIL: Amazonas: Manaus-Porto-Velho Highway, km 230, 20 March 1974, **Ghillian T. Prance, D. G. Campbell, J. C. Ongley, J. F. Ramos, O. P. Monteiro 20769**. Holotype: NY! (illustration voucher) Isotype: HB 70012!

Similar to *Epidendrum erectum* Brieger & Bicalho, but the plants smaller, stems ancipitose towards the apex, leaves wider, ovary and column shorter, column arched upwards, calli laminar, acute, prominent, and divergent.

Epiphytic, sympodial, caespitose, **herb**, 17-27 cm tall including the inflorescence. **Roots** 3-4 mm in diameters, basal, fleshy. **Stems** 10-21 x 0.5-0.8 cm, simple, cane-like, ancipitose towards the apex, straight, green, occasionally tinged purple. **Leaves** 4-6, distributed along the apical 3/4 of the stem, erect, densely aggregate, coriaceous; foliar sheaths 1.5-2.0 cm long, laterally compressed, ancipitose; blades 6.0-9.5 x 3.0-3.5 cm, length:width 2-3:1, ovate-elliptic, apex unequally bilobed, minutely mucronate, venation and dorsal keel evident; green. **Spathe** lacking. **Inflorescence** apical, racemose to pluri-racemose, producing one flower at a time, and flowering during several years from the same stem: peduncle 5-7 mm long, reduced, rachis 10-15 mm long. **Floral bracts** 3-5 x 3-4 mm, much shorter than the ovary, embracing, triangular, acuminate. **Ovary** 40 x 2.1 mm, shorter than the apical leaf, terete, not inflated, unornamented. **Flowers** successive, resupinate, sepals pale green, petals and lip white, calli yellow; fragrance not registered. **Sepals** 35 x 4 mm, spreading, lanceolate, acuminate, 10-veined, with numerous secondary veins; margin entire, revolute. **Petals** 35 x 3 mm, spreading, lanceolate, acuminate, 5-veined, with numerous secondary veins, margin entire, spreading. **Lip** 25 x 12 mm, united to the column, 3-lobed, margin entire, spreading; bicallose, the calli laminar, acute, prominent, divergent; lateral lobes 10 x 4 mm, semi-ovate, rounded; mid-lobe 23 x 1 mm, linear, acuminate. **Column** 12 mm long, arching widely upwards, vertically wider towards the truncate apex, with a short tooth on each side of the clinandrium-hood. **Clinandrium-hood** flush with the apex of the column, entire. **Anther** obovoid, 4-celled. **Pollinia** 4, semi-obovoid, laterally compressed, caudicles soft and granulose, similar in length to the pollinia; viscidium semi-liquid, transparent. **Rostellum** apical, slit. **Lateral lobes of the stigma** reduced. **Nectary** penetrating nearly half the length of the ovary, unornamented. **Capsule** not seen.

OTHER SPECIMENS: None seen.

OTHER RECORDS: None seen.

DISTRIBUTION AND ECOLOGY: Presently known from a single specimen from the middle Amazon basin in Brazil. Flowering in March; probably throughout the year.

RECOGNITION: *Epidendrum prancei* belongs to the Nocturnum Group which is characterized by the sympodial, caespitose plants, cane-like, non-fusiform stems, nocturnal flowers on a short, racemose or pluri-racemose inflorescence, without spathaceous bracts, and large, star-shaped flowers, with similar sepals and petals; the flowers are mostly indistinguishable in shape. The species is recognized by the ancipitose stems towards the apex, leaves wide and short (length:width 2-3:1), 6.0-9.5 x 3.0-3.5 cm; stems and leaves green, occasionally tinged purple, ovary 40 mm long, column 12 mm long, calli laminar, acute, prominent, divergent, column arched widely upwards. It is similar to *Epidendrum erectum* which is found in the Planalto Central of Brazil, in the states of Minas Gerais and Goiás, but that species has taller stems, 30-90 cm tall, narrower leaves, 1.2-2.5 cm wide, (length:width = 2-4:1), ovary 45-60 mm long, column 15-23 mm long, straight and calli laminar, quadrate, parallel. *Epidendrum nocturnum* Jacq., widely distributed from Florida to Bolivia, has green plants, terete stems, leaves distributed along the apical 2/3 of the stems, larger flowers, sepals and petals 35-75 mm long, ovary 50-80 mm long, straight to arching downwards, body of the capsule centered and occupying most of its length. *Epidendrum tumuc-humaciense* (Veyret) Carnevali & G.A. Romero is endemic to the Guyana Shield and the northern Amazon basin in Colombia, Venezuela, Guyana, Surinam, French Guyana and northern Brazil; its plants are wine-red or yellowish green, with numerous short and narrow leaves (3-9.2 x 1.2-2.8 cm), distributed throughout the stems, those towards the base of the stem larger, sepals and petals 48-81 mm long, ovary generally 80-100 mm long, column 19-27 mm long, straight to arching downwards, and the body of the capsule occupying the apical half of the pedicelate ovary. *Epidendrum spruceanum* Lindl. is found at the base of the Andes in Brazil and Peru, from Manaus to Puerto Meléndez, plants are larger and the stems laterally compressed, leaves large and wide (length:width = 2-4:1), generally 10-17.5 x 2.0-4.5 cm, sepals and petals 48-70 mm long, column 12-20 mm long, straight, calli laminar, parallel.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: Ghillian Tolmie Prance (1937-), prominent British botanist and ecologist published extensively on families Chrysobalanaceae and Lecythydaceae, and drew particular attention in documenting the pollination ecology of *Victoria amazonica* (Poepp.) J.C. Sowerby. He is a former director of the Royal Botanic Gardens, Kew, and collected extensively in the Amazon basin.



REFERENCES: Cervantes, L., E. Hágsater & M. Soto, 2002, *Epidendrum nocturnum*, in E. Hágsater & M. Soto (eds.), *Orchids of Mexico*, Parts 2 and 3, **Icon. Orchid.** 5 & 6: t. t. 578. Sánchez S., L., & E. Hágsater, 2010, *Epidendrum carpophorum* in E. Hágsater & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 9, **Icon. Orchid.** 13: t. 1313. Hágsater, E., Meneguzzo, T. E. C., & L. Sánchez S., 2015, *Epidendrum erectum* in E. Hágsater & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 11, **Icon. Orchid.** 15(1): t. 1520. Sánchez S., L., & E. Hágsater, 2015, *Epidendrum spruceanum* in E. Hágsater & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 11, **Icon. Orchid.** 15(1): t. 1561. Sánchez S., L., & E. Hágsater, 2015, *Epidendrum tumuc-humaciense* in E. Hágsater & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 11, **Icon. Orchid.** 15(1): t. 1566.

Authors: E. Hágsater & L. Sánchez S.

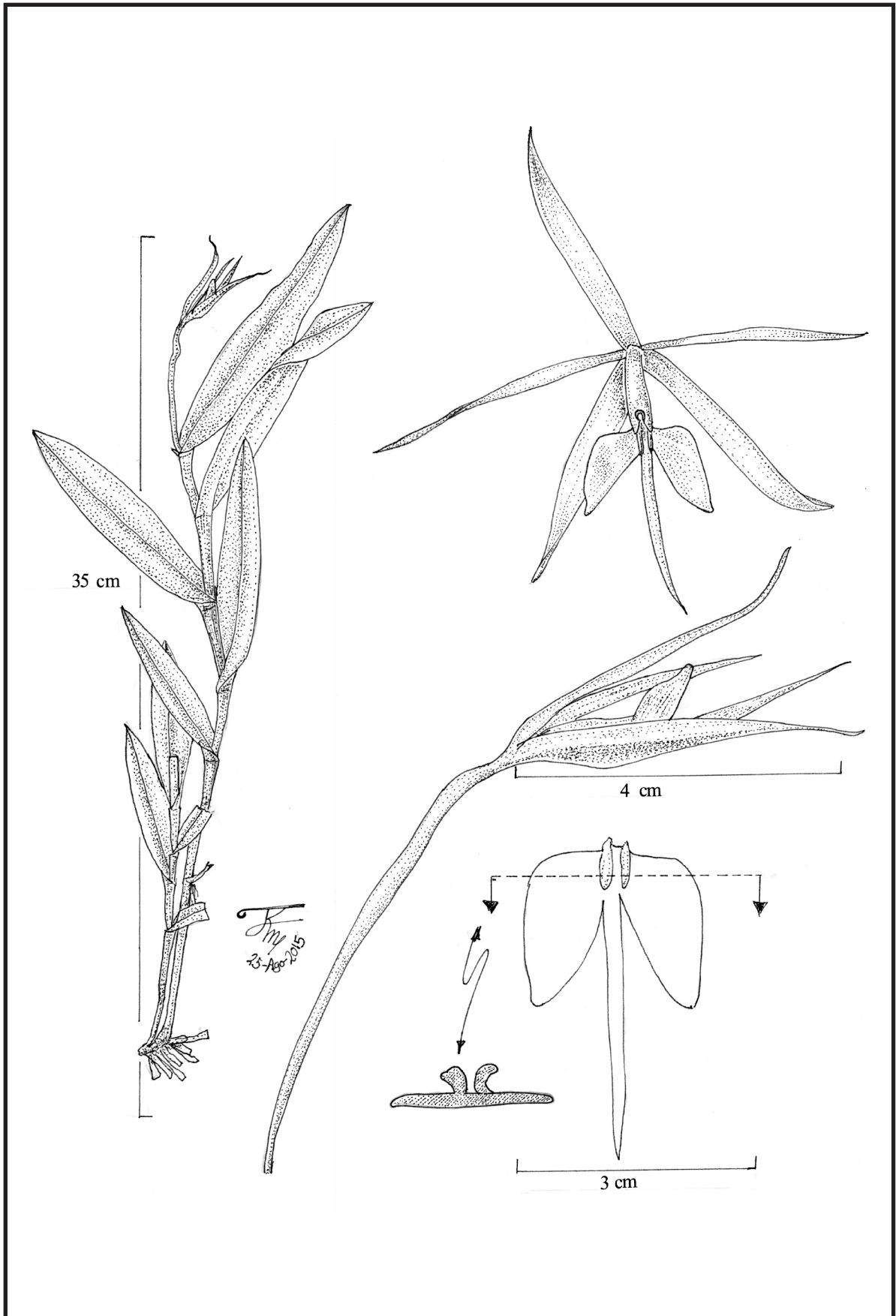
Illustrator: R. Jiménez M.

Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

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ICONES ORCHIDACEARUM 15(2). 2016. Plate 1594



EPIDENDRUM PRESBYTERI-LUDGERONIS Gomes-Ferreira

Plate 1595

EPIDENDRUM PRESBYTERI-LUDGERONIS Gomes-Ferreira. *Orquidário* 8(4): 91(-92). 1994.

Type: BRAZIL: Alagoas: Quebrangulo, Reserva Ecológica da Pedra Talhada, in silva cum paludibus altis, January 1990 [original publication cites 1991], *Ismael Cantinho Gouveia & Carlos Eduardo Melo e Silva s.n.* Holotype: UFP 9657! (illustration voucher) Xerox: AMO 18304! (including capsule, received in 1997 from the author (Gomes Ferreira, 1997).

Epiphytic, sympodial, caespitose **herb**, 33 cm tall including the inflorescence. **Roots** basal, fleshy, 2-3 mm in diameter. **Stems** 22 x 0.58 cm, cane-like, terete at base, laterally compressed above, simple, straight. **Leaves** 6-7, distributed throughout the stem, sub-erect, green; foliar sheaths 1.5-2.0 cm long, laterally compressed; blade 6.5-13 x 1.2-3.0 cm, (length:width = 5-6:1), lanceolate, apex slightly bilobed to retuse, coriaceous, slightly carinate. **Spathes** lacking. **Inflorescence** apical, pluri-racemose (racemose, producing new racemes from the basal internodes of the previous raceme with time, flowering from the same stem over several years); peduncle inconspicuous, ca. 25 mm long. **Floral bract** much shorter than the ovary, triangular, acute, embracing. **Flowers** successive, one at a time from a raceme, resupinate, autogamous, green with the sepals dorsally tinged red, lip white, column green, turning reddish on the fourth day after opening; fragrance not registered. **Ovary** 50-52 mm long, terete, unornamented. **Sepals** 30-45 x 6 mm, linear-lanceolate, acuminate, margin entire, revolute; lateral sepals slightly oblique. **Petals** 30-45 x 3 mm, linear-lanceolate, acuminate, margin entire, spreading. **Lip** united to the column, 3-lobed, base truncate; lateral lobes ca. 16 x 8 mm, semi-ovate, rounded, margin entire, spreading; mid-lobe ca. 33 x 2 mm, ensiform, acuminate, margin entire; bicallous, the calli laminar, prominent, parallel, curved in natural position so as to be longitudinally canaliculate externally. **Column** slightly arched, thin at the base, strongly dilated towards the apex. **Clinandrium-hood** not seen. **Anther** not seen. **Pollinia** not seen. **Rostellum** not seen. **Lateral lobes of the stigma** not seen. **Nectary** not seen. **Capsule** 52 mm long, ovoid, located at the apical half of the pedicelate ovary; pedicel 20 mm long, body 30 mm long, apical neck 2 mm long.

OTHER SPECIMENS: BRAZIL: Espírito Santo: Domingos Martins, 600 m, 3 I 1974, *Kautsky 415*, HB! **Rio de Janeiro:** Angra dos Reis, Japuhya, 17 IV 1926, *Hoehne s.n.*, SP!

OTHER RECORDS: None seen.

DISTRIBUTION AND ECOLOGY: Known presently only from a few specimens from the Mata Atlântica, along the SE coast of Brazil in the states of Alagoas, Espírito Santo and Rio de Janeiro. Flowering from January to April, in fruit in July.

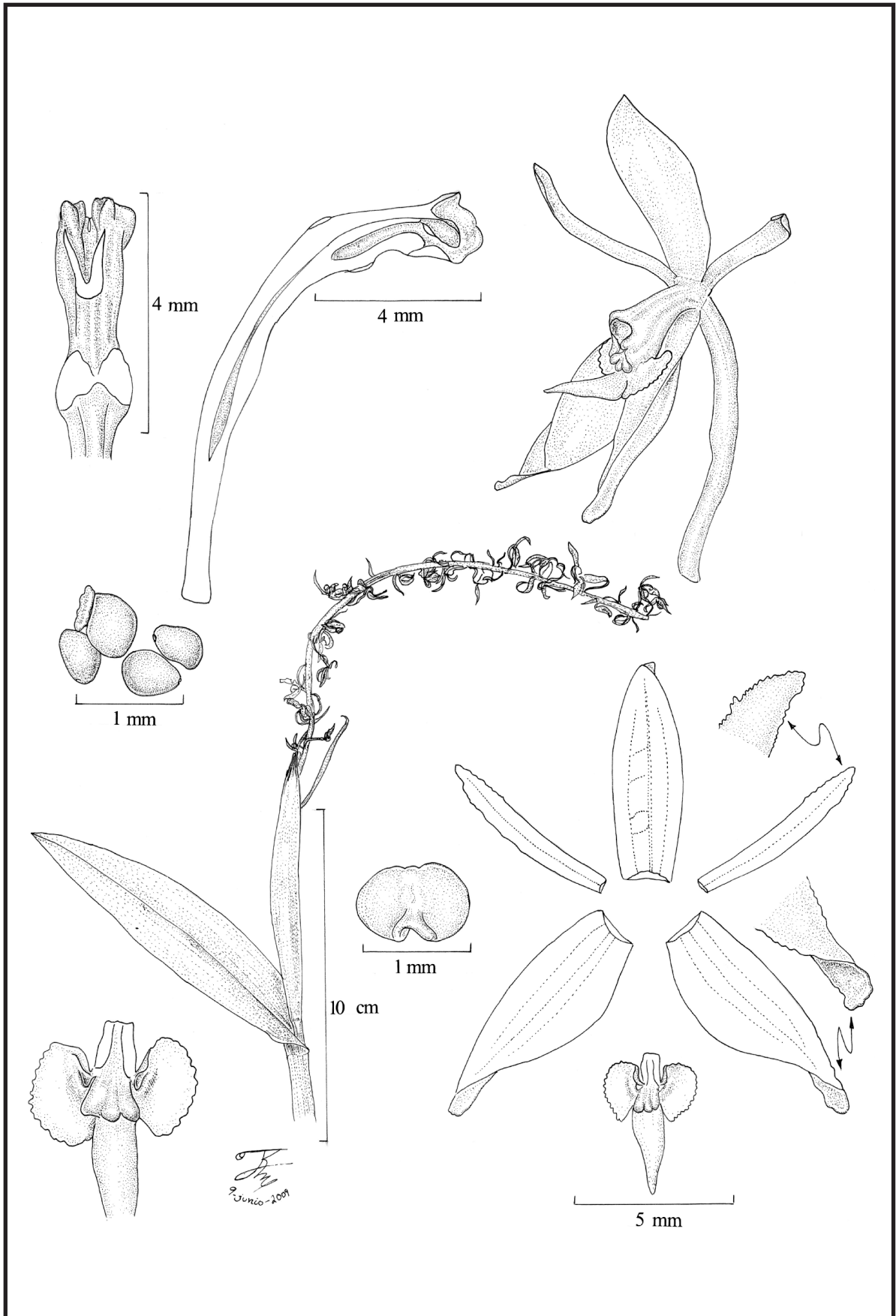
RECOGNITION: *Epidendrum presbyteri-ludgeronis* belongs to the Nocturnum Group which is characterized by the sympodial, caespitose plants, cane-like, non-fusiform stems, successive flowers on a short, racemose or pluri-racemose inflorescence, without spathaceous bracts, and large, star-shaped flowers, with similar sepals and petals; the flowers are mostly indistinguishable in shape. The species is recognized by the laterally compressed stems with 6-7 leaves distributed throughout the stem, lanceolate, 6.5-13 x 1.2-3.0 cm, flowers autogamous, green the sepals dorsally tinged red, lip white, column green, ovary 50-52 mm long, the body of the capsule located at the apical half of the pedicelate ovary. *Epidendrum carpophorum* Barb.Rodr., found along the Atlantic Coast from Venezuela, Guyana and Brazil has much wider, ovate-elliptic leaves, 2.5-6.0 cm wide, distributed along the apical half of the stem, sepals and petals yellowish green, lip and column white, petals narrower, 1.0-2.5 mm wide, and the ovary much longer, 50-120 mm long, with the body of the capsule only slightly displaced beyond the middle of the pedicelate ovary. *Epidendrum nocturnum* Jacq. widely distributed in the Neotropics at low altitudes, has terete stems, narrowly ovate-elliptic leaves distributed along the apical 2/3 of the stems, 0.8-4.2 cm wide, sepals and petals longer, 50-70 mm long, yellowish green, lip and column white, and the body of the capsule in the middle and occupying nearly the whole length of the pedicelate ovary.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In homage to Father Ludgero Raaymakers, SCJ, who celebrated the first mass in the parish of Palmeira dos Índios in 1952, promoted the first school and a community farm, and enjoyed the beauty of orchids in the region. He remained the parish priest for many years.



REFERENCES: Cervantes, L., E. Hágsater & M. Soto, 2002, *Epidendrum nocturnum* in E. Hágsater & M. Soto (eds.), *Orchids of Mexico, Part 2-3, Icon. Orchid.* 5-6: t. 578. Gomes Ferrerira, Augusto Burle, 1997, personal communication. Sánchez S., L. & E. Hágsater, 2010, *Epidendrum carpophorum* in E. Hágsater & L. Sánchez S. (eds.), *The Genus Epidendrum, Part 9, Icon. Orchid.* 13: t. 1313.



EPIDENDRUM ROEZLII Hágsater

EPIDENDRUM ROEZLII Hágsater, *sp. nov.*

Type: COLOMBIA: [Antioquia]: Medellín, **Benedict Roezl s.n.** Holotype: W-R 4777! (illustration voucher).

Similar to *Epidendrum tequendamae* F.Lehm. & Kraenzl. but the leaves shorter and twice as wide, flowers similar in size but the segments proportionately narrower, lateral lobes of lip with denticulate margin, calli shorter than the thickened mid-rib and the clinandrium-hood, though short, reaches the apex of the column.

Epiphytic, sympodial, caespitose **herb**, more than 23 cm tall. **Roots** basal, thin. **Stems** 0.6 cm thick, simple, cane-like, laterally compressed, erect, straight. **Leaves** articulate, alternate, sub-coriaceous; sheath 2.0 x 0.7 cm, tubular, laterally compressed, minutely striated; blade 10.3 x 2 cm, lanceolate, acute, margin entire, spreading. **Spathe** 7.3 x 0.7 cm, single, tubular, conduplicate, obtuse. **Inflorescence** 22 cm long, apical, racemose, slightly arched, densely many-flowered; peduncle 8 cm long, laterally compressed, erect, straight, nearly totally hidden by the spathe; apically provided with a pair of embracing bracts 18-31 mm long, linear-oblong, acute. **Floral bracts** 5-7 mm long, prominent, nearly as long as the ovary, linear-triangular, acuminate, embracing. **Ovary** 6-8 mm long, terete, thin, not inflated, unornamented. **Flowers** 40, simultaneous, resupinate, sepals and petals greenish, lip apricot colored, column green at base, the apex white, anther white; fragrance not registered. **Sepals** 7-8 x 2.2-3.0 mm, free, fleshy, elliptic, acute, 3-veined, inner surface minutely papillose, margin spreading; dorsal sepals somewhat spreading, minutely apiculate, margin entire; lateral sepals partly spreading, oblique, apical margin crenate, with a prominent dorsal keel, margin crenate. **Petals** 6.0 x 0.8 mm, partly spreading, free, linear, acute, 1-veined, apical margin crenate, spreading. **Lip** 4 x 3 mm, united to the column, fleshy, 3-lobed, base cordate; bicallose, the calli prominent, sub-globose, elongate to the base of the mid-lobe, with a pair of minute fleshy thickenings outside each callus; disc with a very short mid-rib, similar to and as long as the calli; lateral lobes 1.2 x 2.0 mm, spreading (without embracing the column), ovate, sub-acute, distal margin denticulate; mid-lobe 2.7 x 1.1 mm, slightly incurved in natural position, narrowly triangular, acute, margin entire. **Column** 4 mm long, straight, thick, the apex with a pair of short, truncate, semi-circular wings. **Clinandrium-hood** prominent (though not surpassing the body of the column), margin entire. **Anther** reniform, with a low central rib, prolonged into a short, upturned, fleshy hood at the apex of the anther; 4-celled. **Pollinia** 4, sub-obovoid, somewhat laterally compressed; caudicles soft and granulose, somewhat longer than the pollinia; viscidium not seen. **Rostellum** sub-apical, slit. **Lateral lobes of the stigma** small, occupying 1/3 the length of the stigmatic cavity. **Nectary** short, without penetrating the ovary, no inflated, unornamented. **Capsule** not seen.

OTHER SPECIMENS: COLOMBIA: Antioquia: S of Medellín, SE of Caldas, Morro Gil, 2380-2540 m, 23 X 1983, *Juncosa 1072*, JAUM! MO! **Tolima:** an der Passstraße über den Quindío, 2800 m, *Schneider 36*, S! (illustration, AMO!) Toche, 2300 m, 18 V 1042, *von Sneider 3037*, AMES! (illustration, AMO!).

OTHER RECORDS: COLOMBIA: Antioquia: al oriente de Antioquia, bosque de neblina, 2100 m, *Duque 1315*, photo, AMO! Antioquia, *Uribe s.n.*, digital images, AMO! Antioquia, *Uribe CUV-0108*, digital image, AMO! Mun. Angelópolis, 2183 m, *Monsalve 215*, digital photo series, AMO! (photograph voucher). **Tolima:** Ibagué, 2700 m, *Rincón s.n.*, digital photo series, AMO!

DISTRIBUTION AND ECOLOGY: Presently known from the departments of Antioquia and Tolima, south of Medellín, at around 2100-2700 m altitude. Flowering October.

RECOGNITION: *Epidendrum roezlii* belongs to the Alpicolum Group and Subgroup which is characterized by the simple, cane-like stems, 1-2 long, narrow, spathaceous bracts, fox-tail-like inflorescence and numerous flowers with fleshy lip, triangular mid-lobe and roundish lateral lobes. The species is recognized by the lanceolate leaves, sepals greenish, acute, 7-8 x 2.2-3.0 mm, lip apricot colored, the lateral lobes ovate with the margin denticulate. *Epidendrum tequendamae* F.Lehm. & Kraenzl. has narrower, longer, linear-lanceolate leaves, the flowers are similar in size and proportionately narrower, sepals 7.6-8.5 x 2.0-2.3 mm long, elliptic to linear-lanceolate, falcate petals, the lip callus somewhat shorter, and the margin of the lateral lobes entire; column has very prominent, long column wings which are rounded and notched above, with the clinandrium-hood very short, reaching only half the column length. *Epidendrum anthoceros* Rchb.f. has oblong leaves, spreading sepals 10-11 mm long, lateral lobes of the lip erose-denticulate, mid-lobe linear-triangular, short acuminate. *Epidendrum aenigmaticum* Hágsater & Dodson has small flowers, ochre-orange colored inside, lateral sepals 6.8-7.5 mm long, transversely ovate-elliptic lateral lobes of the lip are upright, with margin entire, and mid-lobe is short and wide.

CONSERVATION STATUS: DD. Data Deficient.

ETYMOLOGY: In honor of Benedict Roezl, (1823-1885) orchid collector born in Prague, Bohemia. He was sent to the Americas around 1868 by Messrs. Sander & Co. to collect orchids, sending thousands of plants back to England collected from California to Peru. He thus discovered about 800 species of flowering plants, including many orchids (Reinikka, 1972). He also collected the type of this species which lay unpublished in the Reichenbach herbarium in Vienna, annotated as *E. cariniferum* Rb.f., an unpublished name.

REFERENCES: Dunsterville, G.C.K., & L.A. Garay, 1976, *Epidendrum anthoceros*, **Venezuelan Orchids Illustrated** 6: 118-119. Hágsater, E. & C.H. Dodson, 2007, *Epidendrum aenigmaticum* in Hágsater, E. & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 6, **Icon. Orchid.** 9: t. 902. Hágsater, E., 2016, *Epidendrum tequendamae* in Hágsater, E., & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 11, **Icon. Orchid.** 15(2): t.1597. Reinikka, Merle A., 1972, **A History of the Orchid**, University of Miami Press, Coral Gables, 316 pp.



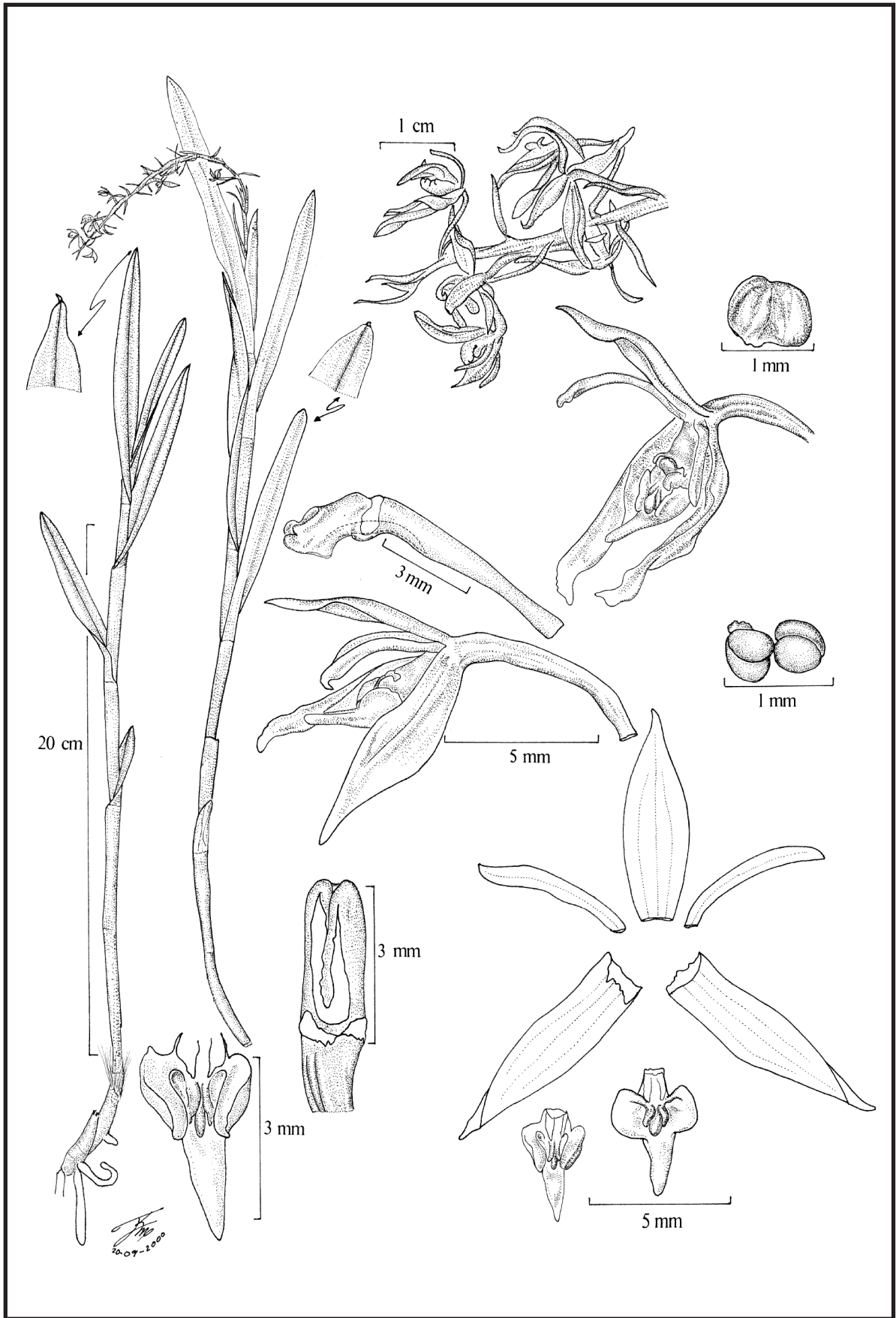
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Illustrator: R. Jiménez M.
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Photo: S. Monsalve

Editors: E. Hágsater & L. Sánchez S.

ICONES ORCHIDACEARUM 15(2). 2016. Plate 1596



EPIDENDRUM TEQUENDAMAE F. Lehm. & Kraenzl.

EPIDENDRUM TEQUENDAMAE F. Lehm. & Kraenzl., Engl. Jahrb. 26: 475. 1899.

Type: COLOMBIA: Cundinamarca; supra arbores dictas Psammit ad montem ignivomum Tequendama, February, **Friedrich Carl Lehmann 2589**. Lectotype, (here designated): K-Lindl.! Isolectotypes: AMES! G x2! LE! NY! (illustration voucher) W-R!

Epiphytic, sympodial, caespitose **herb**, 30-40 cm tall (excluding the inflorescence). **Roots** 3 mm in diameter, basal, thick. **Stems** 30-40 cm long, simple, cane-like, laterally compressed, ancapitose, erect, straight. **Leaves** 3-6, articulate, alternate, subcoriaceous, and unequal in length (the basal ones smaller); sheath 2.8-4.5 x 0.4-0.5 cm tubular, laterally compressed, minutely striated; blade 10-15 x 0.7-1.5 cm, linear-lanceolate, acute, erect, sub-parallel to the stem, margin entire, spreading. **Spathes** 1-2, 6.0-9.5 x 0.6 cm, tubular, conduplicate, acute, papiraceous. **Inflorescence** ca. 16 cm long, apical, racemose, arched, subdensely many-flowered; peduncle 6-10 cm long, laterally compressed, erect, straight, nearly totally hidden by the spathe; apically provided with a bracts 17-25 mm long, linear-oblong, acuminate, embracing. **Floral bracts** 6-11 mm long, prominent, about as long as the ovary, linear-triangular, acuminate, embracing. **Ovary** 6-8 mm long, terete, thin, not inflated, unornamented. **Flowers** ca. 45, simultaneous, resupinate, sepals and petals ochre, lip ochre-orange, somewhat darker than the sepals, column and anther pale greenish white; fragrance not registered. **Sepals** 7.0-8.5 x 2.0-2.3 mm, free, fleshy, elliptic, acuminate, dorsally minutely papillose, 3-veined, margin spreading, entire; dorsal sepals somewhat spreading, minutely apiculate; lateral sepals partly spreading, oblique, with a prominent dorsal keel extending beyond the surface of the sepals. **Petals** 6 x 0.7 mm, spreading, free, linear, apex obtuse, 1-veined, margin entire, spreading. **Lip** 3.5 x 3.0 mm, united to the column, fleshy, 3-lobed, base cordate, margin entire; bicallose, the calli prominent, sub-globose, short; disc with a very short mid-rib, extending beyond the calli, nearly to the base of the mid-lobe; lateral lobes 1.2 x 1.7 mm, embracing the apex of the column, transversely quadrate, rounded; mid-lobe 2.2 x 1.2 mm, slightly incurved in natural position, narrowly triangular, acute. **Column** 3 mm long, somewhat humped at the base, thick, the apex with a pair of very long, rounded wings, notched above. **Clinandrium-hood** short, only reaching the middle of the column, margin entire. **Anther** reniform, with a low central rib; 4-celled. **Pollinia** 4, sub-obovoid, somewhat laterally compressed; caudicles soft and granulose, somewhat longer than the pollinia; viscidium not seen. **Rostellum** at about the middle of the column considering the length of the lateral wings, slit. **Lateral lobes of the stigma** not seen. **Nectary** short, penetrating about 1/3rd of the ovary, no inflated, unornamented. **Capsule** not seen.

OTHER SPECIMENS: COLOMBIA: Cundinamarca: Facatativá, Zipacón, en Lagunaverde, 1700 m, 8 V 1964, *Uribe 4784*, COL! MO! NY! Ibid., arriba de capilla, 1750 m, 25 XI 1970, *Uribe 6483*, COL! Sin localidad precisa, cultivada en Sylvania en vivero de Sócrates Forero, *Escobar 5304*, received 1 XI 1993, AMO! Pacho, Vereda Negrete, 2163 m, 25 VI 2015, *Reina-Rodríguez 2212*, COL.

OTHER RECORDS: COLOMBIA: Cundinamarca: without locality, 2300 m, 12 XI 2011, *Parra s.n.*, digital photographs & sketch, AMO! VALLE. Albán, Los Saucos, 48 km W of Bogotá, 2060 m, 22 V 1999, *Silverstone-Sopkin 8234*, CUV! without locality, *C. Uribe 1*, digital image, AMO! (photograph voucher).

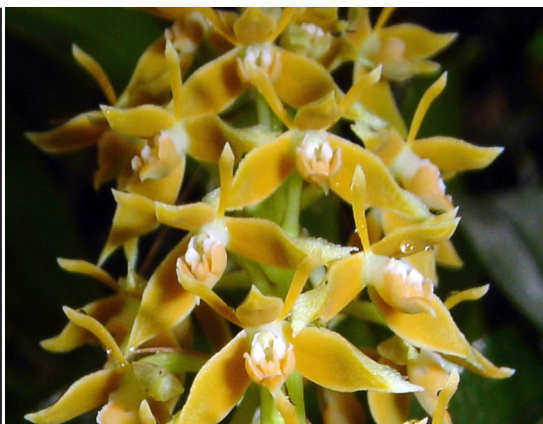
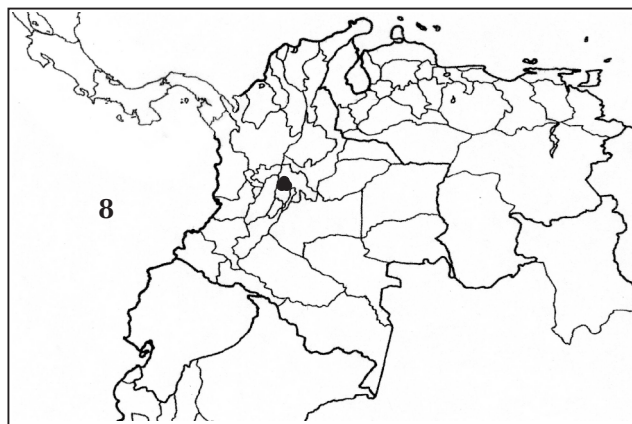
DISTRIBUTION AND ECOLOGY: Presently known from populations along the western slope of the Cordillera Oriental of the Andes (inner slope, Magdalena basin) and forming a belt along 100 km of cliffs on the cordillera in the transition of the humid forest (bh-MB) and very wet, low montane forest (bmh-MB) according to Holdrige (1967); or *selva subandina* to *selva andina* (Cuatrecasas, 1958) where the Tequendama falls are located, in the Department of Cundinamarca, Colombia. The belt is dominated by *Quercus humboldtii* and other epiphytes as *Tillandsia fendleri* among others. Epiphytic at 1700-2300 m altitude. Flowering from November to May, apparently correlated to the season of lower rainfall.

RECOGNITION: *Epidendrum tequendamae* belongs to the Alpicolum Group and Subgroup which is characterized by the simple, cane-like stems, 1-2 long, narrow, spathaceous bracts, fox-tail-like inflorescence and numerous flowers with fleshy lip, triangular mid-lobe and roundish lateral lobes. The species is recognized by the long rounded wings of the column, which therefore puts the clinandrium-hood at the middle of the column when seen from above, the ochre colored flowers, with the column and anther pale greenish white. *Epidendrum roezlii* Hágsater has the clinandrium-hood at the apex of the column, at the same level as the apex of the column wings. *Epidendrum anthoceros* Rchb.f. has oblong leaves, spreading sepals 10-11 mm long, lateral lobes of the lip erose-denticulate, mid-lobe linear-triangular, short acuminate. *Epidendrum aenigmaticum* Hágsater & Dodson has small flowers, ochre-orange colored inside, the lateral sepals 6.8-7.5 mm long, the transversely ovate-elliptic lateral lobes of the lip are upright, with the margin entire, and the mid-lobe is short and wide.

CONSERVATION STATUS: DD. Data deficient. The area is highly fragmented, with the presence of semi-intensive cattle grazing.

ETYMOLOGY: The Tequendama waterfall, SW of Bogotá, according to legend was created by the Chibcha savant, Bochica, when there was a great inundation on the Bogotá plain, and he struck a rock, and opened the space which caused great thunder, and released the water producing the cascade.

REFERENCES: Cuatrecasas, J., 1958, *Aspectos de la vegetación natural en Colombia*. Editorial Voluntad, Bogotá, Colombia, 44 pp. Dunsterville, G. C. K., & L. A. Garay, 1976, *Epidendrum anthoceros*, **Venezuelan Orchids Illustrated 6**: 118-119. Hágsater, E., & C. H. Dodson, 2007, *Epidendrum aenigmaticum*, in E. Hágsater & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 6, **Icon. Orchid.** 9: t. 902. Hágsater, E., 2016, *Epidendrum roezlii*, in E. Hágsater & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 11, **Icon. Orchid.** 15(2): t. 1596. Holdrige, L. R., 1967, **Life zone ecology**. San José, Costa Rica, 206 pp.



Author: E. Hágsater

Illustrator: R. Jiménez M.

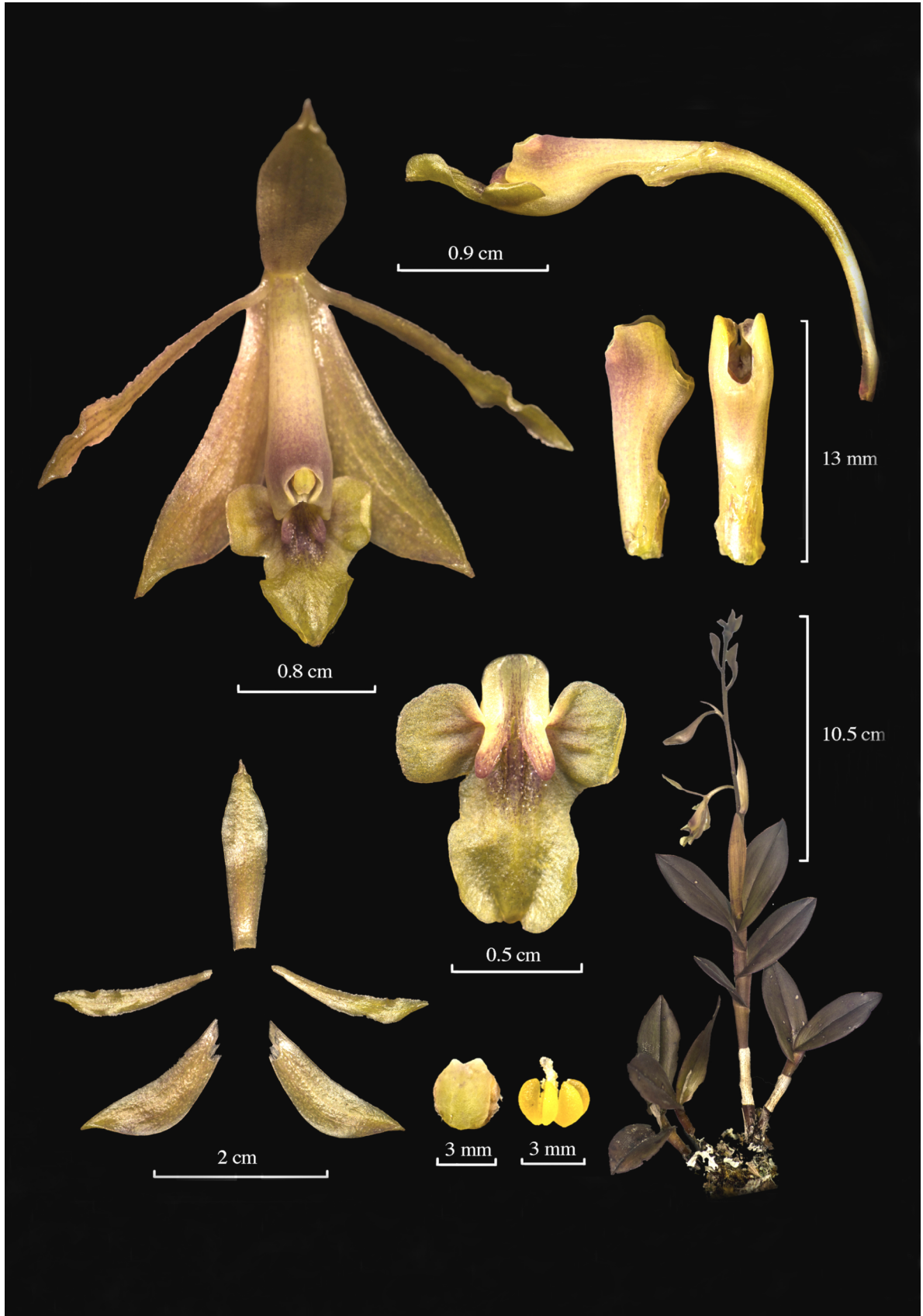
Photo: C. Uribe V.

Editors: E. Hágsater & L. Sánchez S.

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ICONES ORCHIDACEARUM 15(2). 2016. Plate 1597



EPIDENDRUM TOTOROENSE J.S.Moreno, Hagsater, E.Santiago & Erazo

Plate 1598

EPIDENDRUM TOTOROENSE J.S.Moreno, Hągsater, E.Santiago et Erazo, *sp. nov.*

Type: COLOMBIA: Cauca; Mun. Totoró, Gabriel López, Chuscales, 3250 m, 2°32'7.34"N 76°14'49.22"W, 12 marzo 2016, *Astrid Lucero Erazo 491*. Holotype: CAUP!

Similar to *Epidendrum philippii* Rchb.f. but the inflorescence longer, (13.5 cm vs 4 cm), flowers larger (sepals 19 mm long vs 10 mm long), lip nearly as long as it is wide (vs. wider than long) with the apex of the mid-lobe entire (vs. emarginate), and the disc of the lip with a wide mid-rib (vs. no rib what so ever).

Epiphytic, sympodial, caespitose **herb**, ca. 21 cm tall including the inflorescence. **Roots** 1.2 mm in diameter, basal, fleshy. **Stems** 3.5-7.5 x 0.2-0.6 cm, simple, cane-like, laterally compressed, erect, straight, the base covered by a non-foliar sheath 15-20 mm long, tubular, scarious. **Leaves** 2-4, sub-erect, alternate, articulate, coriaceous, conduplicate at the base; sheath 0.7-1.2 x 0.5-0.6 cm, tubular, ancipitose, striated; blade 2.5-5.0 x 1.3-2.0 cm, elliptic, apex acute, margin entire, slightly revolute. **Spathe** 1, 3.5 x 0.6 cm, conduplicate, basal half tubular, apical half open, acute, totally covering the peduncle. **Inflorescence** ca. 13.5 cm long, apical, racemose, laxly few-flowered, erect, straight; peduncle 6 cm long, ancipitose, with a single bract 27 mm long, sub-apical, similar to the floral bracts, but larger, lanceolate, acuminate, embracing; rachis 7.5 cm long, laterally compressed. **Floral bracts** 12-14 mm long, prominent, nearly as long as the ovary, gradually much shorter towards the apex of the rachis, triangular-lanceolate, acuminate, embracing. **Flowers** 7, successive, resupinate, fleshy, yellowish brown, apex of the column, calli and disc of the lip tinged purple; fragrance not registered. **Ovary** 19-20 mm long, short, terete, thin, not inflated, unornamented. **Sepals** 19 x 5 mm, 3-veined, acuminate, minutely apiculate, margin entire, spreading; dorsal sepal free, spreading, oblanceolate; lateral sepals united obliquely to the base of the column, partly spreading, oblong-elliptic, oblique. **Petals** 17 x 3 mm, free, partly spreading, linear-oblanceolate, 3-veined, acute, margin crenulate towards the apex, spreading. **Lip** 10 x 9 mm, united to the column, 3-lobed, base cordate, margin entire; bicallose, the calli laterally compressed, slightly divaricate; disc with 3 fleshy, low ribs, the lateral pair fuse with mid-rib, and forming a single thick, fleshy rib which ends at the apex of the mid-lobe; lateral lobes 3.5 x 4 mm, orbicular-dolabriform, the base with 3 short, thickened veins; mid-lobe 6 x 5 mm, rectangular-oblong, the apex truncate, with the margins slightly involute in natural position. **Column** 13 x 5 mm, straight. **Clinandrium-hood** reduced, margin entire. **Anther** ovoid, 4-celled. **Pollinia** 4, semi-obovoid, laterally compressed, the inner side of each pair flat; caudicles soft and granulose, longer than the pollinia. **Rostellum** apical, slit. **Lateral lobes of the stigma** small, 1/3 the length of the stigmatic cavity. **Nectary** not seen. **Capsule** not seen.

OTHER SPECIMENS: None seen.

OTHER RECORDS: None seen.

DISTRIBUTION AND ECOLOGY: presently known only from the type, from the summit of the Cordillera Central of the Andes in southern Colombia, epiphytic at 3250 m altitude. Flowering in March.

RECOGNITION: *Epidendrum totoroense* belongs to the *Friderici-guilielmii* Subgroup of the *Excisum* Group, recognized by the sympodial habit, tall, unbranched stems, few (3-5), unequal leaves, the sub-erect inflorescence with prominent spathe. The species is recognized by the short stems (to 7.5 cm tall) with 2-4 elliptic leaves (2.5-5.0 x 1.3-2.0 cm), erect inflorescence 13.5 cm long, flowers yellowish brown with the apex of the column and disc tinged purple, sepals 19 mm long, and the lateral lobes of the lip smaller than the mid-lobe. *Epidendrum philippii* is vegetatively very similar, but the inflorescence is short, 4 cm long, sepals 10 mm long, and the lateral lobes of the lip are somewhat larger than the mid-lobe which is emarginate. Florally, the new species is very similar to *Epidendrum sisgaense* Hągsater, but this species has stems to 87 cm tall, larger, oblong-elliptic leaves (6.5-18.5 x 1.3-4.0 cm), flowers are greenish brown, the lip red, and the lateral lobes of the lip about the same size as the mid-lobe, which has a slightly sinuate apex. *Epidendrum carlos-uribei* Hągsater & E.Santiago has taller stems (17-28 cm tall), 3-5 elliptic-lanceolate leaves (7.5-9.3 x 1.5-2.3 cm), and arching nutant inflorescence 11-18 cm long with up to 10 flowers which are brownish-orange, the lip yellow.

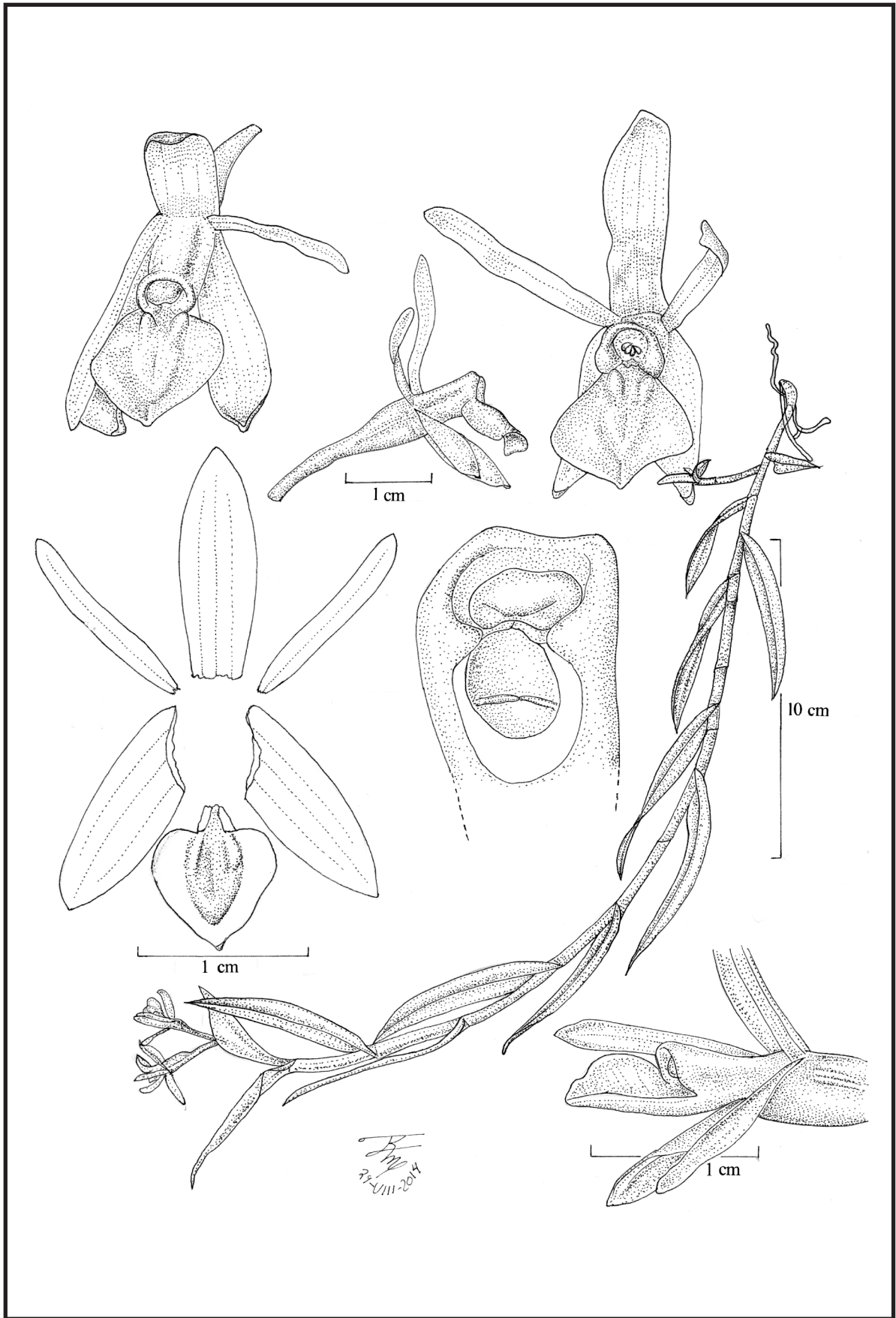
CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In reference to the municipality of Totoró, Cauca, where the species was seen and collected. The Totoró people have their own language, which has not yet been classified as to which linguistic family it belongs, and is in danger of being lost as only elderly people speak it.

ACKNOWLEDGEMENTS: We would like to thank Gustavo Pisso, a biologist from Cauca University, who is working very hard for the conservation and restoration of the forests of the town of Gabriel López, in the municipality of Totoró.

REFERENCES: Hągsater, E., 2001, *Epidendrum sisgaense* in Hągsater, E., & L. Sánchez Saldaña (eds.), *The Genus Epidendrum*, Part 3, *Icon. Orchid.* 4: t. 485. Hągsater, E., & E. Santiago, 2016, *Epidendrum carlos-uribei*, in E. Hągsater & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 11, *Icon. Orchid.* 15(2): t. 1575.





EPIDENDRUM VESICICAULE L.O.Williams

EPIDENDRUM VESICICAULE L.O.Williams, Bot. Mus. Leaf. 9(1): 13. t. 3, fig. 1-3. 1940.

Type: ECUADOR: Tungurahua; edge of forest between Páramos Minza Chica and Minza Grande, 3800 m, 5 April 1939, **Charles William Penland & Robert H. Summers 333**. Holotype: AMES 57891! Isotype: AMES!

Epiphytic, sympodial, sub-caespitose, pendent herb, 20-35 cm long (including the inflorescence). **Roots** 1-2 mm in diameter, produced from the basal internodes of the stems, thin, white. **Stems** 15-29 x 0.2-0.4 cm, branching, the branches produced from the basal internodes of the stems, cane-like, terete, thin. **Leaves** 9-11, distributed throughout the stems, unequal in size (the basal ones smaller), articulate, sub-pendent, somewhat fleshy; sheath 0.7-1.7 x 0.3-0.5 cm, tubular, somewhat infundibuliform in pressed specimens, scarious; blade 3.5-6 x 0.4-0.8 cm, narrowly lanceolate, falcate, acuminate, margin entire. **Spathe** 1, 2.2-2.7 x 0.6-0.9 cm, conduplicate, obliquely lanceolate in natural position, ovate when spread, acuminate. **Inflorescence** 2 cm long, racemose, apical, short, flowering only once, laxly few-flowered; peduncle and rachis totally hidden within the spathe. **Flowers** 4, simultaneous, resupinate, green, including the calli; without fragrance. **Floral bracts** 3-6 mm long, much shorter than the ovary, narrowly triangular, embracing, and generally hidden within the spathe. **Ovary** 18 mm long, straight, thin at the base, gradually thickened towards the apex, forming an evident ventral vesicle behind the perianth. **Sepals** 3-veined, membranaceous, unornamented, margin entire, spreading; dorsal sepals 13 x 3.5 mm, free, spreading, oblanceolate, obtuse; lateral sepals 12 x 4.5 mm, obliquely united to the base of the column, partly spreading, oblong-elliptic, sub-acute, slightly oblique. **Petals** 13 x 1.5 mm, spreading, free, straight, linear-oblanceolate, apex rounded, 1-veined, membranaceous, margin entire, spreading. **Lip** 7.5 x 8 mm, united to the column, cordiform, obtuse, minutely apiculate, margin entire, spreading except for the somewhat revolute posterior margin; bicallose, calli, parallel, low, fleshy, separated; disc formed by a prominent, cordiform thickening covering the middle of the lip, starting at the calli, and following the outline of the lip. **Column** 7 mm long, thin, slightly arched upwards along the basal half, apex truncate. **Clinandrium-hood** prominent, margin entire, slightly surpassing the body of the column, and straight. **Anther** not seen. **Pollinia** not seen. **Lateral lobes of the stigma** not seen. **Nectary** not seen. **Capsule** 4 x 1 cm, ellipsoid; pedicel 6 mm long, terete, thin; body 2 x 1 cm; apical neck 1.4 cm long.

OTHER SPECIMENS: COLOMBIA: Tolima: Ibagué-Tolima (Las Nieves), 3400-3600 m, 8 XI 2013, *Rincón 71*, TOLI. (illustration and photograph voucher; illustration prepared from digital photographic series). **ECUADOR:** Without locality data, *Sodiño s.n.*, QPLS! **Carchí:** El Angel, 3600 m, 15 VI 1983, *Hirtz 1236*, RPSC! Estac. Biol. Guandera, 3430 m, 13 II 2000, *Mites 384*, QCNE! Reserva Ecológica El Angel, El Gritadero, 3400 m, 1 XI 1993, *Palacios 11751*, QCNE! **Napo:** ENE of Cayambe Mountain, 10700 ft, 8 XII 1961, *Cazalet 5540*, AMES! K! NY! (illustration, AMO!) UC! US! **Pichincha:** cerca de la Laguna de San Marcos, 3300-3520 m, 1 I 1988, *Freire 968*, QCA! [Montis] Pichincha, III 1900, *Sodiño 23*, QPLS! **Tungurahua:** Tungurahua volcano, 3600 m, 18-19 XI 1983, *Korning 47247*, AAU! QCA! QCNE!

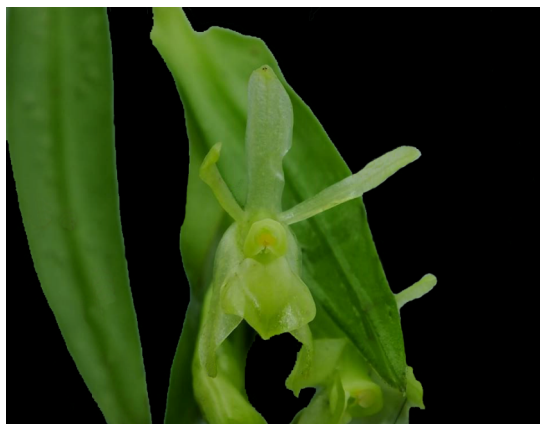
DISTRIBUTION AND ECOLOGY: Known from the inter Andean valley in northern Ecuador, and the Nevado de Tolima in the Cordillera Central of Colombia, epiphytic in elfin forests at the edge of páramos; at 3300-3800 m altitude. Flowering from November to April.

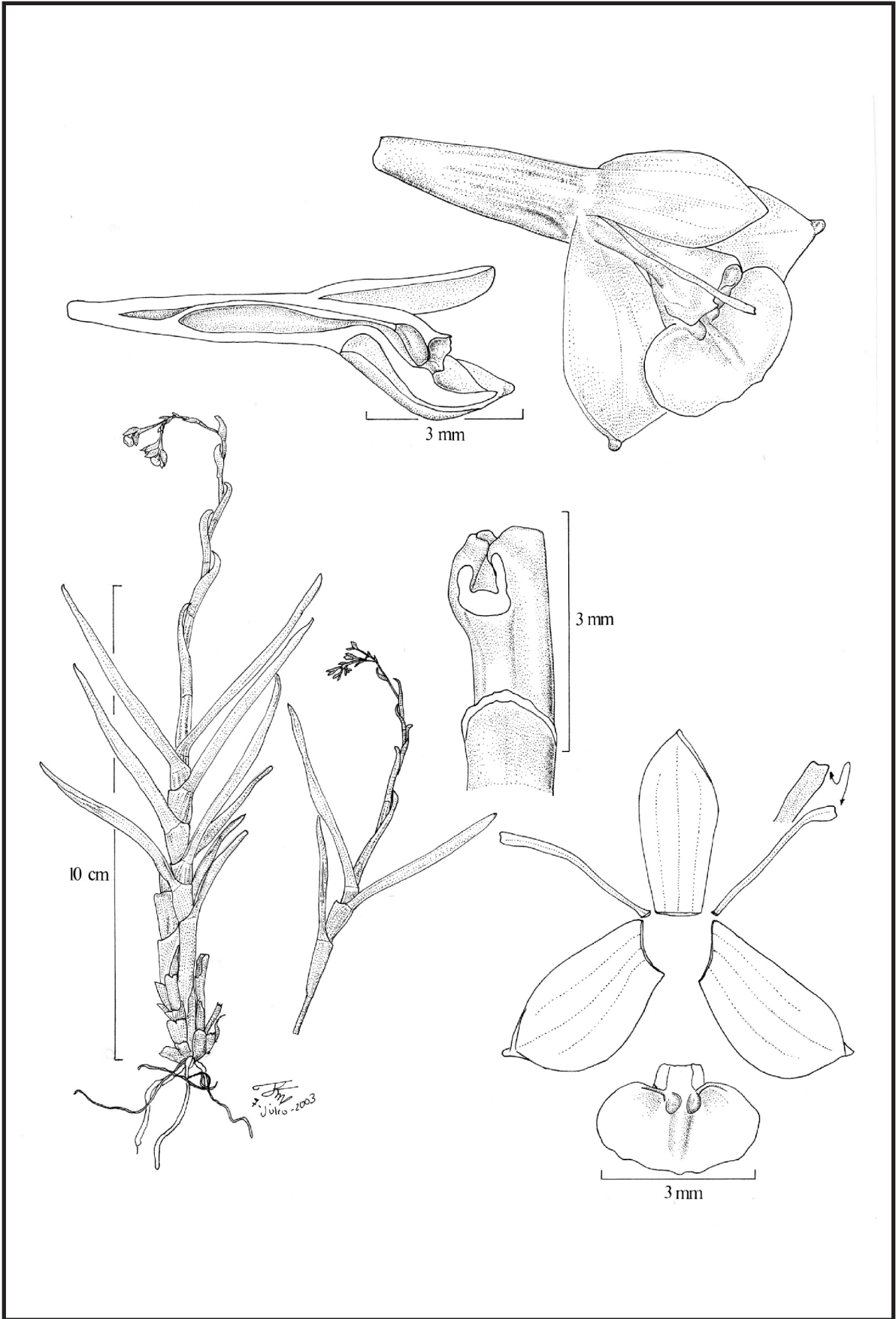
RECOGNITION: *Epidendrum vesicicaule* belongs to Megalospatham Group characterized by the caespitose but branching habit, many-leaved stem, fleshy, oblique leaves, a short, few flowered, raceme subtended by large semi-ovate spathaceous bracts, resupinate flowers, the column more or less united to the lip, and the Vesicicaule Subgroup which has a sympodial habit, numerous leaves throughout the stems, the leaves concolor, green, lip cordiform and bicallose. The species is recognized by the sub-caespitose, pendent plants, leaves narrowly lanceolate, 3.5-6.0 x 0.4-0.8 cm, inflorescence 4-flowered, sepals 12-13 mm long, petals straight, neither falcate nor oblique, lip cordiform with a pair of fleshy, green calli, with the disc prominently fleshy; column slightly upturned along the basal half, apex truncate, clinandrium-hood fleshy; found at 3300-3800 m altitude. *Epidendrum cardiomorphum* Hágsater & E.Santiago is vegetatively very similar but the leaves are 4.0-8.6 x 0.5-1.0 cm, inflorescence 2-flowered, sepals 14-18 mm long, petals slightly falcate, lip triangular-cordiform with a pair of small, laterally compressed, small, parallel calli, the disc not fleshy thickened, with three very thin, low, parallel ribs which disappear before the middle of the lip, and with multiple radiating thickened veins; clinandrium-hood slightly surpassing the body of the column, fleshy, straight; growing at 1500-2000 m altitude. *Epidendrum falcivesicicaule* Hágsater & E.Santiago has been confused with this species, but has a two flowered inflorescence with 2 semicircular, oblique imbricating spathes, the cordiform lip with a pair of calli, elongate, prominent, on a thickened, rounded platform, white, spongy has; clinandrium-hood prominent, truncate and slightly incurved; it is also found at lower altitudes, 1900-2700 m. *Epidendrum calyptrrectylosum* Hágsater & E.Santiago has linear-lanceolate, falcate leaves, the many-flowered (6-17), sub-umbelliform inflorescence, with one or two ovate, acuminate spathaceous bracts, the minutely striated ovary which is not inflated, sepals 7.8-9 mm long, the lanceolate to oblong, acute lip with the base slightly cordate, ecallose, and the very prominent clinandrium-hood with the margin entire. *Epidendrum platypetalum* Hágsater has narrowly ovate leaves 0.5-4.6 x 0.3-1.1 cm, 2 flowered inflorescence, sepals 18-20 mm long; petals elliptic-obovate, lip cordiform with two small calli and a short, narrow mid-rib. *Epidendrum pachyclinium* Hágsater & E.Santiago has obliquely lanceolate leaves 2.8-8.3 x 0.6-1.1 cm, a 2-flowered inflorescence, sepals 17 mm long, petals linear-oblanceolate, slightly oblique, lip orbicular-cordiform, with a pair of small, short, laminar white, calli, clinandrium-hood prominent, straight it an altitude of 1600-2000 m. *Epidendrum lagotis* Rchb.f. has ovate-elliptic leaves 2-6 x 1.0-2.3 cm, sepals 17-25 mm long, petals widely spatulate, 21 x 8 mm, and the lip orbicular, a pair of small spherical calli, and the disc with a short, narrow mid-rib.

NOTE: The name *Epidendrum vesicicaule* has been used for many specimens mainly from Colombia to Bolivia (see www.Tropicos.org, May 2016). However, detailed study has proven that about a dozen different species are involved, and some are illustrated and treated in this and other volumes of *Icones Orchidacearum*, mainly from Colombia and Ecuador, but also Peru. Many of the Ecuadorian specimens cited in Tropicos correspond to *E. cardiomorphum*. *Epidendrum calyptratoides* Hágsater & Dodson and *Epidendrum calyptratrum* F.Lehm. & Kraenzl. are also represented. We have not yet studied Bolivian material in detail, but *Epidendrum chaparense* Dodson & Vásquez belongs to this group.

ETYMOLOGY: from the Latin *vesi-* vesicle and *caule*, stem, in reference to the inflated leaf sheaths clearly visible in pressed material.

REFERENCES: Dodson, C. H. & R. Vásquez, 1989, *Epidendrum chaparense*, *Orchids of Bolivia*, **Icon. Pl. Trop.** ser. II, 4: t. 327. Hágsater, E., & C. H. Dodson, 2001, *Epidendrum calyptratoides*, in E. Hágsater & L. Sánchez S. (eds.) *The Genus Epidendrum*, Part 3, **Icon. Orchid.** 4: t. 426. Hágsater, E., 2001, *Epidendrum platypetalum*, in E. Hágsater & L. Sánchez S. (eds.) *The Genus Epidendrum*, Part 3, **Icon. Orchid.** 4: t. 472. Hágsater, E., & E.Santiago, 2013, *Epidendrum calyptrrectylosum*, in E. Hágsater & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 10, **Icon. Orchid.** 14: t. 1414. Santiago, E., & E. Hágsater, 2015, *Epidendrum lagotis*, in E. Hágsater & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 11, **Icon. Orchid.** 15(1): t. 1532. Hágsater, E., & E. Santiago, 2016, *Epidendrum cardiomorphum*, in E. Hágsater & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 11, **Icon. Orchid.** 15(2): t. 1574. Hágsater, E., & E. Santiago, 2016, *Epidendrum falcivesicicaule*, in E. Hágsater & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 11, **Icon. Orchid.** 15(2): t. 1581. Hágsater, E., & E. Santiago, 2016, *Epidendrum pachyclinium*, in E. Hágsater & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 11, **Icon. Orchid.** 15(2): t. 1590.





EPIDENDRUM XEROPHYTICUM Hágsater & E.Santiago

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

Type: ECUADOR: Loja: Road La Toma-Loja, km 12, 03° 59'S 79°19'W, 2000 m, 2 September 1988, **Jens Elgaard Madsen 75187**.

Holotype: LOJA! Isotypes: AAU! (illustration voucher). QCA!

Similar to *Epidendrum gracillimum* Rchb.f. & Warsz. but the leaves linear-lanceolate (vs. linear), shorter, wider and fleshy (2.0-4.5 x 0.4-0.6 cm vs 4.5-6.5 x 0.2-0.3 cm), the bracts of the peduncle acute and uncinata (vs. long acuminate and straight), flowers smaller (sepals 3.5 mm long vs 5.0-6.3 mm long), and the lip entire (vs. 3-lobed).

Epiphytic, caespitose, sympodial **herb**, 8-12.5 cm tall. **Roots** 0.8 mm in diameter, basal, thin, white. **Stems** 4.0-5.5 x 0.15-0.5 cm, simple, short, cane-like, terete at the base, laterally compressed towards the apex; base covered by sheaths 5-7 mm long, tubular, non-foliar, minutely striated, scarious. **Leaves** 4-7, distributed throughout the stem, sub-spreading, straight and fleshy; sheaths 0.6-1.2 x 0.2-0.5 cm, minutely striated, slightly tinged with purple; blade 2.0-4.5 x 0.4-0.6 cm, linear-lanceolate, acute, margin entire, spreading. **Spathe** lacking. **Inflorescence** 7-9 cm long, apical, paniculate, erect, laxly few-flowered; peduncle 4.5 cm long, thin, ancipitose, erect to slightly fractiflex, with 1-2 bracts 20-22 mm long, at the nodes, tubular, ancipitose at the base, conduplicate above the middle, acute, uncinata; rachis 4.5 cm long, thin, terete, with 5 or 6 racemes 0.5-1.0 cm long, each raceme sub-spreading, laxly few-flowered. **Floral bracts** 2-3 mm long, shorter than the ovary, narrowly triangular, acuminate, embracing. **Flowers** 18, 5-7 per raceme, lip always towards the rachis, small, membranaceous, simultaneous, reddish brown; fragrance not registered. **Ovary** 5 mm long, terete, thin, slightly inflated centrally along the apical half, forming an incipient vesicle. **Sepals** free, minutely apiculate, 3-veined, margin entire, spreading; dorsal sepal 3.5 x 1.5 mm, obovate, spreading to partly spreading; lateral sepals 3.5 x 2.0 mm, partly spreading, obovate-elliptic, slightly oblique. **Petals** 3.2 x 0.25 mm, free, filiform, with the apex slightly wider, 1-veined, apex truncate, margin entire, spreading. **Lip** 1.7 x 3.0 mm, totally united to the column, slightly convex, entire, widely elliptic-cordiform, base cordate, margin entire, spreading; bicallose, the calli small, globose, laterally compressed; disc with a wide mid-rib, that reaches the apex of the lip. **Column** 3 mm long, straight, thin. **Anther** not seen. **Pollinia** not seen. **Rostrum** apical, slit. **Lateral lobes of the stigma** not seen. **Nectary** penetrating to the middle of the ovary, slightly inflated, un-ornamented. **Capsule** not seen.

OTHER SPECIMENS: ECUADOR: Loja: Without locality data, 6000 ft., *Wagner s.n.*, W 4184! Cantón Calvas; Cerro El Ahuaca, close to the town of Cariamanga, 2000-2100 m, 16 IX 2005, *Werner 1765*, AMO! digital images and flowers in spirit, AMO!

OTHER RECORDS: None seen.

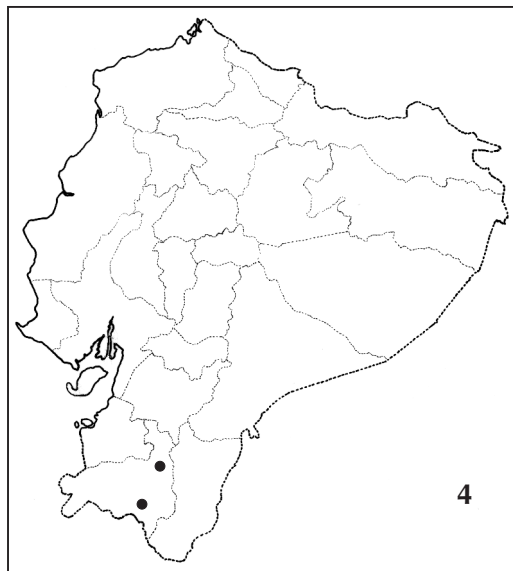
DISTRIBUTION AND ECOLOGY: Known presently only from the upper western slope of the Cordillera de los Andes in southern Ecuador, epiphytic in montane dry forest scrub and pyrogenic grassland. Common in dense forest with cacti along ravines, 1800-2100 m altitude. Flowering in September.

RECOGNITION: *Epidendrum xerophyticum* belongs to the Epidendropsis Group, Gracillimum Subgroup characterized by the sympodial, caespitose, relatively small plants with non-thickened stems, long, narrow, sub-coriaceous leaves, and a long, paniculate inflorescence, delicate small flowers. The species is recognized by the small plants, 8-12.5 cm tall, leaves 2-4.5 x 0.4-0.6 cm, linear-lanceolate, fleshy, the peduncle with acute, uncinata bracts, lip entire, widely elliptic-cordiform, and the ovary thickened along the apical half due to the swollen nectary, without forming an obvious vesicle. *Epidendrum gracillimum* Rchb.f. & Warsz. has taller plants, up to 20 cm tall, leaves 4.5-6.5 x 0.2-0.3 cm, linear and semi-terete, the peduncle of the inflorescence with long, acuminate bracts, lip 3-lobed, the apex bilobed, and the ovary forming a small vesicle. *Epidendrum schlimii* Rchb.f. has plants with narrow leaves, 0.2-0.3 cm wide, laxly, few-flowered inflorescences, the racemes 2-flowered, 0.5 cm long, dorsal sepals strongly reflexed, parallel to the ovary, and the petals filiform. *Epidendrum rolfeanum* F.Lehm & Kraenzl. has plants 12-18 cm tall, acicular leaves 4-11 x 0.1-0.2 cm, racemes of the inflorescence with 3-6 flowers, the flowers purple-brown with the disc of the lip greenish yellow, dorsal sepal strongly reflexed, and the petals filiform. *Epidendrum cryptorhachis* Hágsater has much taller plants, to 43 cm tall, leaves 2.8-10 x 0.4-0.8 cm, linear-lanceolate, bracts of the peduncle apically acute and clearly arched inwards but not uncinata, the racemes of the inflorescence many-flowered, parallel to the rachis, lip 3-lobed, and the ovary with a prominent, globose vesicle. *Epidendrum physophorum* Schltr. has similarly sized plants, 10-15 cm tall, leaves 3.5-6 x 0.15-0.3 cm, dorsal sepals strongly reflexed, parallel to the ovary, petals filiform, and the ovary with a very prominent inflated vesicle.

CONSERVATION STATUS: DD. Data deficient. The species is described as common locally, and the dry scrub forest is not a place commonly visited by orchid collectors.

ETYMOLOGY: From the Greek ξηρος, dry and φυτον, plant, and the ending -τηκος, pertaining to, in reference to the dry habitat where this species grows, among cacti.

REFERENCES: Bennett, D. E., & E. A. Christenson, 1993, *Epidendrum gracillimum* in E. A. Christenson (ed.) Orchids of Perú, **Icon. Orchid. Peruv.** t. 48. Hágsater, E., 2006, *Epidendrum cryptorhachis* in E. Hágsater & L. Sánchez S. (eds.) The Genus *Epidendrum*, Part 5; **Icon. Orchid.** 8: t. 823.



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Editors: E. Hágsater & L. Sánchez S.

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ICONES ORCHIDACEARUM 15(2). 2016.

Plate 1600