

ICONES ORCHIDACEARUM

Fascicle 16(2)
THE GENUS EPIDENDRUM
Part 12
“Species New & Old in Epidendrum”

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ICONES ORCHIDACEARUM

Fascicle 16(2), plates 1668 to 1700

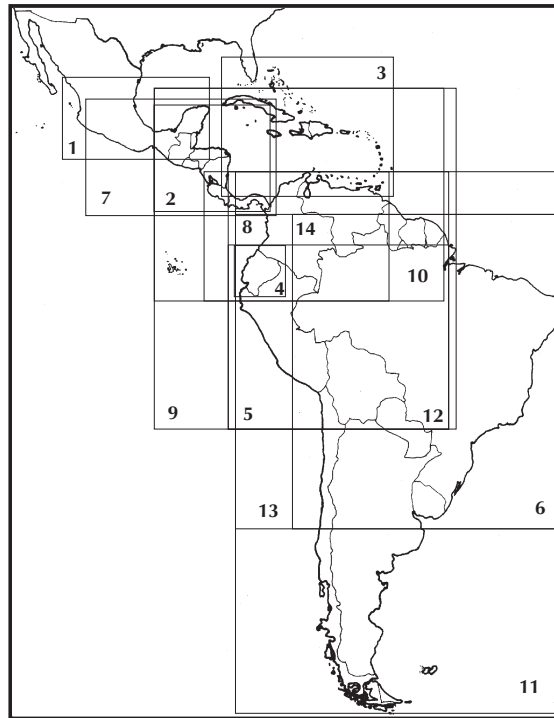
THE GENUS EPIDENDRUM Part 12

“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

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THE GENUS *EPIDENDRUM*

Part 12

“Species New* & Old in *Epidendrum*”

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THE GENUS *EPIDENDRUM*

Part 12

Species New & Old in *Epidendrum*

Foreword

Nearly two years ago Miguel Ángel Chocce Peña (2 February 1977 - 19 February 2017) passed away in Peru. He was a collaborator and a reviewer of *Icones Orchidacearum*. We wish to dedicate this issue of the *Icones* to his memory. Together we published 10 new species of *Epidendrum* from Peru in *Icones*; he published 2 additional species in other journals.

Since the publishing of the last issue of *Icones*, there have been several field trips to Ecuador and Colombia and thus numerous new species are appearing. Colombia is especially interesting, as after the peace has ended 50 years of internal warfare, many areas previously impossible to visit are now open for research. I had the opportunity to attend the National Orchid Exhibition in Popayán, Cauca, and from there briefly visit the herbaria in Popayán (CAUP) and Pasto (PSO), visit private collections and short field trips the Departments of Cauca, Huila, Nariño and Putumayo, all promising numerous species including a few which are published here.

In Ecuador, the agreement between the INABIO, Instituto Nacional de Biodiversidad in Quito and IBUNAM, Instituto de Biología, Universidad Nacional Autónoma de México, has facilitated two more field trips this year, in April and October, and close work with Marcia Peñafiel Cevallos and Efraín Freire of the National Herbarium of Ecuador (QCNE), Botanic Section of INABIO. In addition, I had the opportunity to visit, with Elizabeth Santiago Ayala of AMO, the herbaria of Cuenca (HA) and Loja (LOJA, HUTPL), as well as Q and QAP at the National University in Quito and QCNE. We also visited several private live collections including those of Javier Zambrano, in Piñas, and Ecuagenera, in Gualaceo. All these visits are leading to a better understanding of the diversity of the genus *Epidendrum*. Several new species are illustrated in this issue, with more in the works.

Our collaboration with several botanists in Peru is also clearly visible in this issue. It is becoming evident that southern Ecuador and northern Peru share numerous species, but Peru has been under collected in the far north. Thus some "endemic" species from Ecuador will lose that status. The same can be said of southern Colombia and northern Ecuador.

With the implementation of the LCDP, Lankester Composite Digital Plates, whereby color plates can be produced from photographs made in the field and the same night of the collection in any hostel, we can now publish almost immediately after collecting the material and preparing the necessary herbarium specimen to serve as a type.

Of the 33 species here described, 32 are new to science, 15 from Ecuador, 16 from Peru, and 4 from Colombia. Three have been found in two countries, and it is evident that several will be found in neighboring countries once we have recognized more material.

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Photo by José La Torre

Biól. Miguel Ángel Chocce Peña (1977-2017)

Margoth Elizabeth Acuña-Tarazona & Nanette Vega-Vera

Born in Lima, Peru, on February 2nd, 1977, Miguel studied Biology at the Universidad Nacional Mayor de San Marcos from 1996 to 2003, where he received his B.S. degree in Botany. Miguel became interested in orchids when he was student and joined the Monocot and Gymnosperm Department in the Museo de Historia Natural in Lima, in 2002, where he participated in various research projects. When he finished the career's courses, he developed his undergraduate thesis on the "Diversity of Orchids in Three Forests in the River Basin Los Amigos (Peru)", supported by the Botanical Research Institute Texas (BRIT). Later he also collaborated with the "Orchid Diversity and Ecology in the Andean-Amazonian Region of Southern Peru" project, supported by BRIT. Due to his excitement for fieldwork and interest on the ecology and conservation of the orchids, Miguel participated in international courses in Mexico, Bolivia, Dominican Republic, Guatemala, Nicaragua and China. Also, he did a research stay at the Marie Selby Botanical Gardens in Sarasota, Florida, to study all Peruvian orchid material and compiled an extensive orchid bibliography.

Miguel studied orchid flora for 10 years, focusing on the taxonomy of the genera *Epidendrum*, *Teagueia* and *Pterichis*. He co-authored the description of 12 new species of orchids. He was a member of the editorial committee of *Icones Orchidacearum*, participating in three volumes. Miguel was vice president of the Peruvian Botanical Society and actively participated as scientific coordinator of Orchidaceae in the Process of Categorizing Wild Flora Species organized by Peruvian governmental agencies (SERFOR – MINAM) and he worked as an environmental consultant for Amec Foster Wheeler.

He loved the plants and montane forests and knew the natural habitat of the orchids, especially in the northern Peru. He once said: "I recognize that my passion is orchids, however in each trip I take, I am always amazed by each expression of life, either floral shapes and colors, a magnificent tree or some curious animal". In the field, he showed great dedication, passion, optimism and good humor. Miguel was a conservationist and collaborated in the creation of five conservation areas in the Amazon along with his friends and girlfriend Nanette Vega-Vera; these areas conserve several habitats as montane forest, dry forest, shrubland, grassland and *jalca*.

Miguel died of cancer in Lima on February 19, 2017 at the early age of 40. Miguel was a good friend who shared his knowledge, expertise and love of orchids. He continually worked and developed close relationships with his academic colleagues and amateurs in Peru. We will miss his generosity, great charisma and kindness, and we acknowledge and honor his contributions to Peruvian orchidology.

New Orchid Species coauthored by Chocce

Compiled from The International Plant Names Index (IPNI), 12 November 2018, in alphabetical order.

- Epidendrum camilo-diazii* Hágsater & Chocce, Icon. Orchid. 13: pl. 1308. 2010.
Epidendrum chachapoyarum Chocce, Hágsater, M.E.Acuña & Vega-Vera, Icon. Orchid. 14: pl. 1415. 2013.
Epidendrum chotaëense Chocce, Hágsater & Vega-Vera, Icon. Orchid. 15: pl. 1513, 2015.
Epidendrum constrictolumna Hágsater, Chocce & E.Santiago, Icon. Orchid. 12: pl. 1226, 2009.
Epidendrum diommum Hágsater & Chocce, Icon. Orchid. 12: pl. 1238, 2009.
Epidendrum dolichobotryoides Hágsater, E. Santiago & Chocce, Icon. Orchid. 14: pl. 1424. 2013.
Epidendrum francisci Chocce, Hágsater & M.E.Acuña, Icon. Orchid. 12: pl. 1224, 2009.
Epidendrum jalcaëense Chocce, Dalström, Hágsater & J.Arnaiz, Lankesteriana, 9(3): 529-531; figs. 1-2. 2010.
Epidendrum latorreorum Chocce, Hágsater & Dalström, Icon. Orchid. 12: pl. 1259. 2009.
Epidendrum vegae Chocce & Hágsater, Icon. Orchid. 13: pl. 1397, 2010.
Epidendrum yanesharum M.E.Acuña, Chocce & Hágsater, 14: pl. 1459. 2013.
Teagueia moisesii Chocce & M.E.Acuña, Revista Peru. Biol. 18(2): 165. 2011.

New species dedicated in honor of Miguel Chocce:

- Epidendrum choccei* M.E.Acuña, Hágsater & E.Santiago, Phytotaxa, in press.

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

Eric Hágsater

EPIDENDRUM TRIALATUM Hágsater, *Icon. Orchid.* 11: pl. 1189. 2008.

(The list of OTHER SPECIMENS and OTHER RECORDS were omitted in the Appendix.)

OTHER SPECIMENS: **NICARAGUA:** Without locality, Hort. AMO ex FLAS, pressed 19 XII 1990, *Hágsater* 9230, AMO! Ibid. pressed 3 I 1991, AMO x2! Ibid. pressed 2 X 1992, AMO! Ibid. pressed 21 XII 1995, AMO x4! Ibid. pressed 21 XII 1995, *Hágsater* 9238, AMO x4! **Estelí:** En la Laguna de Miraflores camino a Estelí-Miraflores, 1850 m, 29 VIII 1982, *Martínez* 1932, MEXU! **Jinotega:** Region de Las Mercedes, sierra east of Jinotega, 1200-1500 m, 3 VII 1947, *Standley* 10645, F! **COSTA RICA: Alajuela:** Reserva Forestal de Arenal Río Negro de Chiquito, 1500 m, 16 II 1990, *Bello* 1882, INB! MO! Reserva Biológica de Monteverde, Río Peñas Blancas, *Haber* 7985, INB! MO! Reserva Forestal de Arenal, Cordillera de Tilarán, Falda Norte del Volcán Arenal, camino a Tabacón, 500-600 m, 18 I 1994, *Lépiz* 134, INB x2! **Heredia:** New road to the north of Quebrada Tigre, from Finca El Plástico to ca. 1.5 km NE there of (ca. 8 km SW of Las Horquitas), 450-550 m, 14 II 1986, *Grayum* 6495, MO! SEL! **Guanacaste:** Road side northeast of Tilarán, Atlantic slope, 600-650 m, *Dodge* 7149 AMES! Tilaran, Arriba de la presa El Arenal, col. 9 III 1983, pressed 17 II 1993, *Hágsater* 7093, AMO x2! Lago El Arenal, 21 XII 1983, *Hágsater* 7180, AMO! CR! MEXU! US! Tilarán, Tilarán-El Arenal, carr. 142 Km 27, a la vista del nuevo lago, 630 m, 26 I 1988, *Hágsater* 9470, AMO x4! CR! Tilarán, arriba de la Presa de El Arenal, col. 9 III 1983, pressed 21 II 1997, *Hágsater* 10430, AMO x2! Ibid. pressed 15 XI 1991, *Hágsater* 10431, AMO x2! Ibid. pressed 17 II 1993, AMO x4! Ibid. pressed 22 II 1993, AMO x3! Ibid. pressed 21 II 1997, AMO x2! Ibid. pressed 1 XI 1998, AMO! El Silencio, Tilarán, 12 II 1963, *Jiménez* 385, CR! F! Santa Elena to Tilaran road, Florida, ca. 1100 m, 17 II 1984, *Khan* 1127, CR! MO! Río Naranjo, 5 I 1975, *Taylor* 18128, ILL! NY! US! W slope of Cerro Nubes, ca. 2 Km E of El Silencio de Tilarán, ca. 900 m, 26 I 1985, *Grayum* 5013, AMES! AMO! CR! MO! SEL! Vicinity of Tilarán, 500-650 m, 10 I 1926, *Standley* 44172, US! Ibid. 44174, AMES! US! Ibid. 44396, AMES! US! El Silencio near Tilarán, ca. 750 m, 13 I 1926, *Standley* 44798, AMES! US! Ibid. 44800, AMES! US! El Arenal, 485-600 m, 18 I 1926, *Standley* 45276, AMES x2! US! Los Ayotes, near Tilaran, 600-700 m, 21 I 1926, *Standley* 45587, AMES! US! Los Angeles, near Tilaran, 600-700 m, *Standley* 45628, AMES! Tilaran, La Tejona, N of Tilaran, 600-700 m, 25 I 1926, *Standley* 46013, US! El Arenal, 18-19 I 1926, *Standley* 46056, AMES! US! Quebrada Serena, southeast Tilaran, ca. 700 m, 27 I 1926, *Standley* 46331, AMES! US! Ibid. 46339, AMES! El Arenal, 1 II 1976, *Utley* 3883, F! Ca. 5 km east of Tilarán, above Laguna de Arenal, 900-1000, 13 II 1963, *Williams* 24552, G! About 5 Km east of Tilarán, above Laguna de El Arenal, 900-1000 m, 13 II 1963, *Williams* 24562, F! LL! **PANAMÁ: Coclé:** Hills North of Valle de Anton, 800-1000 m, 2 I 1941, *Allen* 2287, AMES! Ibid. 1 I 1941, 2293, AMES! La Mesa, El Valle de Antón, 1 XI 1976, *Butcher* s.n., AMO! Norte de El Copé, pressed 29 III 1983, *Hágsater* 6297, AMO! F! Ibid. pressed 21 XII 1983, AMES! F! K! MO! ca. 15-20 km NE of North of El Cope, near continental divide and down Atlantic slope, 750-900 m, 23 VI 1988, *McPherson* 12631, MO! La Pintada towards Toábre, largest peak in vicinity, 600-1000 m, 15 II 1981, *Sytsma* 3621, MO! SEL! **Chiriquí:** On right side of road just beyond and down from Continental Divide, along Fortuna Dam-Chiriquí Grande Rd., ca. 900 m, 21 I 1985, *Read* 85-32, US! **Panamá:** Cerro Campana, trail leading to cross, 2700-2900 ft, 14 II 1981, *Sytsma* 3537, MO! Distrito Capiira, cerro Campana, ca. 900 m, *Werff* 6230, AMO! MO!

OTHER RECORDS: **NICARAGUA: Zelaya:** [Atlántico Norte: Cerro Saslaya] Selaya, 3400 ft, IV 1963, *Heller* 4810, Illustration SEL! Xerox copy AMO!

EPIDENDRUM LAMBEAUANUM De Wild., *Icon. Orchid* 16(1): pl. 1633. 2018.

The following specimens, correspond to the:

Department of **Cauca:** Cordillera Central, vertiente occidental. Hoya del río Palo, márgenes del río Tacueyó & La Tolda. 1780-1900 m, 19 X 1944, *Cuatrecasas* 19497, AMES! F! MO! NY! US! VALLE!

And therefore, the Cordillera Central and the Department of Cauca should be added to the Distribution.

EPIDENDRUM ALBAZOËNSE Hágsater & Salas Guerr. *Icon. Orchid* 16(1): pl. 1601. 2018.

Not: *Epidendrum albazoënze* Hágsater & Salas Guerr. (Index), nor *Epidendrum albazoënsse* Hágsater & Salas Guerr. (Plate)

For the following species names, the author names must be standardized as per IPNI, the International Plant Names Index: Chocce for Chocce-Peña, and M.E.Acuña for Acuña-Tarazona.

EPIDENDRUM CHACHAPOYARUM Chocce, Hágsater, M.E.Acuña & Vega-Vera, *Icon. Orchid.* 14: pl. 1415. 2013.

Replacing *Epidendrum chachapoyarum* Chocce-Peña, Hágsater, Acuña-Trarazona & Vega-Vera, *Icon. Orchid.* 14: pl. 1415. 2013.

EPIDENDRUM CHOTAËNSE Chocce, Hágsater & Vega-Vera, *Icon. Orchid.* 15: pl. 1513, 2015.

Replacing *Epidendrum chotaënsse* Chocce-Peña, Hágsater & Vega-Vera, *Icon. Orchid.* 15: pl. 1513, 2015.

EPIDENDRUM DOLICHOBOTRYOIDES Hágsater, E.Santiago & Chocce, *Icon. Orchid.* 14: pl. 1424. 2013.

Replacing *Epidendrum dolichobotryoides* Hágsater, E.Santiago & Chocce-Peña, *Icon. Orchid.* 14: pl. 1424. 2013.

EPIDENDRUM FRANCISCI Chocce, Hágsater & M.E.Acuña, *Icon. Orchid.* 12: pl. 1224, 2009.

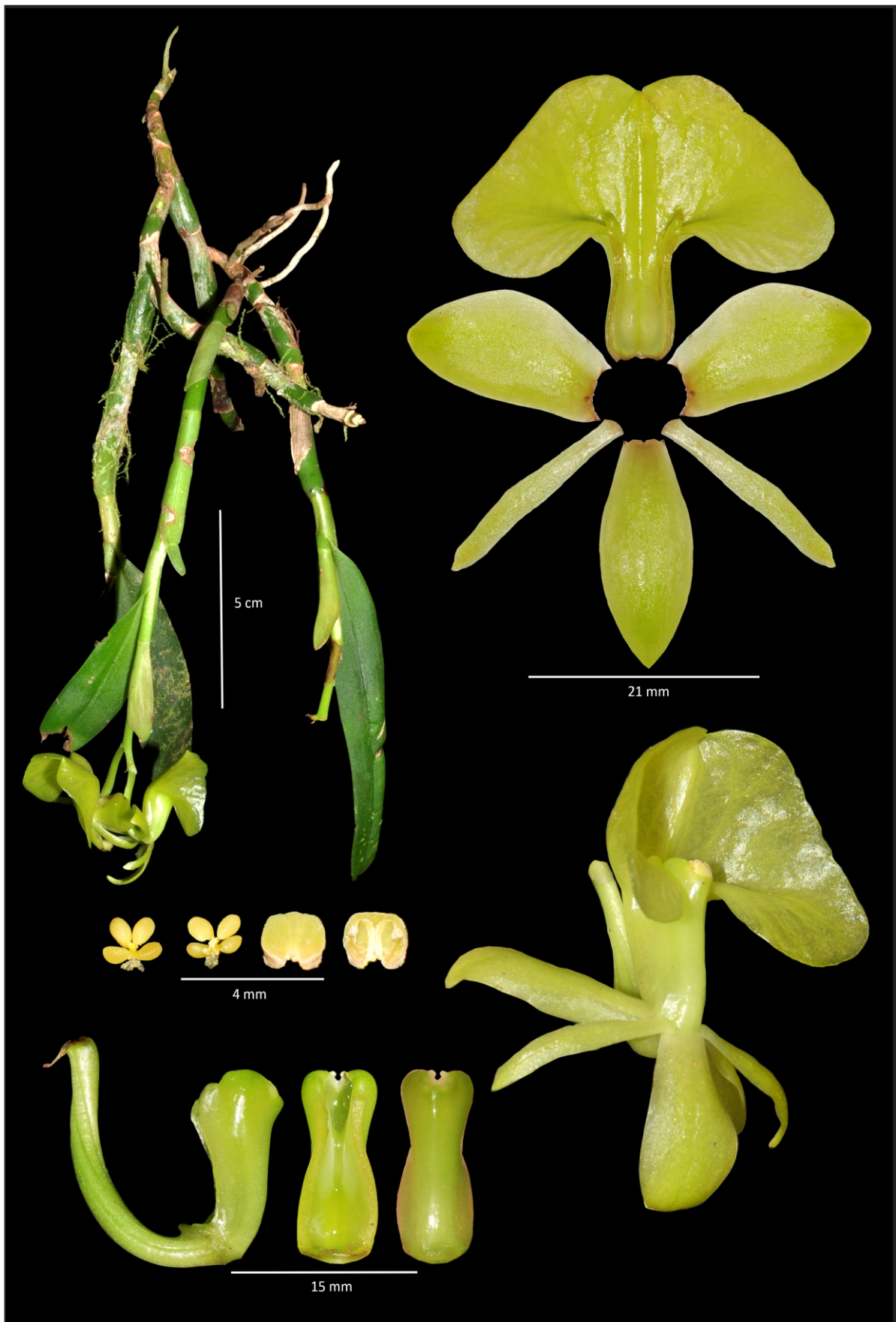
Replacing *Epidendrum francisci* Chocce, Hágsater & Acuña, *Icon. Orchid.* 12: pl. 1224, 2009.

EPIDENDRUM YANESHARUM M.E.Acuña, Chocce & Hágsater, 14: pl. 1459. 2013.

Replacing *Epidendrum yanesharum* Acuña-Tarazona, Chocce-Peña & Hágsater, 14: pl. 1459. 2013.

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
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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
Volume 16(1) part 12 was published on 24 January 2018
Volume 16(2) part 12 is published on 30 November 2018



EPIDENDRUM AMPHORASTELE Hágsater, A.Díaz & E.Santiago

Plate 1668

EPIDENDRUM AMPHORASTELE Hágsater, A. Díaz et E. Santiago, *sp. nov.*

Type: PERU: Lambayeque, Prov. Ferreñafe, Distr. Kañaris; a 2.9 km al SE de Kañaris, 2793 m, 22 febrero 2018, **Alex Díaz 98**, Holotype: HUT! (LCDP and photo voucher)

Similar to *Epidendrum moronense* Dodson & Hágsater, leaves 5-15 x 1.3-2.5 cm, lanceolate (vs. lanceolate-elliptic, 4-10 x 1-3 cm), but the flowers larger, green, with an anchor-like lip, margins entire (vs. lip white, sub-orbicular to reniform, base cordate, margin laciniate); the column is dorso-ventrally constricted at the apical 1/3, but widest at the base, though laterally thin at the base and progressively widened towards the apex.

Epiphytic, sympodial, pendent **herb**, 18-26 cm tall. **Roots** 1-2 mm in diameter, scarce, from the base of the stems, thin, fleshy, white. **Stems** 6.5-13 x 0.5-0.9 cm, cane-like, terete, produced from the basal internodes of the previous stem, straight, thickened, green tinged; partly covered when young by 2 green thin non-foliar striated sheaths, turning brown with age. **Leaves** 1-4, distributed along the apical half of the stem; sheath tubular, striated, short; blade 5-15 x 1.3-2.5 cm, lanceolate, acute, coriaceous-succulent, articulate, green, margin entire, spreading. **Spathe** 2.5-4 cm long, single, conduplicate, narrowly elliptic, acute; the spathe is located at the apex of a short laterally compressed peduncle, 1.2-2.5 cm long. **Inflorescence** up to 8 cm long including the flowers, apical, laxly few-flowered; peduncle ca. 2.4 cm long, laterally compressed, short, below the spathe, rachis above the spathe terete; rachis short; the flowers non-resupinate, the ovary turned over 90° so that the flower produced from the left side of the rachis is oriented slightly towards the right and vice-versa. **Flowers** 2-3, simultaneous, non-resupinate, by way of the arched ovary and the column forming a 90° angle with the ovary, fleshy, lustrous, greenish, anther pale green; fragrance not registered. **Floral bracts** 2 mm long, much shorter than the ovary, triangular, acute, embracing. **Ovary** 25 mm long, terete, thick, forming a 90° arch, not inflated, minutely striated. **Sepals** 18.8-20 x 8.7-9.5 mm, spreading, dorsal sepal elliptic, acute, apex somewhat revolute, margin entire, spreading; lateral sepals obliquely elliptic, somewhat shorter and wider than the dorsal sepal. **Petals** 19.1 x 2.2 mm, spreading, free, linear, narrowly rounded, sub-acute, 1-veined, margin entire, spreading. **Lip** 25 x 35 mm, united to the column, anchor-like, sub-reniform, base deeply cordate, the lobes rounded, apex emarginate, margin entire; bicallose, the calli very short, divergent, disc with a narrow, fleshy mid-rib, running nearly to the apex of the lip. **Column** 15 mm long, straight, forming a 90° angle with the ovary, so that column is vertical and upright, laterally constricted at the apical 1/3, so as to appear dorso-ventrally as a narrow amphora, without the handles, apex truncate (lateral view clavate). **Clinandrium-hood** reduced, margin entire. **Anther** wide, reniform, 4-celled. **Pollinia** 4, obovoid; caudicles soft and granulose, about as long as the pollinia; viscidium semi-liquid. **Rostellum** apical, slit. **Nectary** shallow, not penetrating beyond the perianth, and transversely widened towards the base of the column but vertically narrow. **Lateral lobes of the stigma** small, located at the constriction of the column. **Capsule** not seen.

OTHER SPECIMENS: None seen.

OTHER RECORDS: None seen.

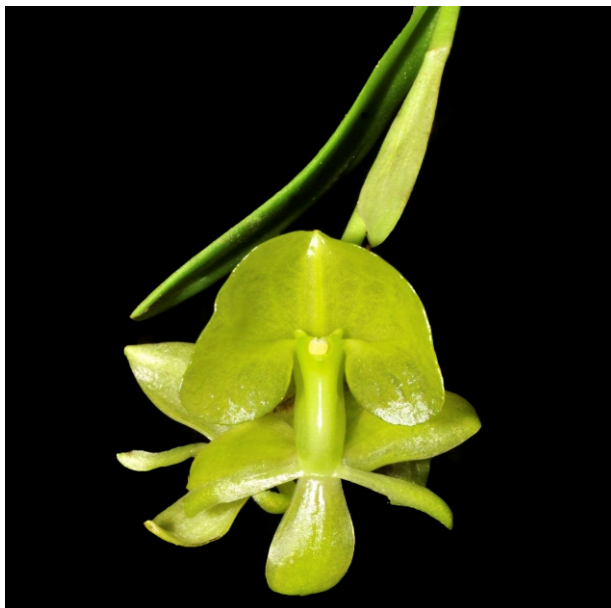
DISTRIBUTION AND ECOLOGY: Known only from the type, from the summit of the Cordillera Occidental of the Andes in northern Peru, just east of the Continental Divide, epiphytic at 2800 m altitude. Flowering in February.

RECOGNITION: *Epidendrum amphorastele* belongs to the Moronense Group which is characterized by the caespitose habit with thickened stems, with 1-4 fleshy, coriaceous leaves, the inflorescence apical, distichous, with successive non-resupinate flowers, the lip entire, bicallose, margin fimbriate to entire. The species is recognized by the pendent habit, single-leaved thickened stems, peduncle with a prominent spathe, and the non-resupinate flowers with a prominent anchor-shaped lip. The flower is reminiscent of that of *Epidendrum cuchibambae* Schltr. but the plant of that species is erect with several leaves on the thin stem. The plant is reminiscent of that of *Epidendrum moronense*, pendent, with a single apical, coriaceous, succulent apical leaf in mature plants. *Epidendrum moronense* has thickened stems 4 cm long, non-resupinate flowers, greenish to pinkish or buff, the lip white sometimes tinged with pale pink, column green, anther white, strongly reflexed sepals and petals nearly as long as the ovary, and the lip is reniform to sub-orbicular, with the margin deeply lacinate. *Epidendrum ruizlarreanum* D.E.Benn. & Christenson with a single linear leaf, has white, concolor flowers, spreading sepals, petals parallel to the column, the oblong-ovate un-lobed lip with the margin fimbriate, high laminar calli, and 3 narrow ribs, the reniform anther is truncate.

ETYMOLOGY: From the Greek ἀμφωρέας, amphora, an oval storage jar, with a narrow neck, and two handles, and στήλη, column, in reference to the dorso-ventral view of the column, which is constricted at the apical 1/3 and is reminiscent of a Greek amphora lacking the handles. The column is dorso-ventrally compressed towards the base, a very unusual feature, making the nectary equally transversely wide but narrow in height.

ACKNOWLEDGEMENT: Type collected under project "Estudios taxonómicos selectos de la flora del norte del Perú", Resolución: 247-2016-Serfor/Dggsppfs y la ampliación Resol. 430-2017.

REFERENCES: Bennett, D. E., & E. A. Christenson, 2001. *Epidendrum ruizlarreanum* in D.E. Bennett & E. A. Christenson (eds.), **Icon. Orchid. Peruvianum** pl. 651. Hágsater, E., 2015, *Epidendrum cuchibambae* in E. Hágsater & L. Sánchez S. (eds.), **The Genus Epidendrum**, Part 11, **Icon. Orchid.** 15: pl. 1517. Hágsater, E., 2015, *Epidendrum moronense* in E. Hágsater & L. Sánchez S. (eds.), **The Genus Epidendrum**, Part 11, **Icon. Orchid.** 15: pl. 1543.



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LCDP: A. Díaz

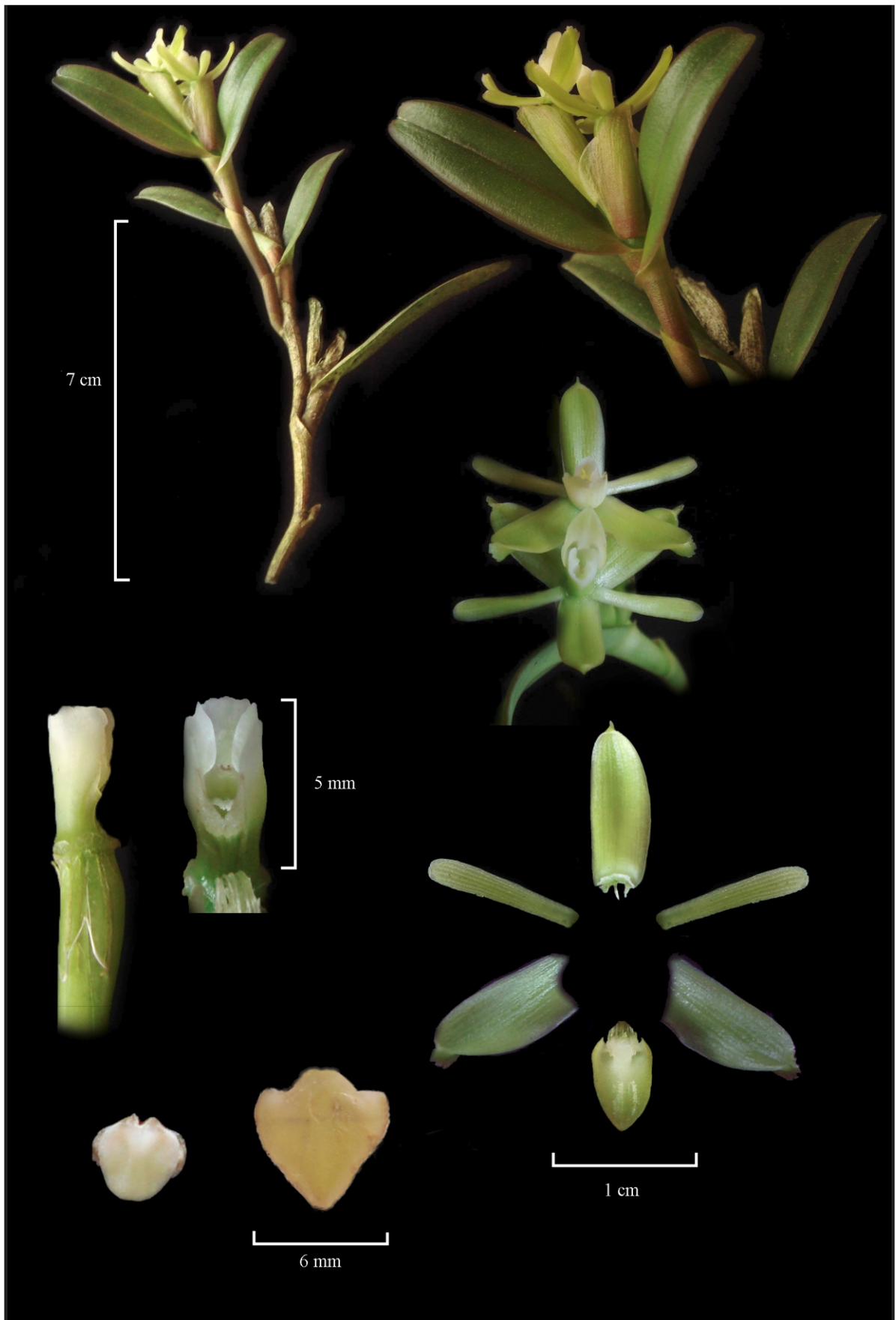
Photo: A. Díaz

Editors: E. Hágsater & E. Santiago

Herbario AMO

Ciudad de México, MÉXICO

ICONES ORCHIDACEARUM 16(2). 2018. Plate 1668



EPIDENDRUM CALYPTRANDRIUM Hágsater, Medina Tr. & Huamantupa

Plate 1669

EPIDENDRUM CALYPTRANDRIUM Hágsater, Medina Tr. et Huamantupa, sp. nov.

Type: COLOMBIA: Putumayo: Vereda La Esperanza; vía Minchoy-Mocoa, 1900 m, collected 26 March 2006, pressed 16 November 2014, **Ramiro Medina Trejo 266**, Holotype: JAUM! Digital photo series, AMO 135099! (LCDP voucher).

Similar to *Epidendrum modestiflorum* Schltr. but the flowers bright green with column and lip white (vs. olive-green), lip 6 x 6 mm (vs. 6.5 x 4.5 mm) and proportionately wider, triangular, the sides about equal in length as width at base when the lip is spread, embracing the apex of the column (vs. lip narrower than long, spread flat, not embracing the column).

Epiphytic, caespitose, sub-erect **herb**, to 72 cm tall. **Roots** basal, from the basal stems, thin. **Stems**: primary stem 15-35 x 0.3 cm, thereafter producing short, successive secondary stems from sub-apical internodes in succession from the 2nd or 3rd internode of the previous stem, forming long sub-erect chains, each stem 4.0-12.0 x 0.3-0.4 cm, progressively shorter, terete, somewhat sinuous; the basal half covered by 2 non-foliar sheaths 10-21 mm long, terete, apex obtuse, somewhat keeled towards the apex, green, the base more or less tinged red-brown, turning light brown when dry. **Leaves** 11 on primary stem, on secondary stems 2-3 per stem, aggregate towards the apex of stem, distichous, articulate; sheaths 4-10 mm long, tubular, somewhat conical, green tinged red-brown; blade of primary stem 3.8-5.8 x 0.8-1.6 cm; blade of secondary stems 2.8-4.5 x 0.5-1.5 cm, oblong-elliptic, coriaceous, apex widely bilobed, margin entire, surface rugose, green, the margin red-brown. **Spathes** lacking. **Inflorescence** apical, from the mature stem, both primary and secondary, flowering only once, distichous, sub-sessile, rachis very short ca. 1 cm long, zig-zag. **Flowers** 2-4, opening in succession, eventually all open at once, green, lip cream to pale green, column and callus white; fragrance not registered. **Floral bracts** 15 mm long, covering the whole ovary, embracing, somewhat funnel-shaped in natural position, apex widely obtuse, green, tinged red-brown. **Ovary** 12 mm long, thick, ventrally somewhat inflated. **Sepals** sub-spreading, many-veined, margins entire, spreading; dorsal sepal 11 x 4.0 mm, ovate-oblong, apex rounded, with a dorsal aristate, low keel; lateral sepals 11 x 4.6 mm, obliquely ovate-oblong, apex rounded, aristate, with a prominent dorsal keel, the apical margin of the keel dentate. **Petals** 10 x 2 mm, sub-spreading, linear-oblong, somewhat widened towards the rounded apex, 5-veined, margin entire. **Lip** 6 x 6 mm when spread, triangular-ovate, base very slightly cordate, united to the column, the sides upturned and partly embracing the column in natural position, apex narrowly rounded; callus a wide platform prolonged into a low rounded keel that reaches the apex of the lip, on the sides of the callus two short wide cuniculi. **Column** 5 mm long, short, straight. **Clinandrium-hood** prominent, membranous, thin, surpassing the body of the column and nearly continued down, to the sides of the column. **Anther** trapezoid, 4-celled. **Pollinia** not seen. **Rostellum** apical, slit, completely hidden by the clinandrium-hood. **Nectary** penetrating the apical half of the ovary, slightly inflated. **Capsule** not seen.

OTHER SPECIMENS: COLOMBIA: Caquetá: Mun. Belén de los Andaquíes, camino entre Acevedo y Belén, (camino Andaki), zona de cordillera entre paramillo, 1100-1400 m, 21 VII 2011, *Cárdenas et al. 41772*, COAH! (digital images of specimen before pressing, by Xavier Cornejo, AMO! GUAY!). **Huila:** San José de Isnos, "La Chorrera", 1700 m, floreció en Santadercito, IX 1974, *Ortiz 627*, HPUJ! **PERU: San Martín:** Prov. Lamas, Distr.: Alonzo de Alvarado - Roque, Caserio Canaán, 1494 m, 7 II 2018, *Edquén 403*, HURP! USM! digital images, AMO! (photo voucher).

OTHER RECORDS: COLOMBIA: Huila: San José de Isnos, "La Chorrera", 1700 m, floreció en Santadercito, IX 1974, *Ortiz 621*, photo and illustration HPUJ! copies AMO! **PERU: Cusco:** Paucartambo; Valle de Kosñipata, Pongo de O'ñech, 700 m, *Isau Huamantupa s.n.*, digital images, III 2011, *Hágsater s.n.* AMO 135503! *Ibid.*, as *Epidendrum strobiliferum* aff., (Huamantupa et al. 2015), digital images, AMO! **Madre de Dios:** Prov. Manú; Distr. Huepetuhe: Reserva Comunal Amarakaeri, 5 VIII 2014 *Soras s.n.*, digital images, AMO!

DISTRIBUTION AND ECOLOGY: Widely distributed along the Eastern slope of the Andes from southern Colombia to southern Peru, epiphytic in wet montane forest, 500-1900 m altitude. Flowering in March to July.

RECOGNITION: *Epidendrum calyptrandrium* belongs to the modestiflorum sub-group within the ramosum group, and is distinguished by the branched, repent habit, main stem with shorter lateral branches, few-flowered distichous inflorescence, with large bracts covering the ovaries, the lip ovate-triangular, without obvious lateral lobes, and a single "Y" shaped callus forming a platform at the base of the lip. The species is recognized by the leaves 2.8-5.8 x 0.5-1.6 cm, oblong-elliptic, coriaceous, apex widely bilobed; flowers bright green, column and lip white, lip 6 x 6 mm when spread, triangular-ovate, and the column 5 mm long, with a prominent clinandrium-hood membranous, thin, surpassing the body of the column and nearly continued down to the sides of the column. *Epidendrum modestiflorum* is vegetatively very similar, as well as in the size of flowers which are olive green, lip is smaller, 6.5 x 4.5 mm, and narrower than wide and flat, does not embrace the column. *Epidendrum paradiscolum* Hágsater & García-Cruz has leaves short and narrow (2.0-4.5 x 0.4-0.9 cm), 2-3 flowered distichous inflorescence, the flowers green, small, sepals 6.5-7.5 mm long, cordiform lip, and short clinandrium. *Epidendrum stevensii* Hágsater is distinguished by its larger plants, leaves 4-7 cm long, ovary which forms an elongate vesicle, flowers are green, sepals 7-9 mm long, triangular-cordate lip, and reduced clinandrium. *Epidendrum flexicaule* Schltr. also has numerous leaves 3-8 cm long, the ovary which forms a short vesicle, flowers are green, turning orange-brown, the perianth segments 9-12 mm long, petals 2 mm wide, ovate-cordiform lip is longer than wide and flat, the apex rounded, and reduced clinandrium.

NOTE: The Modestiflorum sub-group is mainly distributed in Costa Rica and Panama. It is surprising to find a new widespread species on the eastern slope of the Andes from Colombia to Peru.

ETYMOLOGY: From the Greek *καλυπτρα*, veil, and *ανδρος*, men's. In reference to the prominent, membranous, thin, clinandrium-hood, which is veil-like and surpasses the body of the column and continued down, to the sides of the column, which is characteristic of this species.

CONSERVATION STATUS: NT. Not Threatened. The species is very widespread, but few collections have been identified. It is found in steep wet montane forests, often too steep for any use such as cattle grazing.

REFERENCES: Hágsater, E., 1992, Nuevas especies del complejo *Epidendrum modestiflorum* de Costa Rica y Panamá, **Orquídea (Mexico City)** 12(2): 281-295. Hágsater, E., & J. García Cruz, 1999, *Epidendrum paradiscolum* in Hágsater, E., L. Sánchez S. & J. García Cruz (eds.) The Genus *Epidendrum* Part 2, **Icon. Orchid.** 3: pl. 366. Huamantupa, Isau, E. Hágsater & Isaac Huamantupa, 2015, *Epidendrum* (Orchidaceae) de las Yungas bajas del sur peruano, Regiones de Cusco, Madre de Dios & Puno, **fieldguide # 685** v.1, pg. 5: fig 27a & b, Field Museum, Chicago. Sánchez S., L., & E. Hágsater, 2008, *Epidendrum flexicaule* in Hágsater, E. & L. Sánchez S. (eds.) The Genus *Epidendrum* Part 7, **Icon. Orchid.** 11: pl. 1123. Sánchez S., L., & E. Hágsater, 2008, *Epidendrum modestiflorum* in Hágsater, E. & L. Sánchez S. (eds.) The Genus *Epidendrum* Part 7, **Icon. Orchid.** 11: pl. 1144. Sánchez S., L., & E. Hágsater, 2008, *Epidendrum stevensii* in Hágsater, E. & L. Sánchez S. (eds.) The Genus *Epidendrum* Part 7, **Icon. Orchid.** 11: pl. 1183.



Authors: E. Hágsater, R. Medina T. & I. Huamantupa LCDP: R. Medina T. & C. Álvarez Photo: J. D. Edquén O. Editors: E. Hágsater & E. Santiago



EPIDENDRUM CITRINANTHUM Hágsater

Plate 1670

EPIDENDRUM CITRINANTHUM Hágsater, sp. nov.

Type: ECUADOR: AZUAY: Cantón Oña: Parroquia: San Felipe de Oña: camino Urdaneta-Yacuambi, Bosque Protector Yacuambi, a 10 km de Urdaneta, 3081 m, páramo de alta montaña con pinos escasos, suelo duro de arenizca, 27 abril 2018, **Eric Hágsater, Gerardo. A. Salazar, Francisco Tobar, Itzi Fragoso y Marcia Peñafiel 15898**. Holotype: QCNE! Isotypes: AMO! MEXU! (ECDP & photo voucher).

Similar to *Epidendrum papallactense* Hágsater & Dodson, but stems thin, 2-3 mm in diameter, but leaves erect, parallel to the stem, 7-14 x 2-4 mm (vs. stems laterally compressed, leaves 7.5-14 x 1.4-2.0 cm), inflorescence 1.8 cm long, usually sessile, arching-nutant (vs. 9-31 cm long, arching, racemose to paniculate), with 2-7 sulphur yellow flowers produced in succession, 2-3 open at a time (vs. 13-34 flowers per raceme, successive, 2-3 open at a time, blue to black, lip green, to black, column green).

Terrestrial, caespitose, sympodial, erect **herb**, to 50 cm tall. **Roots** 3 mm diameter, basal, fleshy. **Stems** primary stem to 50 x 0.2-0.3 cm, terete, totally covered by sheathes of the leaves; secondary stems 1-7 x 0.16 cm, much shorter, produced from the nodes of the upper half of the stems, and these producing increasingly shorter stems. **Leaves** numerous per stem ca. 6 remaining at flowering on the primary stem, to as few as 2-3 on the shorter branches; sheathes 0.3-1.4 x 0.2-0.3 cm, tubular, striated, rugose, wine-red to yellow-brown; blade 0.7-1.4 x 0.2-0.4 cm, articulate, parallel to and adnate to the stem, imbricated, coriaceous, lanceolate-oblong, apex narrowly rounded, surface rugose, green, margin minutely and irregularly crenulate, especially towards the apex, spreading. **Spathe** lacking. **Inflorescence** ca. 1.8 cm long, very short, the inflorescence appearing usually sessile, apical, from both primary and secondary stems, racemose, arching-nutant; peduncle up to 1.0 x 0.1 cm, erect, terete; rachis 0.8 x 0.1 cm, zig-zag, very compact, minutely pustulate. **Floral bracts** 1.0-2.5 mm long, progressively shorter, triangular, acuminate, embracing, yellow, minutely dotted red. **Flowers** 2-7, successive, 2-3 flowers open at a time, sulphur yellow, concolor; fragrance absent. **Ovary** 2.5 x 0.8 mm, straight, smooth. **Sepals** 4.5-5 x 1.9-2.5 mm, partly spreading, somewhat concave, oblanceolate-elliptic, apex narrowly rounded, 3-veined, fleshy, margin entire, spreading, lateral sepals slightly oblique and wider, apiculate. **Petals** 4.5 x 0.5 mm, adnate to the margins of the dorsal sepal, linear-oblong, straight, membranaceous, 1-veined, apex truncate. **Lip** 3.3 x 4.4 mm, widely reniform, fleshy, base truncate, apex widely rounded, united to the column, cymbiform in natural position, embracing the apex of the column without covering it, callus lacking, with a low tape-like thickening, disappearing at the middle of the disc. **Column** 2.7 mm long, straight, apex widely rounded, except for the reduced clinandrium-hood which is concave when seen from the side. **Clinandrium hood** reduced, margin entire. **Rostellum** sub-apical, slit. **Anther** ovoid. **Pollinia** not seen. **Lateral lobes of the stigma** not seen. **Capsule** globose, body 8 x 6 mm, apical neck short

OTHER SPECIMENS: ECUADOR: AZUAY: Cantón Oña: Parroquia: San Felipe de Oña: subiendo de Urdaneta hacia el Bosque Protector Yacuambi, zona de flujo de agua con *Sphagnum* y *Puya* sp. y pinos intercalados, 3081 m, 17 X 2018, Hágsater 16015, QCNE!

OTHER RECORDS: None seen.

DISTRIBUTION AND ECOLOGY: Known presently from the type collection, on the mountainous border between Azuay and Loja provinces, above Urdaneta, at the entrance of the Bosque Protector Yacuambi, at 3081 m altitude. On hard sandstone with *Sphagnum* moss, and *Puya* sp. sparsely reforested with pine trees. Flowering in March-May and October, probably longer.

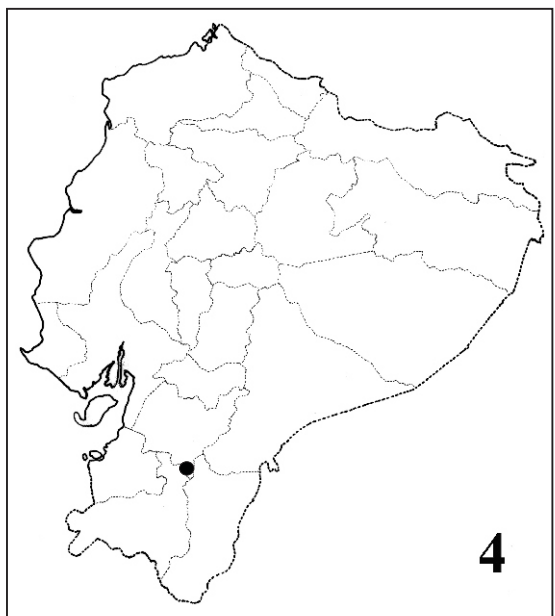
RECOGNITION: *Epidendrum citrinanthum* belongs to the Frutex Group recognized by the caespitose habit, usually simple stems, lanceolate leaves, inflorescence lacking spathes, nutant racemes, and a widely cordiform to reniform lip and Lepthanthum Subgroup which is characterized by the thin stems, scarcely branched when mature, leaves short, linear-lanceolate to lanceolate oblong, nearly parallel to the stem, inflorescence arching-nutant, apical and lateral in mature stems, racemose to paniculate, few-flowered. The species is recognized by the very thin erect stems, 2-3 mm in diameter, leaves 0.7-1.4 x 0.2-0.4 cm, erect, adnate to the stem, inflorescence very compact, arching-nutant of up to 7 successive sulphur yellow flowers, sepals 4.5-5 mm long, the lip widely reniform, lacking any callus, with a low tape-like thickening, disappearing at the middle of the disc. It resembles *Epidendrum papallactense* which is larger in every way, stems 46-70 cm long, somewhat laterally compressed, leaves 7.5-14 x 1.4-2.0 cm, flowers blue to black, lip green to black, column green, lip widely reniform, base truncate, embracing the column, with a "Y" shaped callus. *Epidendrum lepthanthum* Hágsater, from the same area, has thin stems to 40 cm tall, narrowly lanceolate leaves 2.6-8.0 x 0.4-0.7 cm, the inflorescence with the peduncle sub-erect, ca. 2.2 cm long, arching-nutant raceme with successive, cretaceous, greenish white flowers, delicate in substance, sepals 8.0-8.4 mm long, the lip deeply and widely cordiform, 6.0 x 6.5 mm, embracing the column, and callus "W" shaped. *Epidendrum harlingii* Hágsater & Dodson has sub-spreading leaves 5.4-12.1 x 0.7-1.2 cm, inflorescence is paniculate, erect, spreading, flowers yellowish green to brown-violet, lip somewhat spreading, not embracing the column, widely cordiform, base nearly truncate, and a callus "Y" shaped.

CONSERVATION STATUS: DD. Data deficient. Known presently from the type collection, on the mountainous border above Urdaneta (Loja) in Azuay province, entering the Bosque Protector Yacuambi at 3081 m. Heavy machinery was seen quarrying sandstone in the vicinity in October.

ETYMOLOGY: From the Greek κίτρινος, yellow, and ανθος, flower, therefore yellow flowered *Epidendrum*.

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

REFERENCES: Hágsater, E., & C. H. Dodson, 2001, *Epidendrum harlingii* in The Genus *Epidendrum*, Part 3, **Icon. Orchid.** 4: pl. 443. Hágsater, E., & C. H. Dodson, 2001, *Epidendrum papallactense* in The Genus *Epidendrum*, Part 3, **Icon. Orchid.** 4: pl. 468. Hágsater, 2018, *Epidendrum lepthanthum* in The Genus *Epidendrum*, Part 12, **Icon. Orchid.** 16(2): pl. 1677.



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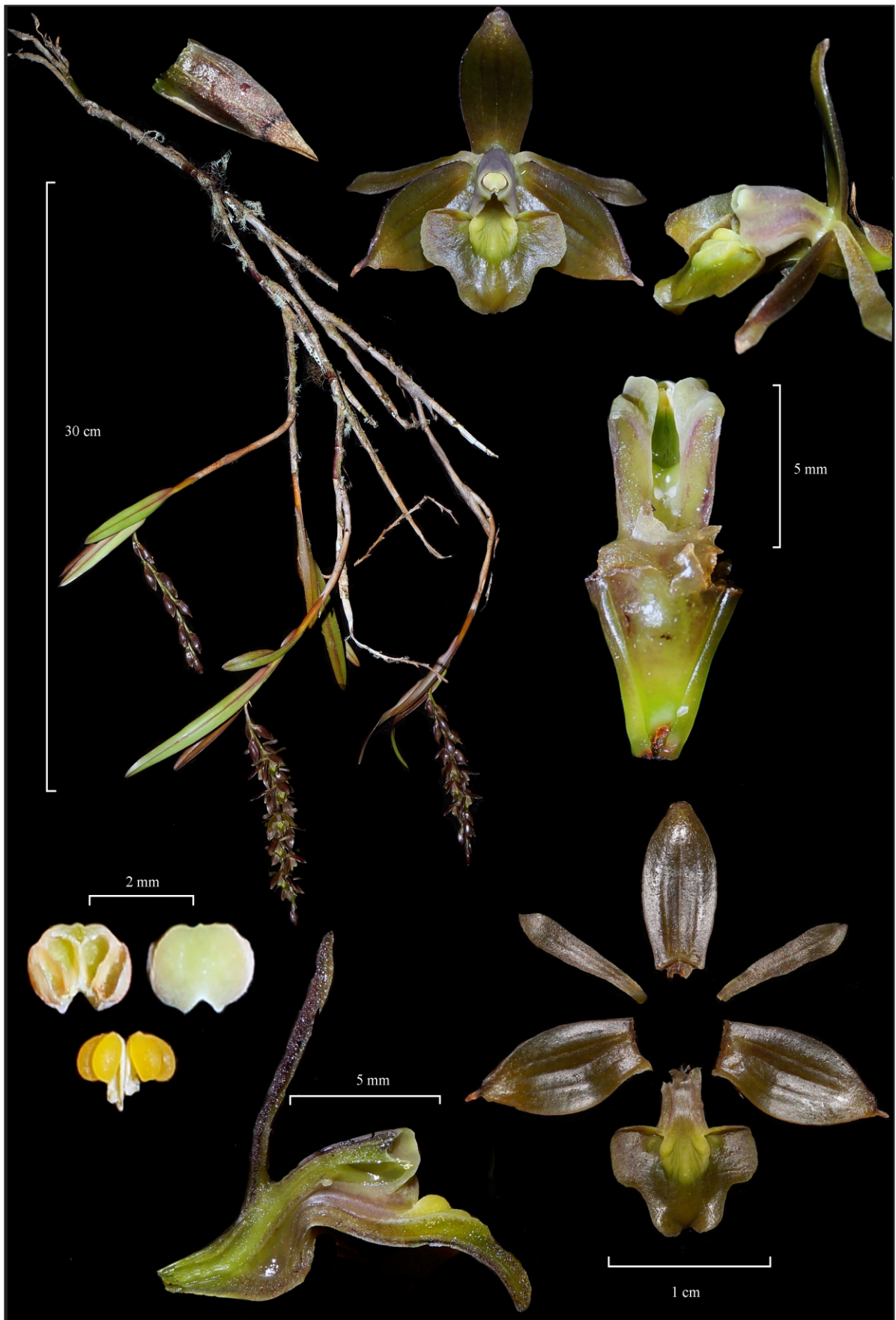
Photo: E. Hágsater

Editors: E. Hágsater & E. Santiago

Herbario AMO

Ciudad de México, MÉXICO

ICONES ORCHIDACEARUM 16(2). 2018. Plate 1670



EPIDENDRUM DIOSANENSE Hágsater, Edquén & E.Santiago

Plate 1671

EPIDENDRUM DIOSANENSE Hágsater, Edquén et E.Santiago, *sp. nov.*

Type: PERU: Amazonas: Provincia: Chachapoyas, Distrito: Granada, Comunidad campesina anexo de Diosán, 3232 m, 1 mayo 2018, **José Dilmer Edquén Oblitas 892**. Holotype: HURP! (LCDP and photo voucher).

Similar to *Epidendrum karstenii* Rchb.f. but the stems straight 7-12 cm de largo (vs. 2.5-6.0 cm long, slightly arching), 2-4 leaves 2.5-10.0 x 0.7-1.2 cm, oblong-lanceolate with the apex obtuse (vs. 2 leaves 3.0-5.1 x 0.6-0.8 cm, lanceolate to oblong-elliptic, apex acute), inflorescence 8-12 cm long with 11-22 flower (vs. 3.5-5.0 cm long with 5-14 flower) sepals partly spreading, 10-11 mm long (vs. dorsal sepal reflexed, 6-7 mm long), disc of the lip with a thickened semi-circular disc in front of the calli and a prominent rib (vs. disc of the lip with 3 low ribs).

Epiphytic, sympodial, sub-erect **herb**, 30-50 cm tall. **Roots** 2-3 mm in diameter, produced from the base of the primary stem, thick, white. **Stems** 7-12 x 0.4-0.6 cm, cane-like, terete at base, laterally compressed towards the apex, simple, produced from the middle of the previous stem, sub-erect, straight (larger plants often arching or horizontal due to the weight of the plant); base covered by 3-4 sheaths 1.0-3.0 cm long, tubular, non-foliar, scarious and becoming fibrous. **Leaves** 2-4, aggregate towards the apex of the stem, sub-parallel to the stem, alternate, articulate, green to greenish brown; sheaths 0.4-2.3 x 0.4-0.6 cm, tubular, minutely striated; blade 2.4-11.5 x 0.6-1.2 cm, oblong-lanceolate, apex obtuse, margin crenulate, spreading. **Spathes** lacking. **Inflorescence** 8-12 cm long, apical, racemose, cylindrical, arching-nutant, densely many-flowered; peduncle 1.0 cm long, somewhat laterally compressed; rachis 7-11 cm long, totally hidden by the flowers. **Floral bracts** 8-9 mm long, longer than the ovary, triangular, acuminate, embracing. **Flowers** 11-22, opening in succession from the middle towards the base and apex of the inflorescence, eventually all open simultaneously, resupinate, fleshy, dark brown to greenish brown, the disk of the lip, anther and clinandrium yellow-green; fragrance not registered. **Ovary** 5-6 mm long, terete, furrowed, thin at the base, gradually widening towards the apex. **Sepals** 10-11 x 6-7 mm, free, partly spreading, slightly concave, elliptic, 3-veined, obtuse, with a low apical dorsal keel and thus short aristate, margin entire, spreading. **Petals** 9 x 2 mm, free, spreading, linear-oblongate, sub-acute, 1-veined, margin entire, spreading. **Lip** 6.5 x 9.5 mm, united to the column, 3-lobed, base truncate, apex widely emarginate, margin entire, involute at base, thereafter spreading; bicallose, calli fleshy, prominent, elongate, divergent; disc prominently thickened, semi-circular, extending from the apex of the calli and between them to the middle of the lip, furrowed radially from the base with a thickened mid-rib, with an additional low thickened, progressively wider mid-rib that reaches the apical sinus of the mid-lobe; lateral lobes 3 x 4 mm, sub-quadrate, corners rounded; mid-lobe 3 x 5 mm, rectangular with the apex widely emarginate. **Column** 5 mm long, arching, constricted ventrally at base, forming a "S" with the ovary, thin at base and strongly widened vertically towards the apex. **Clinandrium hood** short, margin entire. **Anther** reniform, 4-celled. **Pollinia** 4, obovoid, somewhat laterally compressed; caudicles soft and granulose, somewhat longer than the pollinia; viscidium semi-liquid. **Rostellum** apical, slit. **Lateral lobes of the stigma** very small. **Nectary** widened at the base, at the insertion of the perianth, then narrowed where the column is constricted, unornamented. **Capsule** ellipsoid.

OTHER SPECIMENS: None seen.

OTHER RECORDS: None seen.

DISTRIBUTION AND ECOLOGY: Known presently only from the type in northern Peru, epiphytic on *Alnus acuminata* Kunth at 3232 m altitude in wet, montane, tropical forest (anthropic-cattle grazing area), registered in very disturbed areas. The habitat shows abundant moss accumulation and high ambient humidity. Flowering in May.

RECOGNITION: *Epidendrum diosanense* belongs to the Incomptum Group which is characterized by the successive lateral growths produced from the middle of the previous growth, few leaves aggregate towards the apex of the stems, a short apical inflorescence with fleshy greenish to violet-green flowers with short ovaries, the lip entire to 3-lobed. The species is recognized by the few, long, narrow leaves, to 11 x 1.2 cm, erect, aggregate towards the apex of the stem, the apical, nodding cylindrical narrow inflorescence densely covered by small, brown to greenish brown flowers, sepals 10-11 mm long, lip with a prominent, thickened green, semi-orbicular disc. *Epidendrum karstenii* Rchb.f. has bifoliate stems, the leaves spreading, 2.5-6 x 0.2-0.3 cm, inflorescence 3.5-5.0 cm long, with small greenish brown flowers, column green, apex purple, sepals 6-7 mm long, lip provided with 3 low ribs. *Epidendrum oenochromum* Hágsater & Dodson has oblong-lanceolate leaves 2.5-5.0 x 0.6-0.8 cm, inflorescence not cylindrical, 2.5 cm long, 6, burgundy-red flowers with column green, sepals 11.7-13 mm long, lip with a wide mid-rib, disc lacking any other thickening. *Epidendrum yambalense* Hágsater & Dodson has herbaceous leaves 2-9 x 0.7-0.1 cm, spreading from the stem, inflorescence 2-5 cm long, with yellowish green flowers, lip tinged purple, sepals 14-15 mm long, lip with 3 narrow ribs, the lateral pair apically bifid.

CONSERVATION STATUS: DD. Data deficient. Known from a single collection, but from a highly disturbed area and growing on early colonizing *Alnus* trees.

ETYMOLOGY: In reference to the community of Diosán, in Peru, where the species has been collected.

ACKNOWLEDGMENT: Collections made under project "Efecto de la fragmentación de hábitats de bosque alto andino en diversidad de Orchidaceae y Bromeliaceae del anexo de Diosán, Distrito de Granadas, Amazonas" emitido bajo la resolución de Dirección General (RDG) N° 137-2018-SERFOR/DGGSPFFS; correspondiéndole el Código de Autorización N° AUT-IFL-2018-025.

REFERENCES: Hágsater, E. & C. H. Dodson, 1993, *Epidendrum yambalense*, in E. Hágsater & G. A. Salazar (eds.), The Genus *Epidendrum*, **Icon. Orchid.** 2: pl. 198. Hágsater, E., & C. H. Dodson, 2004, *Epidendrum oenochromum*, in E. Hágsater & L. Sánchez S. (eds.), The Genus *Epidendrum*, Part 4, **Icon. Orchid.** 7: pl. 768. Hágsater, E., 2007, *Epidendrum karstenii* Rchb.f. in E. Hágsater & L. Sánchez S. (eds.) The Genus *Epidendrum*, Part 6, **Icon. Orchid.** 9: pl. 949.



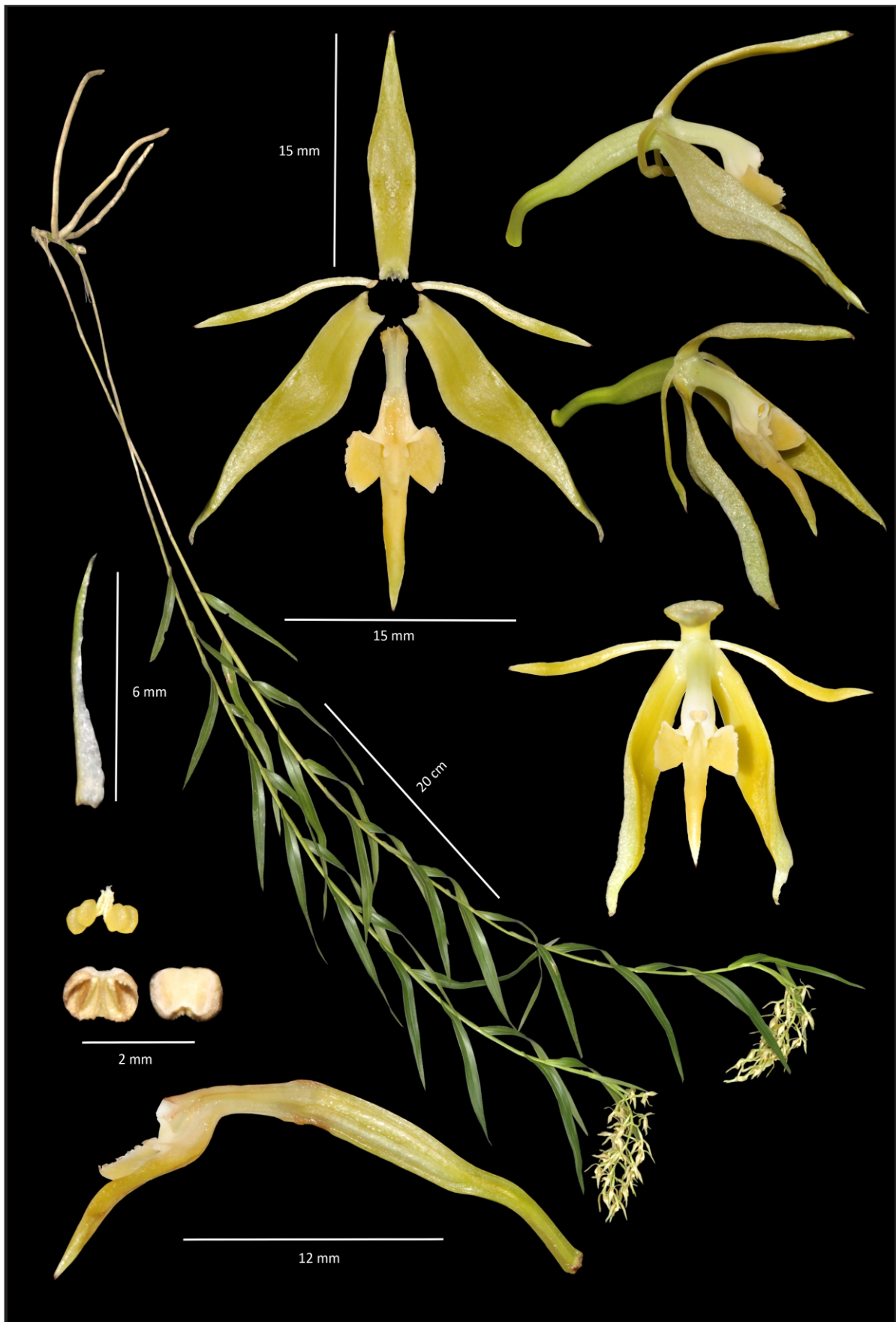
Authors: E. Hágsater & J. D. Edquén & E. Santiago LCDP: J. D. Edquén

Photo: J. D. Edquén Editors: E. Hágsater & E. Santiago

Herbario AMO

Ciudad de México, MÉXICO

ICONES ORCHIDACEARUM 16(2). 2018. Plate 1671



EPIDENDRUM DOLICHOCAULUM Hágsater & A.Díaz

Plate 1672

EPIDENDRUM DOLICHOCAULUM Hágsater et A. Díaz, sp. nov.

Type: PERU: Lambayeque, Prov. Ferreñafe, Distr. Kañaris a 1.9 km al SE de Kañaris, 2603m, 22 de febrero 2018, **Alex Díaz 96**, Holotype: HUT! (LCDP and photo voucher).

Similar to *Epidendrum cornutum* Lindl and is recognized by the 97 cm long stems (vs. 65 cm long), with 17-19 linear-lanceolate leaves to 9-15 x 0.8-1.2 cm, (vs. 13-14, 7-13.5 x 0.8-1.4 cm). relatively short, laxly flowered inflorescence, the large yellow flowers, sepals 15-20 mm long (vs. 10-12.3 mm), and the long, straight lip, mid-lobe 8.4 x 2 mm (vs. 4.5 x 1.1 mm).

Epiphytic, sympodial, caespitose **herb**, ca. 97 cm tall. **Roots** 3.5 mm in diameter, basal, thick. **Stems** 80 x 0.25 cm, simple, cane-like, terete, sub-erect to pendulous, straight. **Leaves** numerous, 15-17, distributed along the upper 2/3 of the stem, articulate, alternate, grass-like, green; sheath 2.5-4.0 x 0.25 cm, tubular, minutely striated; blade 7.9-15 x 0.8-1.2 cm, linear-lanceolate, acute, margin entire, spreading. **Spathe** 6.0 x 0.35 cm, single, tubular, conduplicate, obtuse. **Inflorescence** 11-18 cm long, apical, racemose, arched-nodding, laxly flowered; peduncle 5 cm long, laterally compressed, arching, straight, nearly totally hidden by the spathe. **Floral bracts** 7 mm long, prominent, about half as long as the ovary, linear-triangular, acuminate, embracing. **Ovary** 14 mm long, terete, thin, inflated ventrally along the apical 2/3 of its length, unornamented. **Flowers** 20-22, simultaneous, resupinate, sepals and petals yellow, lip ochre-yellow, column green at base, the apex white, anther ochre; fragrance not registered. **Sepals**, free, fleshy, linear-elliptic, acuminate, 3-veined, margin entire, spreading; dorsal sepal 15 x 3.2 mm, partly spreading; lateral sepals 20 x 4.2 mm, partly spreading, nearly parallel to the column/lip, oblique. **Petals** 13 x 0.9 mm, spreading, somewhat descending, free, linear, acute, 1-veined, margin entire, spreading. **Lip** 11 x 6.5 mm, united to the column, fleshy, 3-lobed, base cordate; bicallose, the calli small, laterally compressed, slightly divergent; disc with a very short mid-rib, about twice as long as the calli, which have even shorter ribs in front; lateral lobes 2.1 x 4 mm, spreading (without embracing the column), ovate, sub-acute, distal margin erose; mid-lobe 8.4 x 2 mm, straight in natural position, narrowly triangular, acuminate, margin entire. **Column** 7 mm long, straight, thin, the apex truncate. **Clinandrium-hood** reduced, margin entire. **Anther** 0.8 x 1.3 mm, reniform; 4-celled. **Pollinia** 4, sub-obovoid, somewhat laterally compressed; caudicles soft and granulose, about as long as the pollinia; viscidium semi-liquid, translucent. **Rostellum** sub-apical, slit. **Lateral lobes of the stigma** small, occupying 1/2 the length of the stigmatic cavity. **Nectary** long, penetrating somewhat over half the ovary, inflated, unornamented. **Capsule** not seen.

OTHER SPECIMENS: PERU: None seen.

OTHER RECORDS: PERU: None seen.

DISTRIBUTION AND ECOLOGY: Known only from the type, from the summit of the Cordillera Occidental of the Andes in northern Peru, just east of the Continental Divide, epiphytic at 2603 m altitude. Flowering in February.

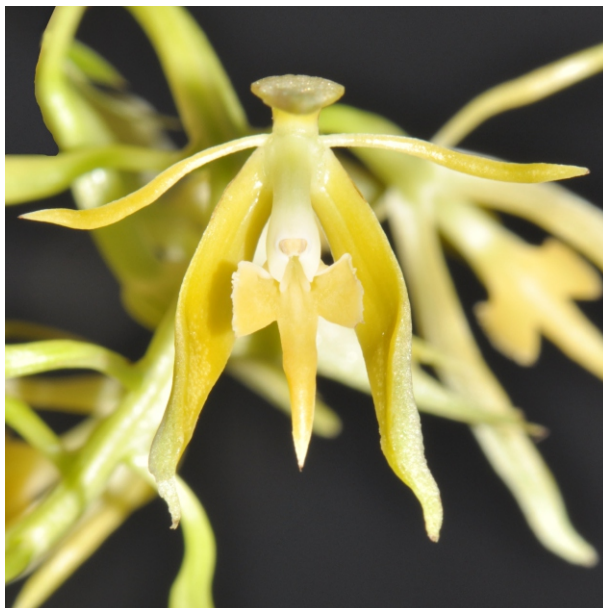
RECOGNITION: *Epidendrum dolichocaulum* belongs to the Alpicolum Group and Subgroup which is characterized by the simple, cane-like stems, 1-2 long, narrow spathe, fox-tail-like inflorescence and numerous flowers with fleshy lip, triangular mid-lobe and roundish lateral lobes. The species is recognized by the long stems, nearly 100 cm long, with 17-19 linear-lanceolate leaves to 9-15 x 0.8-1.2 cm, relatively short, laxly flowered inflorescence, the large yellow flowers, long sepals 15-20 mm long, and the long straight lip, mid-lobe 8.4 x 2 mm; the lip has a relatively long mid-rib with a pair of shorter ribs in front of the calli. *Epidendrum cornutum* Lindl. has stems to 65 cm long, 13-14 leaves 7-13.5 x 0.8-1.4 cm, narrowly oblong-lanceolate, apex acuminate, sepals 10-12.3 mm long, and mid-lobe of lip 4.5 x 1.1 mm; it also has three short ribs on the disc, the lateral ribs slightly longer than the mid-rib. *Epidendrum roezlii* Hágsater has lanceolate leaves, sepals yellow-green, acute, 7-8 x 2.2-3.0 mm, lip apricot, 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: From the Greek *δολιχος*, long, and *καυλος*, stem, in reference to the very long stems, unusual in the Alpicolum group.

ACKNOWLEDGEMENT: Type collected under project "Estudios taxonómicos selectos de la flora del norte del Perú", Resolución: 247-2016-Serfor/Dggsppfs y la ampliación Resol. 430-2017.

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Authors: E. Hágsater & A. Díaz

LCDP: A. Díaz

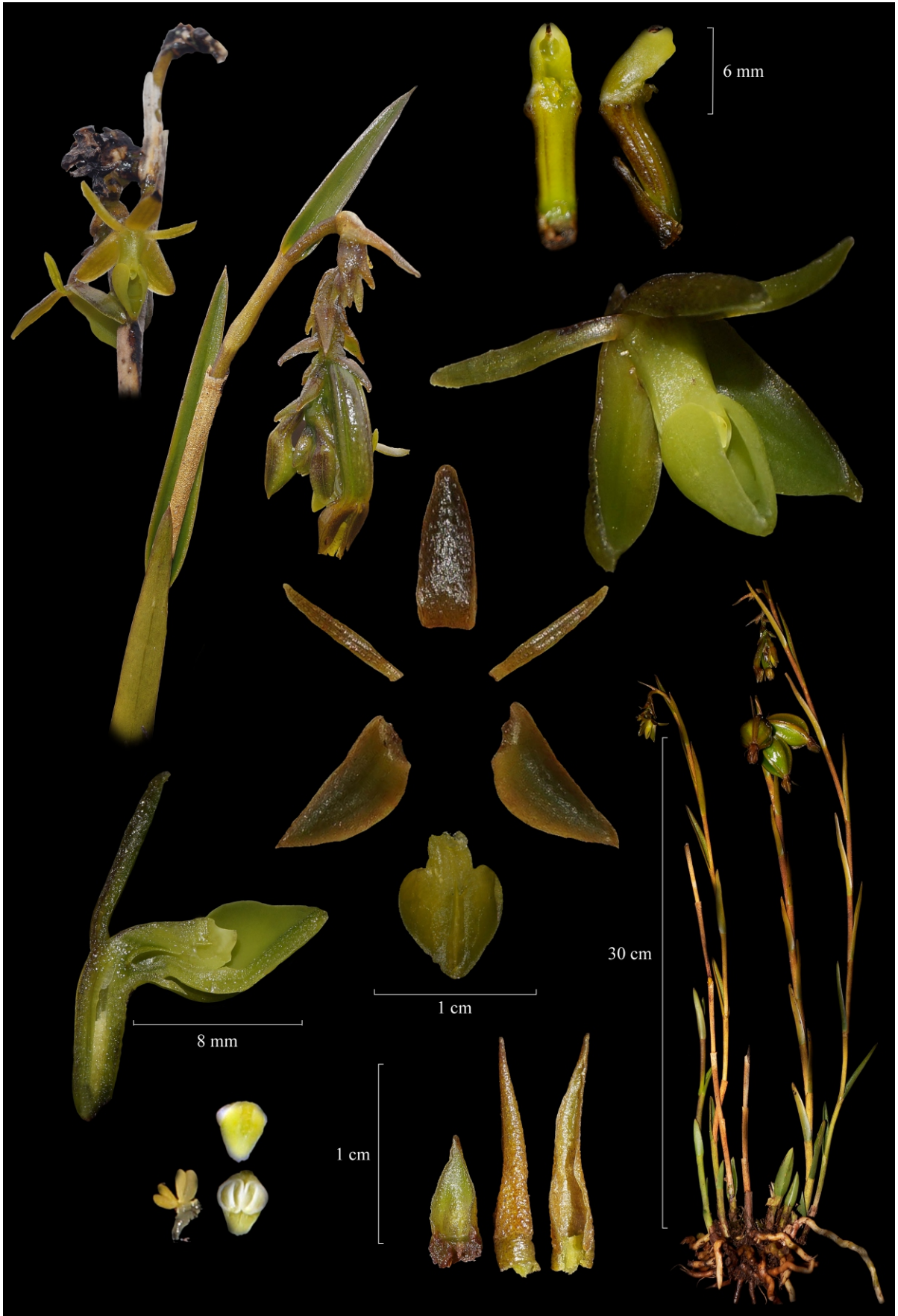
Photo: A. Díaz

Editors: E. Hágsater & E. Santiago

Herbario AMO

Ciudad de México, MÉXICO

ICONES ORCHIDACEARUM 16(2). 2018. Plate 1672



EPIDENDRUM EFFUSIPETALUM Hágsater, Edquén & E.Santiago

Plate 1673

EPIDENDRUM EFFUSIPETALUM Hágsater, Edquén et E.Santiago, *sp. nov.*

Type: PERU: Departamento: Amazonas, Provincia: Chachapoyas, Distrito: Granada, Comunidad campesina de Diosán, pajonal alto andino (Jalca), parte alta de la comunidad campesina en el sector denominado 7 lagunas, límite entre Amazonas y San Martín, 3690 m, 14 Enero 2018, **José Dilmer Edquén Oblitas 342**. Holotype: HURP! (LCDP and photo voucher)

Similar to *Epidendrum leptanthum* Hágsater but the flowers yellowish green, sepals dorsally tinged brown (vs. cretaceous, greenish white, outside more or less tinged green with red-brown minute dots), petals spreading, outstretched (vs. partly nearly parallel to the dorsal sepal), lateral sepals obliquely united to the column (vs. free), lip ecallose, ovate-cordiform (vs. bicallose, lip widely cordiform).

Terrestrial, sympodial, caespitose, erect **herb**, 30-40 cm tall. **Roots** 4 mm in diameter, basal, produced from the base of the stems, fleshy, white, nearly as thick as the stems. **Stems** 30-40 x 0.3-0.4 cm, cane-like, terete, thin, erect, straight. **Leaves** 9-12, distributed throughout the stem, parallel to the stem, articulate, distichous, coriaceous, green, concolor, slightly concave, base embracing the stem; foliar sheath 2.0-6.0 x 0.3-0.4 cm, tubular, rugose, yellowish green; blade 3.2-4.5 x 0.6-0.8 cm, narrowly lanceolate, acuminate, margin entire, spreading. **Spathes** lacking. **Inflorescence** 4.0-6.7 cm long, apical and lateral from mature stems, racemose to paniculate with time, producing dense, short, many-flowered racemes, arching-nutant; peduncle 0.7-1.0 cm long, short, terete, thin but not filiform, papillose, provided at the apex with a bract 0.9-1.25 cm long, embracing, narrowly triangular, acuminate, rugose-papillose. **Floral bracts** 7.0-7.5 mm long, shorter than the ovary, widely triangular, acuminate, embracing, dorsally slightly papillose, greenish brown. **Ovary** 7.5-9.0 mm long, terete, not inflated, striated, forming a nearly 90° angle with the column. **Flowers** 5-15 per raceme, successive, arranged in a helicoid around the rachis, yellowish green, sepals dorsally tinged brown, column and lip greenish yellow, concolor; fragrance none. **Sepals** 3-veined, scarcely dorsally papillose, margin entire, spreading; dorsal sepal 8.5 x 4.8 mm, free, spreading, triangular-lanceolate, apex obtuse; lateral sepals 10.0-10.5 x 4.8-5.0 mm, partly spreading, obliquely united to the base of the column, triangular-ovate, oblique, acute, minutely apiculate. **Petals** 9.0 x 1.0 mm, spreading, outstretched, free, linear-oblong, obtuse, 1-veined, margin entire, spreading. **Lip** 6.5 x 7.0 mm, united to the column, entire, ovate-cordiform, cymbiform, embracing nearly totally the apex of the column, base slightly cordate, apex rounded, margin entire, spreading; ecallose, glabrous, disc provided with a thin, low mid-rib that disappears near the apex of the lip. **Column** 6.0-6.5 mm long, straight, apex with a wide, rounded wing on each side. **Clinandrium-hood** reduced, margin entire. **Anther** ovoid, 4-celled. **Pollinia** 4, obovoid, laterally compressed; caudicles soft and granulate, slightly longer than the pollinia; viscidium semi-liquid. **Nectary** without penetrating the ovary, not inflated, unornamented. **Rostellum** apical, slit. **Lateral lobes of the stigma** small, ¼ the length of the stigmatic cavity. **Capsule** 39 x 20 mm, ellipsoid, sessile, pedicel very short, body 39 x 20 mm; apical neck very short; perianth persistent.

OTHER SPECIMENS: PERU: [Junín: Concepción:] Mito, 9000 ft, 8 IV 1923, *MacBride* 3372, AMES! [Huánuco: Pachitea: Chaglla:] Tambo de Vaca, 13000 ft, 10 VI 1923, *MacBride* 4345, AMES! **Amazonas:** Chachapoyas; Molinopampa: Upper slopes summit of Cerro Yuma-uma above Tualia 12-13 km SSE (185°) of Molinopampa, 3200-3450 m, 11 VIII 1942, *Wurdack* 1671, P! Ibid. *Wurdack* 1674, AMES! NY! K! S! UC! US! (illustration, AMO!) USM!

OTHER RECORDS: None seen.

DISTRIBUTION AND ECOLOGY: Widespread in Peru, along the eastern side of the Andes, on Andean Tepuis, terrestrial in *pajonal* at 2700-3900 m altitude. Flowering from January to August, probably throughout the year as it has successive flowers.

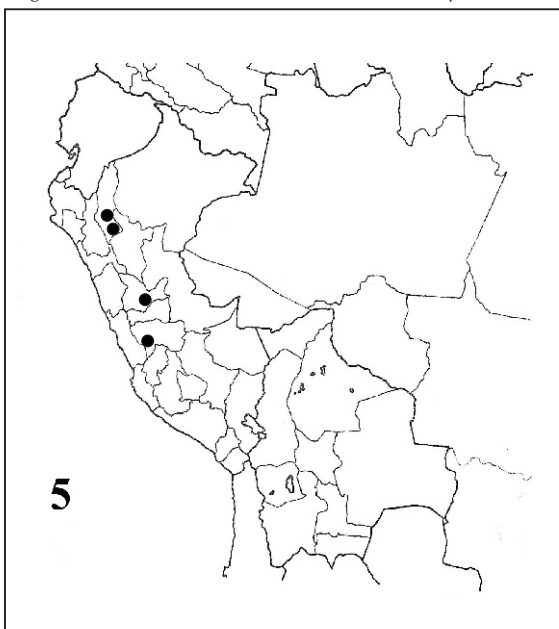
RECOGNITION: *Epidendrum effusipetalum* belongs to the Frutex Group recognized by the caespitose habit, usually simple stems, lanceolate leaves, lacking spathes, nutant racemes, widely cordiform to reniform lip and the Lepanthum Subgroup which is characterized by the thin stems, scarcely branched when mature, leaves short, linear-lanceolate to lanceolate oblong, nearly parallel to the stem, inflorescence arching-nutant, apical and lateral in mature stems, racemose to paniculate, few-flowered. The new species is recognized by the erect leaves parallel to the stem, few, densely-flowered inflorescence, yellowish green flowers, sepals dorsally tinged brown, outstretched petals, lateral sepals triangular-ovate, obliquely united to the base of the column and ecallose, ovate-cordiform lip. *Epidendrum leptanthum* is vegetatively very similar, but has a lax-flowered inflorescence, petals partly spreading, lateral sepals ovate-oblong, free, and lip bicallose forming a "W", widely cordiform. *Epidendrum podocarpense* Hágsater & E.Santiago has fuchsia colored flowers, the ventral surface of tepals and lip pink, petals partly spreading, parallel to the dorsal sepal, lateral sepals free, elliptic, and lip bicallose, widely cordiform. *Epidendrum choccei* M.A.Tarazona, Hágsater & E.Santiago, has pink colored flowers, column and disc of the lip white, petals partly spreading, acute, sepals free, and lip ecallose, widely ovate, base truncate and apex acuminate. *Epidendrum stenophyton* Schltr. (sub-group Rhombochilum) is vegetatively similar, but the floral bracts are acuminate, proportionately longer than wide, sepals and petals are partly spreading, petals 7 mm long, linear-lanceolate, acuminate, column ca. 3 mm long, and lip 2.5 mm long, rhombic-elliptic.

CONSERVATION STATUS: DD. Data deficient. The species is widespread in areas where agriculture and cattle-grazing is not possible.

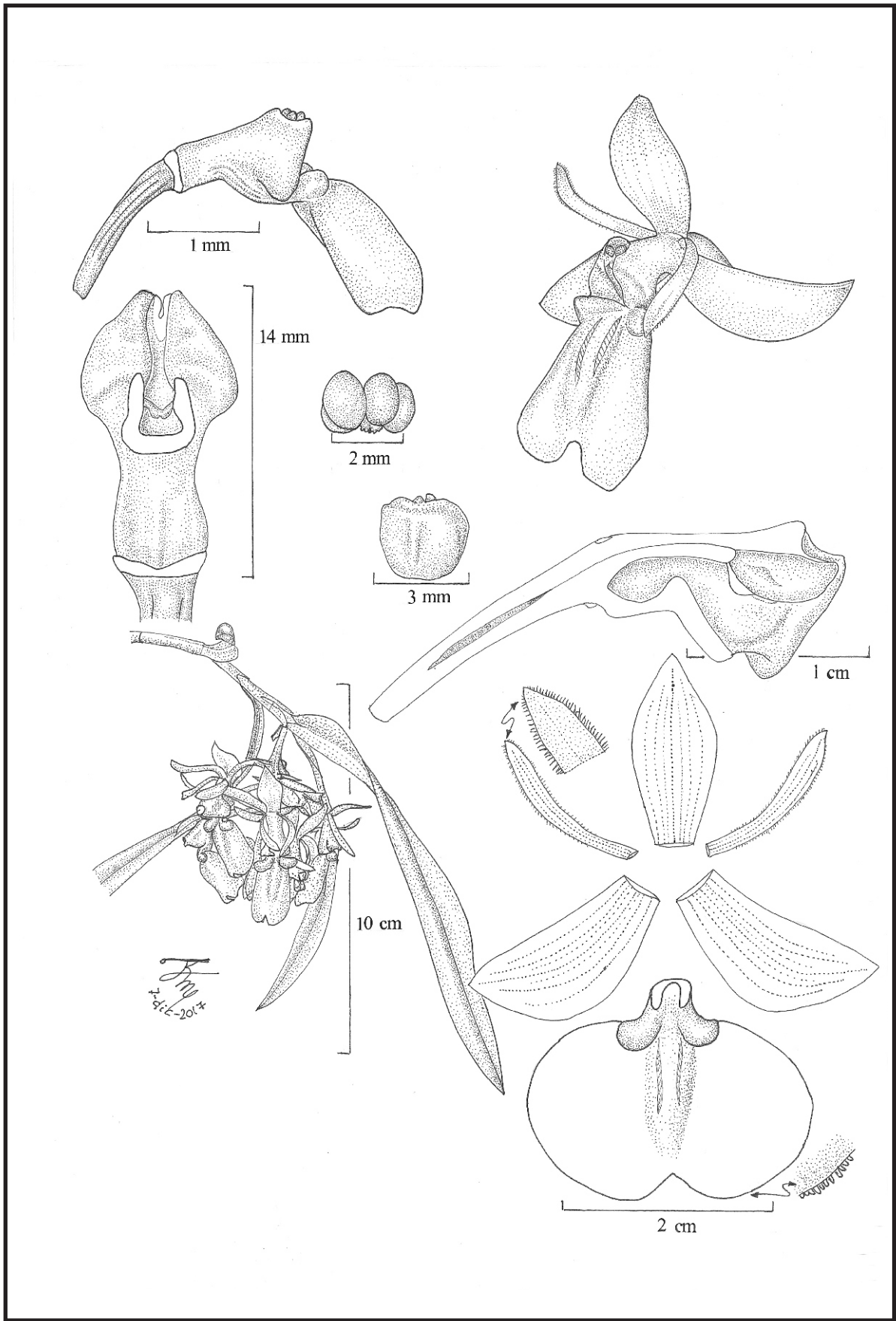
ETYMOLOGY: *Epidendrum effusipetalum*, from the Latin *effusus*, spreading out, and *petalum*, the petals, in reference to the outstretched petals, where most of the species of this group have the petals adnate to the dorsal sepal.

ACKNOWLEDGMENT: Type collection made under project "Efecto de la fragmentación de hábitats de bosque alto andino en diversidad de Orchidaceae y Bromeliaceae del anexo de Diosán, Distrito de Granadas, Amazonas" emitido bajo la resolución de Dirección General (RDG) N° 137-2018-SERFOR/DGCSPPFS; correspondiéndole el Código de Autorización N° AUT-IFL-2018-025.

REFERENCES: Acuña-Tarazona, M, E. Hágsater & E. Santiago, in press, *Epidendrum choccei* in *Phytotaxa*. Hágsater, E., 2018, *Epidendrum leptanthum* in The Genus *Epidendrum*, Part 12, *Icon. Orchid.* 16(2): pl. 1677. Hágsater, E. & E.Santiago, 2018, *Epidendrum podocarpense* in The Genus *Epidendrum*, Part 12, *Icon. Orchid.* 16(2): pl. 1696. Mansfield, R., 1929, *Epidendrum stenophyton* in *Repert. Spec. Nov. Regni Veg. Beih.* 57: t. 121, nr. 476. Schlechter, R., 1921, *Epidendrum stenophyton* in *Repert. Spec. Nov. Regni Veg. Beih.* 9: 93.



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EPIDENDRUM GUISLAINAE Hágsater & C.Soto

EPIDENDRUM GUISLAINAE Hągsater et C.Soto, sp. nov.

Type: PERU: Cusco: Santuario Histórico de Machu Picchu-SHM, 2040 m, XI 2011, Equipo de Inkaterria Asociación-ITA: *Ermitaño Quispe & Carmen Soto 30*, pressed inflorescence originally conserved in spirit, AMO! (illustration & photo voucher).

Similar to *Epidendrum evelynae** Rchb.f., but the flowers twice as large, sepals 17.7-20.0 mm long (vs. 9-11 mm), the calli of the lip much larger, divergent, fleshy, the margin of the petals minutely ciliate (vs. denticulate-erose), as well as the margin of the lip.

Epiphytic **herb**, 85 cm tall, where the new stem is produced from a sub-apical internode of the previous stem. **Roots** ca. 3-5 mm in diameter, fleshy, from the base of each stem. **Stems** 15-32 x 0.3-0.6 cm, simple, cane-like, terete, straight, the new produced from the middle of a sub-apical internode of the previous stem. **Leaves** 3-4, sub-coriaceous, smooth; leaf-sheaths 1-4 cm long, striate; blade 11-17 x 1.4-2.0 cm, articulate, narrowly oblong, acute, margin entire. **Spathes** lacking. **Inflorescence** 6 cm long, apical, from the mature stem, flowering only once, nodding, racemose; peduncle 15-20 mm long, laterally compressed, ancipitose; rachis unornamented.

Floral bracts 3-7 x 2-6 mm, triangular, acuminate, shorter than the ovary. **Flowers** 3-10, successive, ca. 2-7 open at one time, resupinate, green with the column, calli and mid-rib of the lip tinged purple, especially the apex of the column which may be a solid purple; fragrance not registered. **Ovary** 15-16 mm long, not inflated, terete, unornamented. **Sepals** free, spreading, narrowly elliptic, acute, fleshy, glabrous, without any dorsal keel, margin entire, spreading; dorsal sepal 17.7 x 8.3 mm, 7-veined; lateral sepals 20 x 8-9 mm, elliptic, somewhat oblique and thus upper side straight, 7-veined. **Petals** 16.6 x 2.3 mm, partly spreading forward, linear-lanceolate, curved into an arch, acute, 3-veined, margins minutely ciliate, spreading. **Lip** 17 x 28 mm, united to the column, bilobed, obreniform, base truncate, the sides strongly revolute in natural position, so as to appear apron-like, apex emarginate; the lateral lobes 14 x 17 mm, semi-orbicular; bicallose, the calli thick, divergent, with a prominent, wide, fleshy, thickened mid-rib that runs the length of the lip; margin minutely ciliate, spreading. **Column** 13-14 mm long, triangular when seen from the side, thin at the base, and almost immediately strongly dilated, with a pair of rounded wings at the base of the oblique apex, protruding on the side of the base of the lip. **Clinandrium** very short, fleshy, without covering the anther, margin entire. **Nectary** short and thick, without penetrating beyond the perianth, constricted underneath at the basal 1/3 of the column. **Anther** sub-globose, 4-celled. **Pollinia** 4, obovoid, laterally compressed, caudicles soft and granulose, as long as the pollinia. **Rostellum** apical, slit. **Lateral lobes of the stigma** short, 1/3 the length of the stigmatic cavity. **Capsule** not seen.

OTHER RECORDS: PERU: Cusco: Prov. La Convención; Distrito Huayopata; Bosque montano de Alfamayo, ca. 1800 m, received 7 X 2013, Calatayud s.n. digital fotos, AMO!

DISTRIBUTION AND ECOLOGY: Known southern Peru, on the Amazon slope of the Cordillera Oriental of the Andes, at 1800-2040 m altitude, in montane forest, on *Inga adenophylla* Pittier, locally known as "Pacaemono". Flowering August-October.

RECOGNITION: *Epidendrum guislainae* belongs to the Incomptum Group which is characterized by the erect habit with successive lateral growths produced from the middle of the previous growth, few leaves aggregate towards the apex of the stems, roots generally only from the base of the primordial stem, with short apical inflorescences and fleshy yellowish to green to violet-green to black flowers with short ovaries, the lip entire to 3-lobed. The species is recognized by the sub-coriaceous leaves, the successive large flowers, sepals 17.7-20 mm long, without any prominent ventral nectary which inflates the ovary, a obreniform lip, with large, fleshy divergent calli, the margin of the petals and lip minutely ciliate. *Epidendrum evelynae* has smaller flowers, sepals 9-11 mm long, a reniform, bicallose lip, the calli small and parallel, and the linear, 1-veined petals with the margin denticulate-erose. *Epidendrum chimantense* Hągsater & Carnevali has the purple-tinged leaf-sheaths, narrow, elliptic-lanceolate leaves, the column arching only at the base and a slender, non-inflated ovary, sepals 9-10 mm long, lip reniform, 3.5-6.0 x 6.5-9.0 mm. *Epidendrum lechleri* Rchb. f., a species native to Peru, has 13 mm long sepals and a 3-lobed lip. *Epidendrum nephroglossum* Schltr. has very prominent floral bracts equal or longer than the ovary which is not swollen, 11.0-16.5 mm long sepals, acute petals, lip 7 x 14 mm, and an obsolete clinandrium. *Epidendrum bakrense* Hągsater & Cremers has wider petals and shorter segments, sepals 7.0-7.5 mm long, with a much-inflated ovary, and the column apex with a rounded lobe above the calli, not a tooth. *Epidendrum rousseffianae* Collantes & Hągsater has somewhat similar reniform lip, but the plant is quite different, with monopodial, branching stems, sepals are 19-20 mm long and lip 2.9 x 1.5 cm.

*NOTE: We previously illustrated the Icon of *Epidendrum evelynae* (Santiago & Hągsater, 2015), with a photograph of the new species taken by Gloria Calatayud from Cusco. Now with an inflorescence in spirit, we have been able to prepare an illustration of the material from Machu Picchu, and it is clearly distinct from that of Bolivia, especially by the flowers twice as large, and large fleshy divergent calli, and the minutely ciliate margin of the petals and lip. Vásquez and Ibsch (2004) treated this *E. evelynae* as a synonym of *E. lechleri* Rchb.f.

CONSERVATION STATUS: DD. Data deficient. Only two collections have been identified.

ETYMOLOGY: In honor of Mrs. Denise Guislain McKee, (1943-) who is responsible for the extraordinary native gardens of Inkaterria: Inkaterria Machu Picchu Pueblo Hotel, Inkaterria Hacienda Urubamba, Inkaterria Reserva Amazónica and Inkaterria Hacienda Concepción.

REFERENCES: Collantes, B., & E. Hągsater, 2013, *Epidendrum rousseffianae*, in E. Hągsater & L. Sánchez S. (eds.), The Genus *Epidendrum*, Part 10, *Icon. Orchid.* 14: pl. 1482. Hągsater, E., & E. Santiago, 2013, *Epidendrum nephroglossum*, in E. Hągsater & L. Sánchez S. (eds.), The Genus *Epidendrum*, Part 10, *Icon. Orchid.* 14: pl. 1461. Hągsater, E., & G. Carnevali, 1993, *Epidendrum chimantense*, in E. Hągsater & G.A. Salazar (eds.), The Genus *Epidendrum*, Part 1, *Icon. Orchid.* 2: pl. 121. Hągsater, E., & G. Cremers, 1999, *Epidendrum bakrense*, in E. Hągsater, L. Sánchez S. & J. García Cruz (eds.), The Genus *Epidendrum*, Part 2, *Icon. Orchid.* 3: pl. 312. Santiago, E., & E. Hągsater, 2015, *Epidendrum evelynae*, in E. Hągsater & L. Sánchez S. (eds.), The Genus *Epidendrum*, Part 11, *Icon. Orchid.* 15(1): pl. 1524. Vásquez Ch., Roberto, & Pierre L. Ibsch (eds), 2004, *Orquídeas de Bolivia* 2: 124.



Authors: E. Hągsater & C. Soto

Illustrator: R. Jiménez M.

Photo: C. Soto

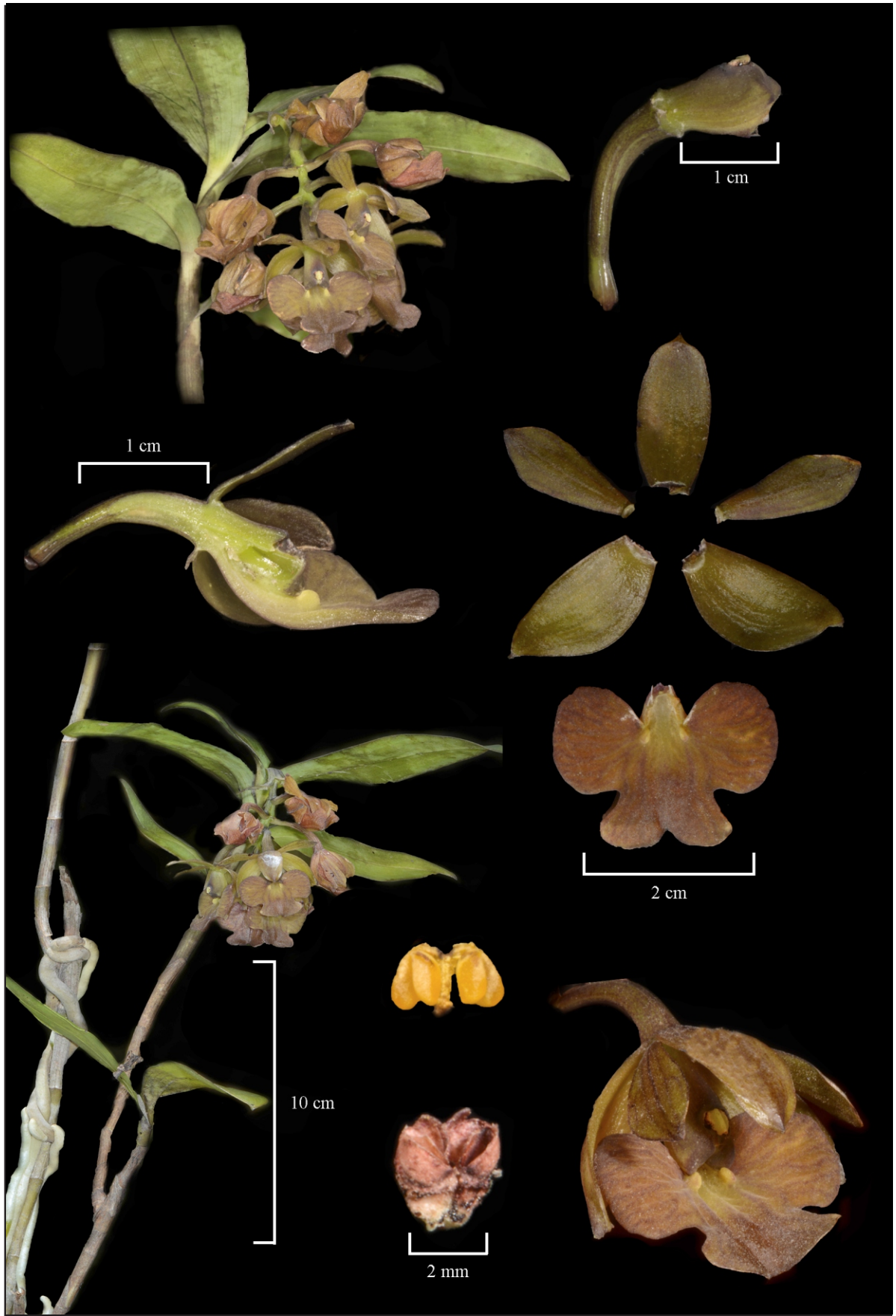
Editors: E. Hągsater & E. Santiago

Herbario AMO

Ciudad de México, MÉXICO

ICONES ORCHIDACEARUM 16(2). 2018.

Plate 1674



EPIDENDRUM ILINIZAINCOMPTUM Hågsater

Plate 1675

EPIDENDRUM ILINIZAINCOMPTUM Hágsater, sp. nov.

Type: ECUADOR: Cotopaxi: Mun. Sigchos; pasando Río Toachi, por carretera Sigchos-Latacunga, desviación hacia Cerro Azul, pasando Meseta rancho ganadero, 2913 m, 0°39'3.68"S 78°50'39.75"W, 22 abril 2018, **Eric Hágsater, Gerardo A. Salazar, Francisco Tobar, Itzi Fragoso & Marcia Peñafiel 15796**. Holotype: QCNE! Isotype: MEXU! Digital images of pretype: AMO! (LCDP and photo voucher).

Similar to *Epidendrum homoion* Hágsater & Dodson, but the flowers brown in color (vs. sepals and petals green, lip olive-green to purple-green), the lip with orbicular lateral lobes (vs. hemi-orbicular lateral lobes), and the mid-lobe twice as wide as it is long, 7 x 15 mm (vs. sub-quadrate, 6 x 9 mm).

Epiphytic, sympodial, erect **herb**, ca. 100 cm tall, the new stems arising from a sub-apical internode of the previous stem. **Roots** 3.0-5.0 mm in diameter, basal from the lower stems, thick. **Stems** 17-23 x 0.3-0.7 cm; simple, cane-like, terete, straight, the new stem originating from a middle internode of the previous stem, gradually becoming thinner and shorter. **Leaves** 2-5, aggregate towards apex of the stem, alternate, articulate, erect-spreading, unequal in size, sub-coriaceous; sheaths 10-30 x 3-7 mm, tubular, minutely striated, becoming fibrous with time; blade 4.2-8.7 x 1.5-2.0 cm, oblong-elliptic, acute, margin entire, spreading. **Inflorescence** 6 cm long, apical, flowering only once, racemose, arching; peduncle wide, laterally compressed, ancipitose, arching, rachis straight. **Floral bracts** 4-10 mm long, about half as long as the ovary, triangular, acuminate. **Flowers** ca. 10, successive, several open at one time, resupinate, green-brown, lip green-brown to brown, calli yellow, column green, the apex somewhat tinged olive brown; fragrance none registered. **Ovary** 17-20 mm long, terete, thickened towards the apex, not inflated, smooth. **Sepals** short aristate, slightly concave, glabrous, 5-veined, fleshy, apex sub-obtuse, margin entire, spreading; dorsal sepal 18 x 8.3 mm, spreading, free, elliptic; lateral sepals 19 x 9.6 mm, partly spreading, elliptic, oblique, somewhat falcate. **Petals** 16.5 x 6.5 mm, partly spreading, free, oblanceolate, sub-acute, 3-veined, the lateral veins branching near the middle, margin entire, spreading. **Lip** 18.7 x 25.5 mm; united to the column, deeply 3-lobed, slightly concave; bicallose, the calli small, laminar, orbicular, parallel; disc glabrous, margin entire, spreading; lateral lobes 10 x 13 mm, sub-orbicular; mid-lobe 7 x 15 mm; emarginate, transversely quadrate-obcuneate, the apical margin forming two semi-orbicular, oblique lobes. **Column** 10.5 mm long, thick, straight. **Clinandrium-hood** reduced, margin entire. **Anther** ovoid, apex truncate, 4-celled. **Pollinia** 4, obovoid, laterally compressed, caudicles soft and granulose, as long as the pollinia, viscidium semi-liquid. **Rostrum** apical, slit. **Lateral lobes of the stigma** small, the stigmatic cavity half as long as the column. **Nectary** penetrating as far as the calyx, narrow, unornamented. **Capsule** not seen.

OTHER SPECIMENS: None seen.

OTHER RECORDS: None seen.

DISTRIBUTION: Endemic to Ecuador. Known presently only from the type, in the valley southwest of the twin Ilinizas mountains, on brush covered hill, amongst ferns and other orchids, at 2913 m altitude, at the edge of the Cotacachi-Cayapas Reserve. Epiphytic on bushes, flowering in April-May.

RECOGNITION: *Epidendrum ilinizaincomptum* belongs to the Incomptum group which is characterized by the successive lateral growths produced from the middle of the previous growth, few leaves aggregate towards the apex of the stems, a short apical inflorescence with fleshy green to violet-green flowers with short ovaries, the lip entire to 3-lobed. The species is recognized by the large, green-brown flowers, sepals 18-19 mm long, the wide lip 18.7 x 25.5 mm, with the mid-lobe 7 x 15 mm; emarginate, transversely quadrate-obcuneate, the apical margin forming two semi-orbicular, oblique lobes. *Epidendrum macuchiense* Hágsater & E. Santiago has green flowers, the deeply 3-lobed lip, twice as wide as it is long, (8.6 x 16.1 mm), the lateral lobes semi-orbicular, and sub-quadrate-cuneate, emarginate mid-lobe, and thin, linear-oblanceolate petals (10.8 x 1 mm). It resembles *Epidendrum homoion* Hágsater & Dodson, having a very similar shaped lip (14-16 x 26-28 mm), but lateral lobes semi-orbicular, obtusate petals which are proportionately much wider (8.5 x 6.0-6.5 mm); the sepals and petals are green and the lip olive-green to purplish green. *Epidendrum boekei* Hágsater also has a 3-lobed lip, but it is nearly as long as it is wide, 11-14 x 14-18 mm, the lateral lobes are slightly retrorse, petals narrowly oblanceolate, apex rounded (11.5 x 3-6 mm), and the calli are narrower and divergent. *Epidendrum curtisii* A.D.Hawkes (= *Epidendrum superpositum* Garay) from Venezuela has pale green flowers of similar shape but smaller, sepals 8-12 cm, and the lip is 5-9 x 10-14 cm.

ETYMOLOGY: In reference to the place where the species has been collected, at the foot of the Ilinizas mountains, in central Ecuador, and the fact that the species belongs to the Incomptum Group.

CONSERVATION STATUS: DD. Data deficient. It is surprising to find few collections of this group from the province of Cotopaxi in herbaria.

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

REFERENCES: Garay, L.A., 1958, *Epidendrum superpositum* in Studies in American Orchids IV, **Bot. Mus. Leaflet**, 18(5): 203, pl. XXXVIII. Hágsater, E., 2009, *Epidendrum boekei* in Hágsater, E. & L. Sánchez S. (eds.) The Genus *Epidendrum* Part 8, **Icon. Orchid.** 12: pl. 1210. Hágsater, E., 2007, *Epidendrum curtisii* in Hágsater, E. & L. Sánchez S. (eds.) The Genus *Epidendrum* Part 6, **Icon. Orchid.** 9: pl. 927. Hágsater, E., & C.H. Dodson, 1993, *Epidendrum homoion* in Hágsater, E. & G.A. Salazar (eds.) The Genus *Epidendrum* Part 1, **Icon. Orchid.** 2: pl. 145. Hágsater, E., & E. Santiago, 2015, *Epidendrum macuchiense* in Hágsater, E. & L. Sánchez S. (eds.) The Genus *Epidendrum* Part 11, **Icon. Orchid.** 15: pl. 1537.



Author: E. Hágsater

LCDP: E. Hágsater & C. Álvarez

Photo: E. Hágsater

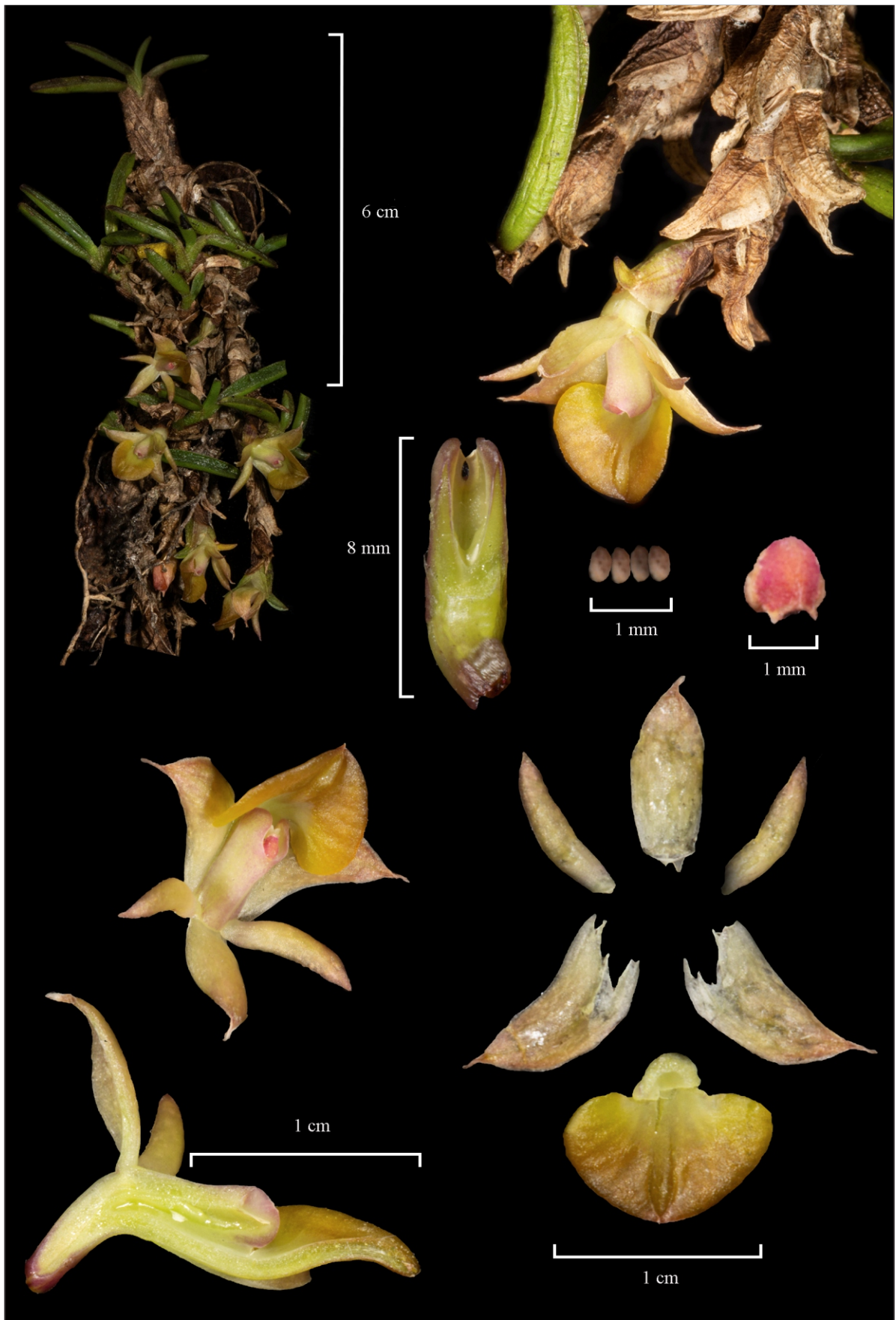
Editors: E. Hágsater & E. Santiago

Herbario AMO

Ciudad de México, MÉXICO

ICONES ORCHIDACEARUM 16(2). 2018.

Plate 1675



EPIDENDRUM KAPULERI (Szlach. & Kolan.) J.M.H.Shaw

Plate 1676

EPIDENDRUM KAPULERI (Szlach. & Kolan.) J.M.H.Shaw, *Orchid Rev. Suppl.*, 124(1314): 36. 2016.
[Quart. Suppl. *Int. Reg. Orchid Hybrids*]

Basionym: *Takulumena kapuleri* Szlach. & Kolan., *Wulfenia* 21: 78-79, f. 12A-F. 2014. Type: COLOMBIA:
Cauca: to Paletará in direction of Hacienda Valencia, August 1964, **Alan M. Kapuler & Vincent C. Hascall 208**. Holotype: COL! Isotype: COL!

Epiphytic, monopodial **herb**, 3-6 cm tall, *Vanda*-like. **Roots** 0.5-1.0 mm in diameter, basal, fleshy. **Stem** 3-6 cm tall, simple, erect, laterally compressed, completely covered by the foliar sheaths; sometimes producing new secondary stems from the base or the lower internodes of the primary stem with age; secondary stems smaller in every way. **Leaves** up to 19, the apical 3-5 present, distributed throughout the stem, distichous, in a single plane, spreading, imbricated, articulate, coriaceous, canalliculate, arched, rugose, dark green; sheaths 3-5 mm long, conduplicate, arching outwards, minutely striated, rugose; blade 1.0-3.5 x 0.3-0.5 cm, semi-terete, linear-oblong, apex rounded, minutely apiculate; margin hyaline, minutely papillose towards the apex. **Spathes** lacking. **Inflorescence** 2.5-4.0 cm long, several produced from the base of the stem and occasionally from the lower internodes of the stem with age surging in between the dry, old leaf sheaths, pendent, flowering over a period of several years from short successive segments, completely covered by leafless bracts 7-9 mm long, imbricated, base tubular, apex acuminate, striated, scarious. **Floral bracts** 5-7 mm long, similar to those of the scape, longer than the ovary, tubular, acuminate. **Flowers** solitary, a single flower produced from each segment of the inflorescence, non-resupinate, ochre, the lip darker, anther pink, column with a pink hue, and the sepals and petals slightly tinged pink towards the apex; no fragrance perceived during daytime. **Ovary** 3-5 mm long, terete, thick, not inflated, minutely furrowed. **Sepals** fleshy, glabrous, acute, apiculate, longitudinally convex, 5-veined, margin entire, spreading; **dorsal sepal** 8.3 x 3.5 mm, free, spreading, narrowly elliptic; **lateral sepals** 9 x 4 mm, obliquely united to about 3/4 of the underside of the column, partly spreading, obliquely oblong-ovate, slightly falcate. **Petals** 6.5-7.0 x 2 mm, spreading, free, oblong, short acuminate, falcate, longitudinally convex, 3-veined, glabrous, margin scarcely ciliate, spreading. **Lip** 6-8 x 9-10 mm, united to the column, widely cordiform, base slightly cordate, apex obtuse, margin minutely and scarcely papillose, spreading; disc concave; ecalllose, with a prominent, fleshy mid-rib low at the base becoming higher and more prominent towards the apical 2/3 of the lip, ending at the apex of the lip. **Column** 7 mm long, thick, straight. **Clinandrium-hood** reduced, margin entire. **Rostellum** sub-apical, slit. **Lateral lobes of the stigma** small, occupying less than half of the stigmatic cavity. **Nectary** shallow, without penetrating the pedicel, unornamented. **Anther** obovoid, 4-celled. **Pollinia** 4, obovoid, laterally compressed, caudicles not seen. **Capsule** ellipsoid.

OTHER SPECIMENS: COLOMBIA: Cauca: Mun. Paletará; Páramo de Paletará, 3000 m, 30 VII 1961, *Garay 351*, COL! carretera Puracé-Paletará-San José de Isnos, km 40, 3004 m, col. 24 III 2018, pressed 7 VII 2018, *Hágsater 15610*, HPUJ! (LCDP and photo voucher).

OTHER RECORDS: COLOMBIA: Cauca: Mun. Paletará; carretera Puracé-Paletará-San José de Isnos, km 40, 3004 m, 24 III 2018, *Hágsater 15610*, digital image, AMO! (capsule). Mun. Sotará; Vereda El Ulluco; carretera Timbío, 2964 m, 25 III 2018, *Hágsater 15633*, digital image, AMO!

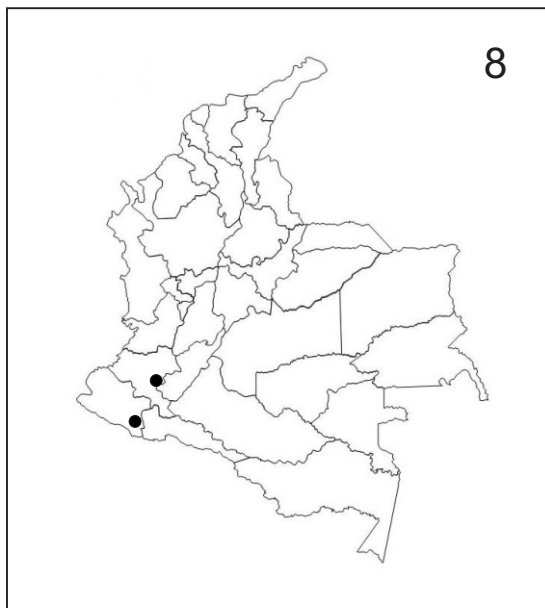
DISTRIBUTION AND ECOLOGY: Present in the Cauca province in southern Colombia, in remnants of montane forests amidst livestock pastures and in forested ravines at 2900-3200 m altitude. The vegetation formation according to Holdrige (1987) is pp-SAT, páramo pluvial subalpino tropical, as well as bp-m, bosque pluvial montano. Flowering in April and June

RECOGNITION: *Epidendrum kapuleri* belongs to the *Takulumena* group which is recognized by the small, *Vanda*-like plants, with simple, imbricating, distichous leaves, and a lateral complicated inflorescence, producing new, single-flowered segments over several years, from the base of the stem or with age from the lower internodes of the stem. The species is recognized by the short leaves, 1.0-3.5 cm long, unequal in size, sepals 8.3-9.0 mm long, acute, the apex apiculate, petals glabrous with the margin scarcely ciliate, flowers ochre with the apex of the tepals pink, lip widely cordiform. *Epidendrum sophronitoides* F.Lehm. & Kraenzl. has larger equal leaves 5.7-7.5 cm long, sepals 10-16 mm long, apex acuminate, petals with ciliate margin, flowers copper green to yellow-green, lip ovate-cordiform. *Epidendrum psilosepalum* Hágsater & E. Santiago has leaves 2.1-4.5 cm long, sepals 7-8 mm long, petals densely pubescent, flowers greenish yellow tinged red, lip widely triangular with the base truncate. *Epidendrum rhodovandoides* Hágsater has very smaller plants, 2 cm tall, leaves up to 5 cm long, sepals 4.0-5.5 mm long, petals with the margin clearly ciliate, red flowers, and lip sub-cordiform.

CONSERVATION STATUS: EN. Endangered. Its estimated range is 1777 km² and less than 3 localities. Between Puracé and Sotará, the area occupied is 97.8 km², and so it qualifies for the category of EN, under sub-criteria B1a(i) and (ii) and also by sub-criteria B2a. Potentially, *E. kapuleri* can occur at 2800-3200 m altitude in the central Andes of Cauca.

ETYMOLOGY: In honor of Dr. Alan M. Kapuler, (1943?-), known as Mushroom, lives in Corvallis, Oregon, U.S.A. He collected the type. Al Kapuler was the co-founder and Research Director of Seeds of Change, an organic seed company. He started his interest in plants as a volunteer, potting orchids at the Brooklyn Botanic Garden at the age of 9. His passion is the conservation biodiversity, focused in breeding high nutrition fruits and vegetables.

REFERENCES: Cuatrecasas, J., 1958, Aspectos de la vegetación natural de Colombia, *Revista Acad. Colomb. Ci. Exact.* 10(40): 221-268. Hágsater, E. & E. Santiago, 2008, *Epidendrum psilosepalum*, in *The Genus Epidendrum*, Part 7, in E. Hágsater & L. Sanchez S. (eds.), *Icon. Orchid.* 11: pl. 1167. Hágsater, E., 2008, *Epidendrum rhodovandoides*, in *The Genus Epidendrum*, Part 7, in E. Hágsater & L. Sanchez S. (eds.), *Icon. Orchid.* 11: pl. 1172. Hágsater, E. & E. Santiago, 2008, *Epidendrum sophronitoides*, in *The Genus Epidendrum*, Part 7, in E. Hágsater & L. Sanchez S. (eds.), *Icon. Orchid.* 11: pl. 1180. Holdrige, L., 1987, *Ecología basada en zonas de vida*, IICA, San José, Costa Rica, 216 pp. <http://runap.parquesnacionales.gov.co/>



Authors: E. Hágsater & E. Santiago

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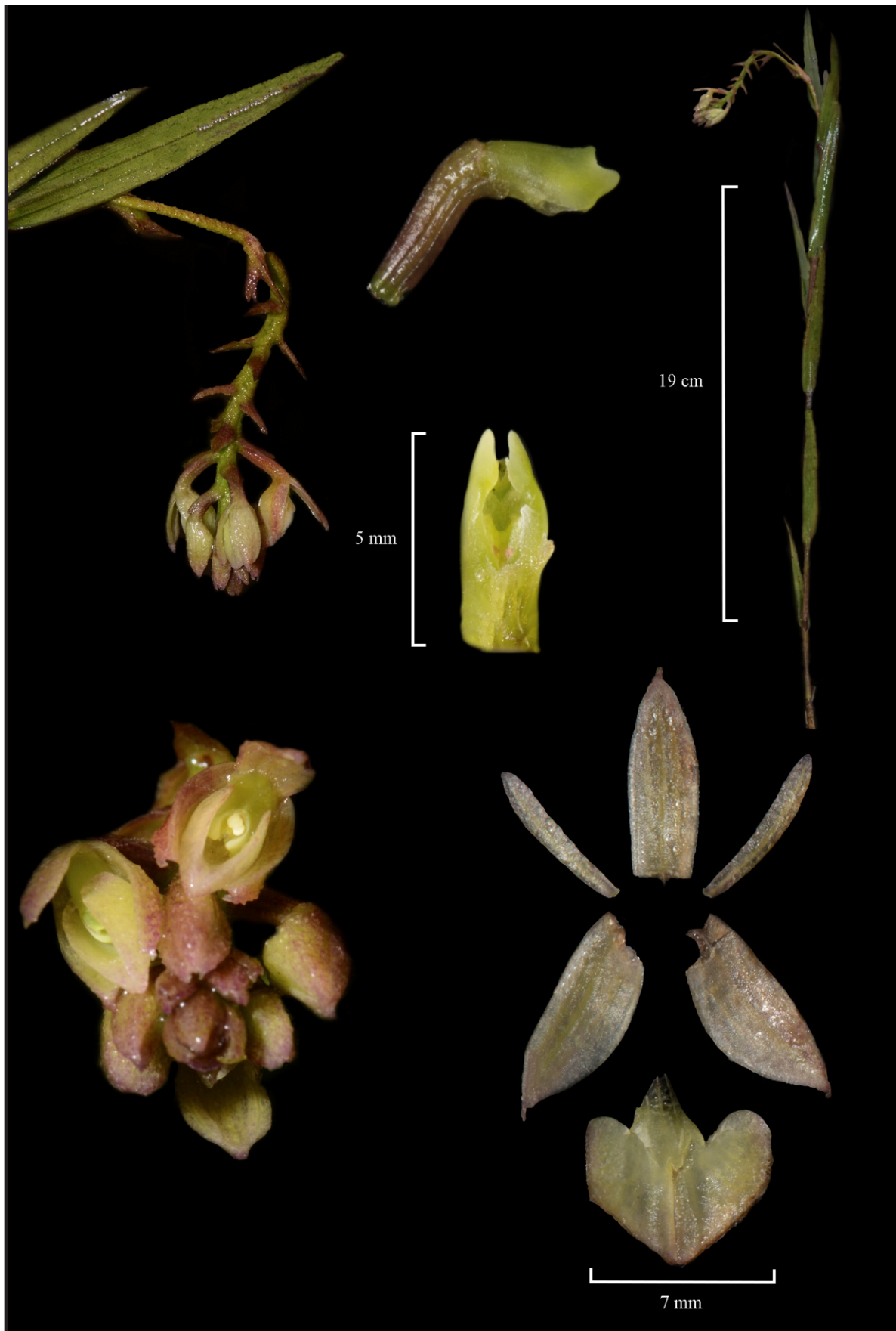
Photo: E. Hágsater

Editors: E. Hágsater & E. Santiago

Herbario AMO

Ciudad de México, MÉXICO

ICONES ORCHIDACEARUM 16(2). 2018. Plate 1676



EPIDENDRUM LEPTANTHUM Hágsater

Plate 1677

EPIDENDRUM LEPTANTHUM Hágsater, sp. nov.

Type: ECUADOR: Morona-Santiago: Gualaquiza; parroquia San Miguel de Cuyes; desviación de Carretera Cuenca-Loja hacia Jima y Tambillo-San Miguel de Cuyes; Cerro Moriré, pasando el puerto, 3356 m, páramo de alta montaña con arbustos, en talud, 26 abril 2018.

Eric Hágsater, Gerardo A. Salazar, Francisco Tobar, Itzi Fragoso y Marcia Peñafiel 15890. Holotype: QCNE! Isotype: MEXU!

Similar to *Epidendrum papallactense* Hágsater & Dodson but smaller and finer in every way, leaves 2.6-8.0 x 0.4-0.7 cm, apex narrowly rounded (vs. 7.5-14 x 1.4-2.0 cm, apex acute), peduncle of the inflorescence 2.2 cm long (vs. 5-15 cm long), flowers cretaceous, whitish, outside more or less tinged green with red-brown dots (vs. sepals and petals blue to black, lip green to black), petals linear-oblancoolate, margins entire (vs. narrowly oblong, margin erose), and the lip widely cordiform, base deeply cordate, callus "W" shaped (vs. widely reniform, base truncate, callus "Y" shaped).

Terrestrial, caespitose, sympodial, **herb**, ca. 40 cm tall including the inflorescence, sometimes producing a branch from the middle of a stem. **Roots** 3 mm diameter, basal, from the main stem and branches, fleshy, thick, white. **Stems** 24-40 x 0.2-0.4 cm, erect, thin, long, terete, the branches shorter than the main stems, nearly totally covered by sheaths of the leaves on the main stem, branches with leafless sheaths along the basal 1/3 of branch; sheaths 2.0-3.3 x 0.2-0.4 cm, tubular, striated, rugose, wine-red when young turning light brown when dry. **Leaves** 2.6-8.0 x 0.4-0.7 cm, ca. 9 per stem, parallel to the stem, distichous, sub-coriaceous, narrowly lanceolate, apex narrowly rounded, margin minutely and irregularly crenulate, spreading. **Spathes** lacking. **Inflorescence** ca. 8 cm long, apical, racemose, the peduncle sub-erect, rachis nutant-pendant, whole surface irregularly pustulate; peduncle ca. 2.2 x 0.17 cm, provided near the middle with a long bract, ca. 10 mm long, linear-triangular, apex rounded, partly embracing; rachis developing through time as successive flowers develop, to ca. 4 cm long, green. **Floral bracts** 6-15 mm long, progressively shorter, narrowly triangular, acuminate, embracing, red-brown. **Flowers** 17, successive, cretaceous, greenish white, outside more or less tinged green with red-brown minute dots; fragrance apparently absent. **Ovary** 6 x 2 mm, short, terete, longitudinally furrowed, minutely and scarcely pustulate. **Sepals** 8.0-8.4 x 3.0-3.4 mm, partly spreading, acute, fleshy, concave, with a low dorsal apical keel and apiculate, 3-veined, dorsally scarcely pustulate, margin entire, spreading; dorsal sepal oblong; lateral sepals ovate-oblong, oblique and embracing the lip. **Petals** 6.5 x 1.0 mm, adnate in natural position to the dorsal sepal, linear-oblancoolate, slightly curved, 1-veined, apex obtuse, margins entire, spreading. **Lip** 6.0 x 7.0 mm, entire, widely cordiform, base deeply cordate, apex rounded, minutely emarginate, united to the column, embracing the apex of the column without covering it, callus cuneate, apically bilobed forming a "W", with a low, narrow central mid-rib reaching the apex of the lip. **Column** 5 x 2 mm, geniculate with the ovary, straight, slender, apex with a triangular, rounded tooth on each side. **Clinandrium-hood** reduced, margin entire. **Rostellum** sub-apical, slit. **Anther** ovoid, 4-celled. **Pollinia** 4, obovoid, laterally compressed, cream colored. **Lateral lobes of the stigma** short, about 1/3 the length of the stigmatic cavity. **Capsule** not seen.

OTHER SPECIMENS: None seen.

OTHER RECORDS: None seen.

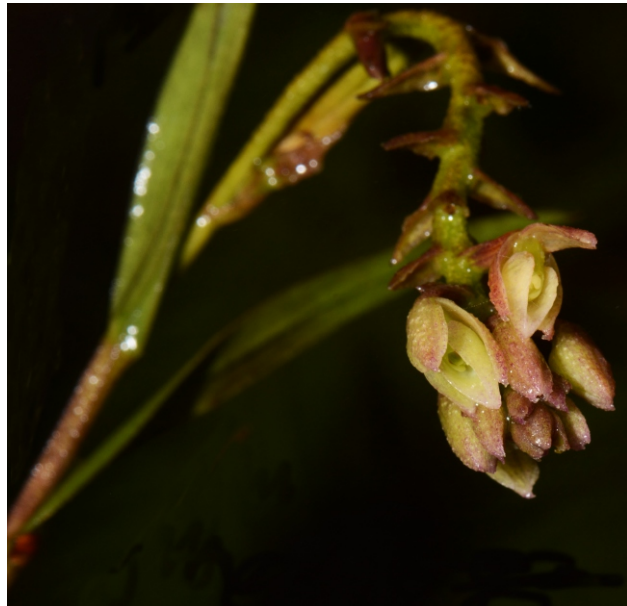
RECOGNITION: *Epidendrum leptanthum* belongs to the Frutex Group recognized by the caespitose habit, usually simple stems, lanceolate leaves, lacking spathes, nutant racemes, widely cordiform to reniform lip and Leptanthum Subgroup which is characterized by the thin stems, scarcely branched when mature, leaves short, linear-lanceolate to lanceolate oblong, nearly parallel to the stem, inflorescence arching-nutant, apical and lateral in mature stems, racemose to paniculate, few-flowered. The new species is recognized by the thin stems to 40 cm tall, narrowly lanceolate leaves 2.6-8.0 x 0.4-0.7 cm, the inflorescence with the peduncle sub-erect, ca. 2.2 cm long, arching-nutant raceme with successive, cretaceous, greenish white flowers, delicate in substance, sepals 8.0-8.4 cm long, petals linear-oblancoolate, and the lip deeply and widely cordiform, 6.0 x 7.0 mm, embracing the column, callus "W" shaped. It resembles *Epidendrum papallactense* which is larger in every way, stems 46-70 cm long, somewhat laterally compressed, leaves 7.5-14 x 1.4-2.0 cm, inflorescence is paniculate, producing new racemes from the nodes of the very long peduncle, 5-15 cm long, ancipitous, arching; flowers blue to black, lip green to black, column green, petals narrowly oblong, lip widely reniform, base truncate, embracing the column, with a "Y" shaped callus. *Epidendrum harlingii* Hágsater & Dodson has sub-spreading leaves 5.4-12.1 x 0.7-1.2 cm, inflorescence is paniculate, erect, spreading, with a short, erect peduncle, 1.6-3.0 cm long, flowers yellowish green to brown-violet, lip somewhat spreading, not embracing the column, widely cordiform, base nearly truncate, callus "Y" shaped. *Epidendrum choccei* M.E.Acuña, Hágsater & E.Santiago has leaves 2.7-3.4 cm long, parallel to the stem, the inflorescence with successive pink flowers, 2-4 open at one time, sepals 8.3 mm long, petals narrowly oblong, and a widely ovate, acuminate lip. *Epidendrum effusipetalum* Hágsater, Edquén & E.Santiago has leaves 3.2-4.5 x 0.6-0.8 cm, peduncle 0.7-1.0 cm long, lateral sepals 10.0-10.5 mm long, petals 9.0 x 1.0 mm, spreading, linear-oblong, and the lip cordiform, ecallose, with a single mid-rib on the disc.

CONSERVATION STATUS: DD. Data deficient. Known presently from the type collection, on the mountainous border between Azuay and Morona-Santiago, in the Parroquia San Miguel de Cuyes, at 3356 m altitude. The area has been recently designated (2018) as an Area Protegida Comunitaria, to be administered by the Cooperativa de Desarrollo de la Comunidad Jima Limitada. It has been protected since 1991.

ETYMOLOGY: From the Greek λεπτός, fine, thin, slender, weak, and άνθος, flower, in reference to the thin substance of the floral segments, which facilitate spreading them, in particular the lip which in most species of this group is fleshy thick, and nearly impossible to spread without tearing it or boiling it.

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

REFERENCES: Hágsater, E., & C. H. Dodson, 2001, *Epidendrum harlingii* in The Genus *Epidendrum*, Part 3, *Icon. Orchid.* 4: t. 443. Hágsater, E., & C. H. Dodson, 2001, *Epidendrum papallactense* in The Genus *Epidendrum*, Part 3, *Icon. Orchid.* 4: pl. 468. Acuña-Tarazona, M., E. Hágsater & E. Santiago, in press, *Epidendrum choccei*, *Phytotaxa*. Hágsater, E., J. D. Edquén & E. Santiago, 2018, *Epidendrum effusipetalum* in The genus *Epidendrum*, Part 12, *Icon. Orchid.* 16(2): pl. 1673.



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LCDP: E. Hágsater & C. Álvarez

Photo: E. Hágsater

Editors: E. Hágsater & E. Santiago

Herbario AMO

Ciudad de México, MÉXICO

ICONES ORCHIDACEARUM 16(2). 2018.

Plate 1677



EPIDENDRUM LEUCOLASIUM Hágsater & E.Santiago

Plate 1678

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

Type: COLOMBIA: HUILA: Mun. San José de Isnos, Parque Nacional Natural Puracé, km 79.9 Popayán-San José de Isnos, 3083 m, 30 marzo 2018, **Eric Hágsater, Edier Fernández & Julio César Ordóñez Miranda 15667**. Holotype: HPUJ! (LCDP and photo voucher)

Similar to *Epidendrum chrysanthum* Hágsater & Dodson, but the lip clearly 3-lobed, base cordate, the lateral lobes somewhat upturned towards the base; disc with a pair of parallel rows of white hairs at the base of the lateral lobes; lateral lobes transversely rectangular, the corners rounded, mid-lobe an isosceles triangle, apex acute, somewhat narrowly rounded (vs. rhomboid, sides rounded, apex triangular-acute, with two keels and pubescent at base, embracing the column in natural position), petals narrowly elliptic, 3-veined (vs. linear, 1-veined).

Epiphytic, monopodial **herb**, sub-erect, with sub-apical branching, to 40 cm tall. **Roots** thick, basal from the primary stem. **Stems** terete, progressively shorter, the primary stem ca. 20 x 0.4 cm, the secondary stems 3-9 x 0.1-0.3 cm. **Leaves** numerous on the primary stem, 3-8 on the secondary stems; sheaths 4-20 x 1-4 mm, rugose, tubular, blade 15-30 x 3-4 mm, linear-lanceolate, acute, apical margin crenulate, entire towards the base, spreading. **Spathe** lacking. **Inflorescence** 13 mm long, apical, arching-nutant, sub-umbellate, few-flowered peduncle 5 mm long, very short, rachis 8 mm long. **Floral bracts** 3.5 mm long, shorter than the ovary, triangular, acuminate, embracing. **Ovary** 6-7 mm long, not inflated, furrowed. **Flowers** 4, non-resupinate, facing always downwards, brown, with the apex of the column and lateral lobes of the lip yellow, and two parallel rows of white hairs on the disc of the lip. **Sepals** 9 x 3 mm, spreading, flat, 3-veined, margins entire, dorsal sepal ovate-triangular, apex narrowly rounded; lateral sepals. ovate, acute, strongly falcate. **Petals** 8 x 2.5 mm, narrowly elliptic, acute, somewhat falcate, the upper margin nearly straight, 3-veined, margins entire, spreading. **Lip** 7.5 x 6.3 mm, united to the column, 3-lobed, base cordate, the lateral lobes somewhat upturned towards the base; calli lacking, disc with a pair of parallel rows of short white hairs at the base of the lateral lobes, the hairs leaning somewhat backwards; lateral lobes 1.5 x 4.7 mm, transversely rectangular, the corners rounded, margin entire; mid-lobe 3.5 x 3.6 mm, an isosceles triangle, the apex acute, somewhat narrowly rounded. **Column** 4.3 x 2.2 mm, thin, straight, apex truncate. **Clinandrium-hood** reduced, margin entire. **Rostellum**, slit. **Anther** dorsal, ovate, rostrate, apex narrowly rounded, 2 celled, the outer pair very narrow. **Pollinia** 2, obovoid; caudicles short, viscidium semi-liquid, semi-transparent. **Lateral lobes of the stigma**, not seen. **Capsule** not seen.

OTHER SPECIMENS: None seen.

OTHER RECORDS: COLOMBIA: **Putumayo:** Mun. San Francisco; Vereda El Cedral, 2018, *Ramiro Medina 746*, digital image, AMO!

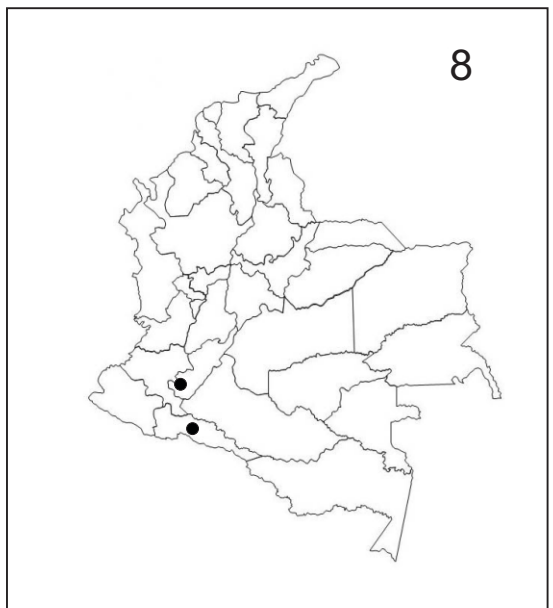
DISTRIBUTION AND ECOLOGY: From recent available information, the species appears to be endemic to Colombia, along the eastern slope of the Macizo Colombiano, epiphytic in sub-paramo areas (Cuatrecasas, 1958) low shrub forest at around 3000 m altitude. The area has not been systematically collected as it was for the last half century under control of illegal armed groups, and thus new access to the area may prove that it is more common. It has been found on small trees on the side of the unpaved roads. Flowering in March-April. The plant formation according to Holdrige (1987) is pp-SAT, Páramo pluvial subalpino tropical, with rainfall ranging between 1000-2000 mm and 3-6°C in average temperature.

RECOGNITION: *Epidendrum leucolasium* appears to belong to the Rhombochilum Group, recognized but the small caespitose, branching vegetative habit, leaves small and narrow, the apical margin crenulate, an apical, short, nodding, few-flowered inflorescence, flowers brown-green-yellow, with the base of the lip more or less pilose. The species has spreading tepals, 9 mm long, 3-veined, and the lip 3-lobed, base cordate, the lateral lobes somewhat upturned towards the base; calli lacking, disc with a pair of parallel rows of short white hairs at the base of the lateral lobes; lateral lobes transversely rectangular, the corners rounded, margin entire; mid-lobe an isosceles triangle, the apex acute, somewhat narrowly rounded. *Epidendrum chrysanthum* fleshy, bronzy-yellow-green colored flowers produced simultaneously, the rhomboid lip enveloping the column, the sepals 7.5 mm long; it as well only has 2 pollinia, an infrequent character in the genus produced by the fusion of each pair.

CONSERVATION STATUS: NT. Not threatened. The two collections are 125 km distant, with a potential range of 1250 km² and by the number of know localities (2) would fall into the VU B1ab(iii) category. However, due to new and large protected areas in its potential range of distribution, it would fall into the NT category. The potential range is between 2800-3200 m altitude in the Departments of Nariño, Cauca, Putumayo and Huila, including the national parks of Serranía de los Churumbelos Auka-Wasi (97,189 ha) and the PNN complejo volcánico Doña Juana-Cascabel (65,858 ha).

ETYMOLOGY: From the Greek λευκον, white color, and λασιος, shaggy, woolly, in reference to the two parallel rows of white hairs on the disc of the lip, at the base of the lateral lobes, which are characteristic of this species and quite unusual in this genus.

REFERENCES: Cuatrecasas, J., 1958, Aspectos de la vegetación natural de Colombia, *Revista Acad. Colomb. Ci. Exact.* 10(40): 221-268. Hágsater, E., & C. H. Dodson, 1999, *Epidendrum chrysanthum*, in *The Genus Epidendrum*, Part 3, *Icon. Orchid.* 4: t. 427. Holdrige, L., 1987, *Ecología basada en zonas de vida*, IICA, San José, Costa Rica, 216 pp. <http://runap.parquesnacionales.gov.co/>



Authors: E. Hágsater & E. Santiago

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Photo: E. Hágsater

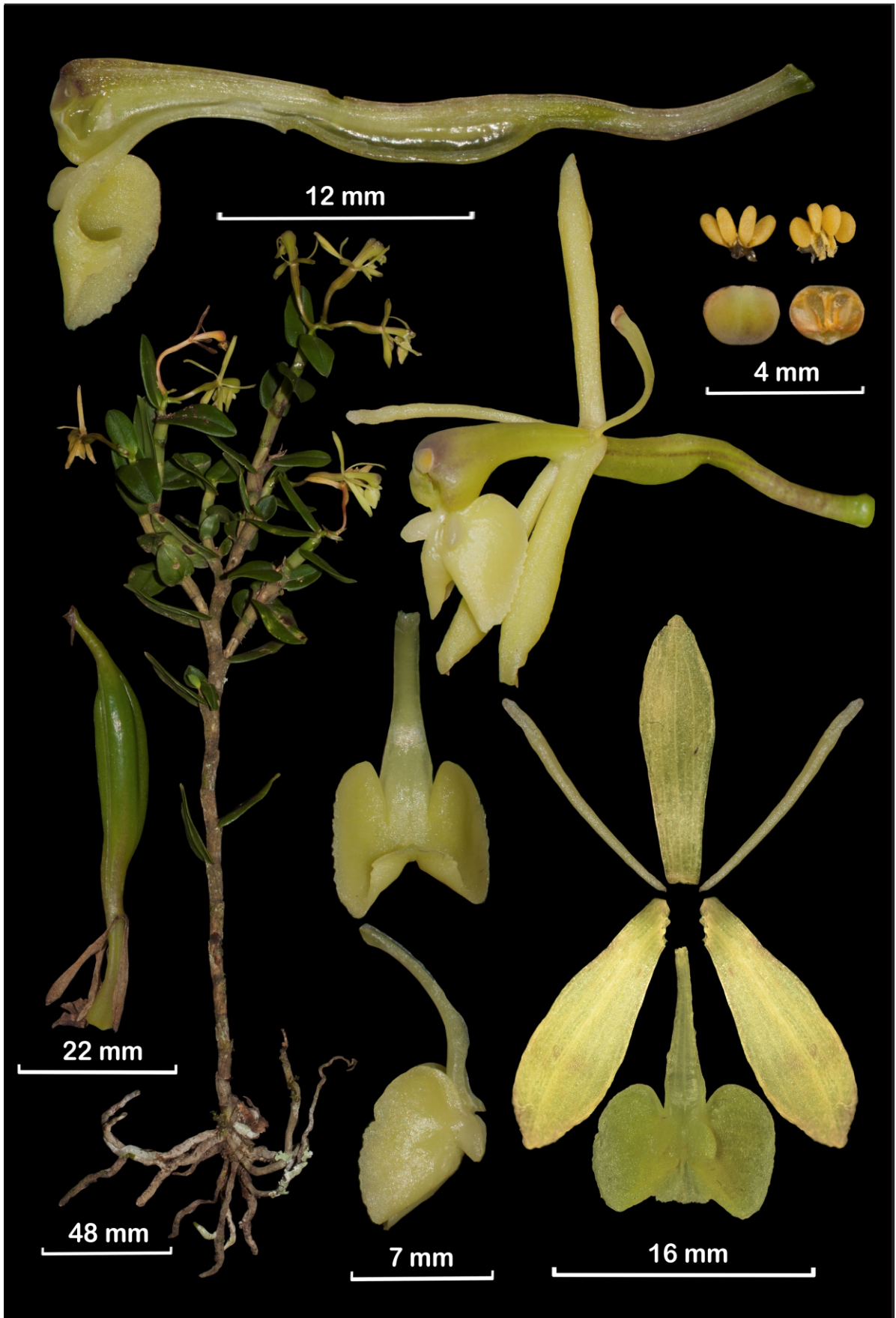
Editors: E. Hágsater & E. Santiago

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Ciudad de México, MÉXICO

ICONES ORCHIDACEARUM 16(2). 2018.

Plate 1678



EPIDENDRUM LLATASII Hágsater, A.Díaz & E.Santiago

EPIDENDRUM LLATASII Hágsater, A. Díaz et E. Santiago, *sp. nov.*

Type: PERU: Lambayeque, Prov. Ferreñafe, Distr. Kañaris, Cordillera de Mamaqpampa, 3081 m, 27 octubre 2017, **Alex Díaz 83**. Holotype: HUT! (LCDP voucher).

Similar to *Epidendrum yanachagaense* Hágsater, but 3-flowered (vs. 8-10 flowered), the lip 3-lobed, with two large transversely obovate-dolabriform lateral lobes, and a very short, wide truncate mid-lobe (vs. lip entire, sub-orbicular), petals linear, margin erose (vs. oblanceolate, falcate, apical margin minutely dentate).

Epiphytic, monopodial, erect, branching herb, 23-30 cm tall. **Roots** 3-4 mm in diameter, basal, fleshy, thick. **Stems** primary stem 20-24 x 0.6 cm, branches 6-8 x 0.5-0.6 cm, cane-like, terete, thin, straight; new branches produced from a sub-apical node of a previous branch, progressively smaller; base of stems covered by non-foliar sheaths 1.2-1.4 cm long. **Leaves** ca. 12 on the primary stem, 4-6 on the branches, distributed throughout the stems, alternate, articulate, coriaceous, dark green, concolor; sheaths 6-11 mm long, tubular, striated; blade 2.4-3.0 x 0.8-1.2 cm, elliptic, obtuse, margin entire, spreading. **Spathe** lacking. **Inflorescence** ca. 0.8-1.2 cm long, excluding the flowers, apical, racemose, flowering only once, laxly few-flowered, very short; peduncle sub-sessile, lacking any bracts. **Floral bracts** 4-5 mm long, much shorter than the ovary, triangular-lanceolate, acuminate, embracing. **Flowers** 3, simultaneous, resupinate, greenish yellow with the apex of the column slightly tinged purple to green; fragrance not registered. **Ovary** 20-22 mm long, terete, thin, longitudinally furrowed, inflated ventrally along the apical half. **Sepals** 12-15 x 4-5 mm, spreading, free, narrowly obovate-oblanceolate, obtuse, 3-5-veined, margin entire, revolute. **Petals** 12.5-15 x 1 mm; partly spreading, free, linear apex rounded, 1-veined, margin entire, spreading. **Lip** 7 x 10 mm, united to the column, reniform, convex in natural position, base cordate; bicallose, the calli laterally compressed, divaricate, elongate, reaching the middle of the lip; disc with a thin mid-rib, reaching the apex of the mid-lobe; lateral lobes 5 x 7 mm, transversely obovate-dolabriform, margin erose, spreading, except for the margin next to the mid-lobe strongly revolute; mid-lobe 0.3 x 3 mm, very small and transversely rectangular, apex truncate, margin sinuous and strongly revolute. **Column** 12 mm long, slightly arched, thin at the base, gradually widened ventrally towards the rounded apex. **Clinandrium-hood** short, margin entire. **Anther** transversely obovoid, 4-celled. **Pollinia** obovoid, laterally compressed, sub-equal; caudicles granulate, slightly longer than the pollinia; viscidium semi-liquid, transparent. **Rostrum** apical, slit. **Lateral lobes of the stigma** small. **Nectary** penetrating nearly half of the ovary, somewhat inflated, forming an elongate vesicle. **Capsule** 6.0 x 0.7 cm, narrowly ellipsoid, striated; pedicel 10 x 1.5 mm, terete, thin; body 3.5 x 0.7 mm; apical neck 15 mm long.

OTHER SPECIMENS: None seen.

OTHER RECORDS: PERU: **Cajamarca:** Prov. Chota, Distr. Conchán, Comunidad Yantavo, proximo a laguna Tijeracongá, 2900 m, 29 X 2016, *Edquén s.n.*, digital photo series, AMO! (photo voucher). A second population is reported near lake El Granero, in the same general region, *Edquén s.n.* Note, AMO!

DISTRIBUTION AND ECOLOGY: Known presently from two collections, from the Cordillera Occidental of the Andes in the section known as Cordillera de Mamaqpampa, in the basin of the Huancabamba River, and from the upper Basin of the Río Chotaño, province of Chota, Department of Cajamarca; both are in the broader basin of the Huancabamba River. Epiphytic in Andean seasonally wet forest remnants of medium height, at 2900-3081 m altitude. Flowering in October.

RECOGNITION: *Epidendrum llatasii* belongs to the Soratee Subgroup of the Scabrum Group which is characterized by the branching habit starting on a monopodial, primary stem, infundibuliform, rugose leaf-sheaths, lanceolate, aristate, acute leaves, racemose subcapitate inflorescence on a short, thin peduncle, and the bicallose lip. The species is recognized by the leaves 2.4-3.0 x 0.8-1.2 cm, elliptic, apex obtuse; inflorescence sub-sessile, laxly 3-flowered, simultaneous, greenish yellow, apex of the column slightly purple tinged; sepals 12-15 x 4-5 mm, narrowly obovate-oblanceolate, obtuse, the lip proportionately wider than long, the lateral lobes prominent, transversely obovate-dolabriform, and the mid-lobe small, very wide and short, apically truncate, the inner margins next to the mid-lobe strongly revolute, so that the lip appears bilobed in natural position. Vegetatively it is very similar to *Epidendrum yanachagaense* which has elliptic-ovate, obtuse leaves 1-4 x 0.9-1.3 cm, inflorescence with 8-10 green flowers, sepals 15-16 x 5-7 mm, elliptic, the lateral sepals falcate; lip sub-orbicular, as wide as it is long. *Epidendrum cardenasii* Hágsater from Bolivia, has narrowly lanceolate, acuminate leaves 3.6-5.1 x 0.5-0.7 cm, 3-5 yellow flowers, sepals 12-13 x 5-6 mm, elliptic, acute, and lip bilobed with a wide, rounded mucro in the apical sinus. *Epidendrum sumapacense* Hágsater & E. Santiago, from Colombia has elliptic, acute leaves 2-6 x 1.1-2.5 cm, 12-15 yellow flowers, sepals 14 x 6.2 mm, narrowly obovate, apex rounded, the lip 5 x 8 mm, with a pair of small, incipient lateral lobes. *Epidendrum monteagudoii* Hágsater & E. Santiago has smaller plants, 16 cm tall, linear-lanceolate leaves 1.2-1.3 x 0.2-0.3 cm, apex minutely apiculate, inflorescence with 7 simultaneous cream colored flowers with wine-red spots, sepals 8 mm long, the lip with globose calli and the mid-lobe widely triangular, obtuse.

CONSERVATION STATUS: DD. Data deficient. Known presently from the Cordillera Occidental de los Andes in the Departments of Lambayeque and Cajamarca.

ETYMOLOGY: In honor of Santos Régulo Llatas Quiroz (1 September 1952 – 2 March 2016), botanical biologist, professor of taxonomy at the National University Pedro Ruiz Gallo, in Lambayeque, Peru, and the most assiduous researcher of the flora Lambayecana.

ACKNOWLEDGEMENT: Type collected under project "Estudios taxonómicos selectos de la flora del norte del Perú", Resolución: 247-2016-Serfor/Dggsppfs y la ampliación Resol. 430-2017.

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Photo: J. D. Edquén

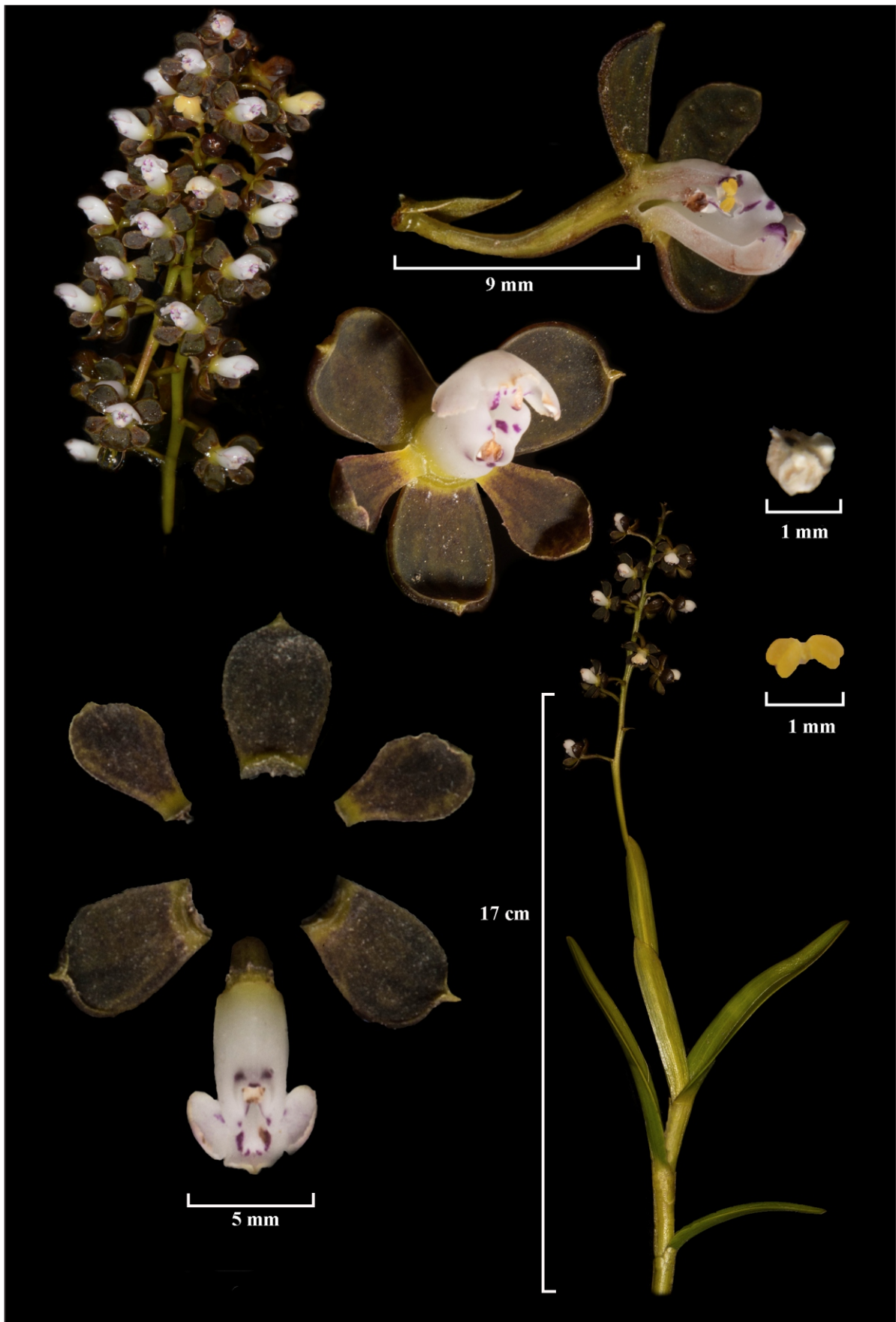
Editors: E. Hágsater & E. Santiago

Herbario AMO

Ciudad de México, MÉXICO

ICONES ORCHIDACEARUM 16(2). 2018.

Plate 1679



EPIDENDRUM MARCIAE Hágsater & E.Santiago

Plate 1680

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

Type: ECUADOR: Cotopaxi: Cantón Sigchos, Parroquia Las Pampas; camino Alluriquin-Sigchos, Reserva Ecológica Los Ilinizas, después de Las Pampas, pasando el puerto hacia Sigchos, epífita, sobre cerca viva de *Euphorbia laurifolia* Lam., 2881 m, 21 abril 2018, **Eric Hágsater, Gerardo A. Salazar, Francisco Tobar, Itzi Frágoso & Marcia Peñafiel 15785**. Holotype: QCNE! (LCDP and photo voucher) Isotypes: AMO! MEXU!

Similar to *Epidendrum punense* Hágsater & Dodson but with 2-4 leaves 5.0-8.0 x 1.0-1.4 cm (vs. 1-leaved, 11-13 x 2.0-2.2 cm), 1-2 spathes that do not cover the whole peduncle of the inflorescence (vs. a single spathe covering the peduncle), flowers brown with lip and column white with purple spots on calli and column apex (vs. dark reddish brown, lip pale yellow with violet spots around the anther), petals 5.5-6.0 x 3.3-4.0 mm, obovate-spatulate, margin entire, flat (vs. petals 7.8-8.0 x 3.5-3.7 mm, obovate, margin undulate), and lip 3.8 x 5.8 mm (vs. lip 4.8-5.0 x 6.5-6.8 mm).

Epiphytic and terrestrial, sympodial, sub-caespitose **herb** 30-35 cm tall including the inflorescence. **Roots** 1-2 mm in diameter, basal, fleshy, thick, whitish. **Stems** 10-13 x 0.5-0.7 cm, simple, cane-like, fleshy, thickened, laterally compressed, nearly completely covered by 2 non-foliar sheaths 2.0-4.0 x 0.5-0.7 cm, tubular. **Leaves** 2-4 distributed along the apical half of the stem, alternate, articulate; sheaths 1.5-4.0 x 0.5-0.7 cm, somewhat laterally compressed, rugose, yellow-green; blade 3.5-8.0 x 0.7-1.4 cm, oblong-elliptic, conduplicate at the base, apex slightly bilobed, minutely apiculate, coriaceous, green with the veins marked in pale green, margin entire. **Spathes** 1-2, 3.5-6.5 x 0.6-0.8 cm, oblong, acute, tubular, laterally compressed, ancipitose. **Inflorescence** 17-18 cm long, apical, racemose, erect; peduncle 9-12 x 0.2 cm, without bracts; rachis 6.5-9.0 cm long, straight. **Floral bracts** 4-5 mm long, about half as long as the ovary, triangular, acuminate, embracing. **Ovary** 9 mm long, terete, slightly thickened near the apex. **Flowers** 10-18, simultaneous, non-resupinate, sepals and petals dark brown, the base green, lip white with purple dots on the calli and apex of the column. **Sepals** 6.5-7.0 x 4.0-4.5 mm, spreading, arched forward and forming a wide cup with the petals, free, obovate, apex rounded, apiculate, fleshy, concave, 5-veined; lateral sepals slightly oblique. **Petals** 5.5-6.0 x 3.3-4.0 mm, spreading, free, obovate-spatulate, 3-veined, fleshy, slightly concave, margin entire, spreading. **Lip** 3.8 x 5.8 mm, united to the column, fleshy, reniform, base cordate, with a pair of apical incisions, thus slightly 3-lobed, apex rounded, strongly concave in natural position; bicallose, the calli fleshy, prominent, parallel, extending to the middle of the disc or more. **Column** 5.8 mm long, slightly arching, thick, apex with a wide tooth on each side about as long as the calli. **Clinandrium hood** reduced, margin entire. **Anther** sub-spherical, 4-celled. **Pollinia** 4, obovoid, laterally compressed, caudicles granulose, much shorter than the pollinia. **Rostellum** sub-apical, slit. **Lateral lobes of the stigma** large, about half the length of the stigmatic cavity. **Nectary** penetrating as far as the perianth, unornamented. **Capsule** not seen.

OTHER SPECIMENS: ECUADOR: Cotopaxi: Cantón Sigchos; cruzando el Río Toachi, por camino Sigchos-Latacunga, desviación hacia Cerro Azul, Meseta rancho ganadero, 2913, 22 IV 2018, *Hágsater 15793*, AMO! MEXU! QCNE! cruzando el Río Toachi, por camino Sigchos-Latacunga, desviación hacia Cerro Azul, arriba de Cerro Azul, 2865 m, 22 IV 2018 *Hágsater 15807*, QCNE! **Pichincha:** Cantón Quito, Parroquia Lloa, río Cristal, sendero Lloa Mindo, 2400 m, 9 X 2009, *Cerón 65944*, QAP!

OTHER RECORDS: ECUADOR: Cotopaxi: Cantón Sigchos, Parroquia Las Pampas; camino Alluriquin-Sigchos, después de Las Pampas, 2891 m, 21 IV 2018, *Hágsater 15780*, digital images, AMO!

DISTRIBUTION AND ECOLOGY: Endemic to Ecuador, presently known only from the Cantón of Sigchos, along the crest of the ridge from Alluriquin, and in the valley south of the Ilinizas mountains, basin of the Río Toachi, epiphytic on live fence shrubs of *Euphorbia laurifolia* Lam. and various low trees in wet forests, as well as terrestrial on road side banks, at 2865-2913 m altitude. Flowering in April-May.

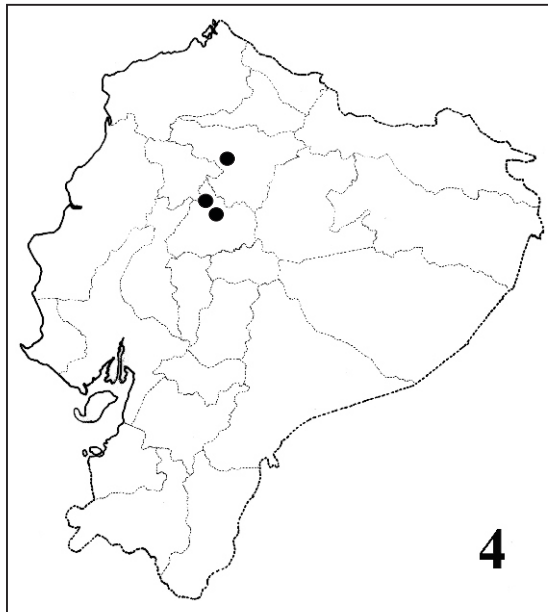
RECOGNITION: *Epidendrum marciae* belongs to the Mancum Group and Subgroup, which is characterized by the sympodial growth, narrow spatheaceous bracts with parallel sides, erect raceme with non-resupinate flowers and a generally reduced, fleshy lip. The new species can be recognized by the 2-4 leaved stems, leaves 3.5-8.0 x 1.0-1.4 cm, the inflorescence subtended by 1-2 spathes, flowers dark brown with column and lip white with purple dots on apex of column and calli, petals 5.5-6.0 x 3.3-4.0 mm, obovate-spatulate, apex rounded, and lip 3.8 x 5.8 mm, united to the column, reniform, base cordate, with a pair of apical incisions, thus slightly 3-lobed, apex rounded, concave in natural position; bicallose, the calli fleshy, prominent, parallel, extending to the middle of the disc or more. *Epidendrum punense* has a solitary leaf 11-13 x 2.0-2.2 cm, single spathe covering the whole peduncle, flowers dark reddish brown, lip pale yellow with violet spots around the anther, petals 7.8-8.0 x 3.5-3.7 mm, obovate with the margin undulate and lip 4.8-5.0 x 6.5-6.8 mm, laminar, entire, reniform, also with a pair of incisions at the apex. *Epidendrum montisillinense* Hágsater et Dodson, from the same general area is vegetatively similar, flowers also similarly colored, but petals narrower, 5.2-5.5 x 2.0-2.3 mm, and the lip, 4.0-4.2 x 4.3-5.0 mm, is deeply 3-lobed, lateral lobes sub-quadrate, apical margin dentate; mid-lobe sub-quadrate, apiculate. *Epidendrum mancum* Lindl., has 2-3 wider leaves 2-6 x 1.3-2.7 cm, and flowers red-brown, column and lip white, and an entire, sub-quadrate lip 4.8-5.0 x 2.4-3.5 mm. *Epidendrum micromarciae* Hágsater & E.Santiago is very similar but has somewhat smaller plants, 21-22 cm tall, leaves 2.5-7.0 x 0.5-0.9 cm, linear-oblong, smaller flowers, sepals 5.7-5.9 mm long, petals 5.0 x 2.0 mm, and lip very small, not wider than the column, 1.5 x 2.0 mm.

CONSERVATION STATUS: NT. The species is common and grows freely on shrubs of live fences, as well as terrestrial on hillsides in the upper basin of the Toachi River.

ETYMOLOGY: In honor of Marcia Cecilia Peñafiel Cevallos (1965-), Ecuadorean Botanist, Administrator of the National Herbarium of Ecuador, QCNE, who participated in the collection of the type and other specimens. Marcia has specialized in the flora of the paramos of Ecuador, in particular with her book on the Flora and Vegetation of Cuicocha, published in 2003.

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

REFERENCES: Hágsater, E., & C.H. Dodson in L. Sánchez S., 2004, *Epidendrum montisillinense*, in E. Hágsater & L. Sánchez S. (eds.), The Genus *Epidendrum*, Part 4, **Icon. Orchid.** 7: pl. 763. Hágsater, E., & C.H. Dodson in L. Sánchez S., 2004, *Epidendrum punense*, in E. Hágsater & L. Sánchez S. (eds.), The Genus *Epidendrum*, Part 4, **Icon. Orchid.** 7: pl. 785. Hágsater, E., & E. Santiago, 2018, *Epidendrum micromarciae*, in E. Hágsater & E. Santiago (eds.), The Genus *Epidendrum*, Part 12, **Icon. Orchid.** 16(2): pl. 1684. Peñafiel, M., 2003, **Flora y Vegetación de Cuicocha**, Ediciones Abya-Yala, Quito, 64 pp. Sánchez S., L., & E. Hágsater, 2004, *Epidendrum mancum*, in E. Hágsater & L. Sánchez S. (eds.), The Genus *Epidendrum*, Part 8, **Icon. Orchid.** 12: pl. 1262.



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LCDP: E. Hágsater & C. Álvarez

Photo: E. Hágsater

Editors: E. Hágsater & E. Santiago

Herbario AMO

Ciudad de México, MÉXICO

ICONES ORCHIDACEARUM 16(2). 2018.

Plate 1680



EPIDENDRUM MARCI-JIMENEZIORUM Hágsater & R.Jiménez

Plate 1681

EPIDENDRUM MARCI-JIMENEZIORUM Hágsater et R.Jiménez, sp. nov.

Type: ECUADOR: Napo: El Chaco, pasando El Chaco hacia Coca, pasando Santa Rosa de Quijos y puente, en subida largo, 1671 m, bosque montano alto, col. 3 November 2017, pressed 1 August 2018, **Eric Hágsater & Marco Marcelo Jiménez León 15376**, Holotype: QCNE! (LCDP and photo voucher)

Similar to *Epidendrum lechleri* Rchb.f. but inflorescence much shorter, 3.0 cm long (vs. 7.5 cm), floral bracts 2-3 mm long, much shorter than the ovary (vs. floral bracts 6-13 mm long, about as long as the ovary), lip slightly 3-lobed, the mid-lobe formed by two wide, short, rounded lobes (vs. lip bi-lobed, the lobes rounded, apex emarginate), calli sub-globose (vs. calli elongate, obtuse).

Epiphytic, sympodial, erect herb, to 26 cm tall, where each new growth originates from a middle to sub-apical internode of the previous growth. **Roots** 3 mm in diameter, from the basal growth. **Stems** 5-13 x 0.2-0.4 cm, simple, cane-like, terete, straight, progressively shorter, covered by several non-foliar sheaths, tubular, 10-20 x 2.0-4.0 mm. **Leaves** 3, aggregate towards the apex of each stem; sheath to 1.1-1.3 cm long, tubular, striated, rugose, the lower ones non-foliar; blade 2.5-7.0 x 0.8-1.4 cm, spreading, narrowly elliptic, acute, sub-coriaceous, smooth, dorsally slightly carinate, margin entire except towards the apex where it is minutely dentate, deep green above, underside purple. **Spathe** lacking. **Inflorescence** 3 cm long (including the flowers), apical, from mature stem, flowering only once, racemose, sub-erect, peduncle and rachis laterally compressed, ancipitose. **Flowers** 3, successive, resupinate, yellow-green, concolor; fragrance apparently lacking. **Floral bract** 2-3 mm long, much shorter than the ovary, triangular, acute, embracing. **Ovary** 18 mm long, slightly but clearly inflated ventrally along the apical half, terete, unornamented. **Sepals** partly spreading, free, with an inconspicuous dorsal keel, acute, apiculate, 5 veined, margins entire, spreading; dorsal sepal 8.5 x 4 mm, elliptic; lateral sepals 9.0 x 4.5 mm, obliquely obovate. **Petals** 8.0 x 2.5 mm, inflexed, sub-parallel to the column, oblanceolate, obtuse, 3-veined, margins entire, spreading. **Lip** 7 x 12 mm, united the column, sub-reniform, somewhat convex in natural position, base cordate, slightly 3-lobed, apex emarginate, fleshy in the disc, margins entire, spreading; bicallose, the calli large, sub-globose, disc thickened by 3 wide, low ribs, the mid-rib somewhat longer, reaching the middle of the lip; lateral lobes 3.5 x 6.0 mm, obliquely semi-circular, rounded; mid-lobe 1.0 x 6.5 mm, bilobed, emarginate, formed by a pair of rounded, shallow lobes. **Column** 6.0-6.5 mm long, thick, straight, vertically widened towards the apex, with a triangular tooth on each side. **Clinandrium-hood** reduced, margin entire. **Anther** 1.6 mm long, ovoid, apex obtuse, with a low mid-rib, along the apical half, 4-celled. **Pollinia** 4, obovoid, laterally compressed, sub-equal; caudicles soft and granulose, slightly longer than the pollinia; viscidium semi-liquid, transparent. **Rostrum** apical, slit. **Lateral lobes of the stigma** small, ¼ the length of the stigmatic cavity. **Nectary** prominent, deep, penetrating half the pedicellate ovary, unornamented. **Capsule** not seen.

OTHER SPECIMENS: ECUADOR: **Morona-Santiago:** Macas, Pedregal Río Upano, 11 km río arriba de Macas, 1050 m, 23 XI 1988, Hágsater 9670, AMO! (spirit). **Napo:** Quijos, km 3 Bæza-Lago Agrio, T500 m, 14 IV 1984, Dodson 14284, MO! Ibid. pressed in cult 30 X 1984, Dodson 14284 sub Hágsater 7746, AMO! (spirit & illustration).

DISTRIBUTION AND ECOLOGY: Widespread along the eastern slope of the Andes from northern and central Ecuador, epiphytic at 1050-1670 m altitude. Flowering from April to October.

RECOGNITION: *Epidendrum marci-jimeneziorum* belongs to the Incomptum Group, which is characterized by the erect habit with successive lateral growths produced from the middle of the previous growth, few leaves aggregate towards the apex of the stems, roots produced generally only from the base of the primordial stem, inflorescences are short with fleshy yellowish to green to violet-green to black flowers with short ovaries, the lip entire to 3-lobed, the Proligerum Subgroup has inflated nectaries clearly visible along the apical half of the pedicellate ovary. This species is recognized by the small yellow-green flowers, sepals 8.5-9.0 mm long, lip slightly 3-lobed, the mid-lobe formed by two wide, short, rounded lobes, and the sub-globose, prominent calli. It has been confused with *Epidendrum lechleri* Rchb.f. which has larger flowers, sepals 10 mm long, a bilobed lip, lobes sub-orbicular, and the calli are elongate, obtuse. *Epidendrum morgani* Dodson & Garay, has short, few-flowered inflorescences, successive, green flowers tinged with purple-brown, sepals 13-18 mm long, the lip widely cordiform, apiculate, with two low, laminar, divergent calli. *Epidendrum ecostatum* Pabst, described from Brazil, has similar but smaller flowers, and the lip lacks any calli. *Epidendrum jamaicense* Lindl. also has an inflated nectary, but the lip is reniform, with the apex rounded and somewhat emarginate, revolute in natural position, and the lateral sepals are aristate. *Epidendrum prietoi* Hágsater from Ecuador, has dirty yellow flowers with purplish veins, the 3-lobed, lip with the lateral lobes dolabriform, the basal margin concave, and the distal margin convex, 1-veined petals and long, narrow calli, the disc with 3 low, narrow veins, the lateral veins trifid.

CONSERVATION STATUS: DD. Data deficient. The species is found within the Cayambe-Coca Ecological Reserve, and thus would be expected to be more widespread and somewhat protected.

ETYMOLOGY: In honor of Marco Marcelo Jiménez León (1982-), and his father Marco Melecio Jiménez Villalta (1954-) of Zamora, Zamora-Chinchipe, Ecuador. The son graduated from the Universidad Técnica Particular de Loja (UTPL), became fascinated with orchids since early childhood with his father, an avid orchid collector, and has collected extensively in southeastern Ecuador, having published the first of 5 volumes of "Orquídeas de Zamora-Chinchipe". He participated in the collection of the type, in a field trip with the author in late 2017, prior to the 22 World Orchid Conference held in Guayaquil, Ecuador.

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

REFERENCES: Hágsater, E., 2004, *Epidendrum prietoi* in E. Hágsater & L. Sánchez S. (eds.), The Genus *Epidendrum*, Part 4, **Icon. Orchid.** 7: pl. 779. Hágsater, E., *Epidendrum jamaicense* in E. Hágsater & E. Santiago (eds.), The Genus *Epidendrum*, Part 12, **Icon. Orchid.** 16: pl. 1631. 2018. Jiménez, Marco, & Jiménez L., Marco, 2017, **Orquídeas de Zamora Chinchipe, 1: Epidendroideae**, 477 pp. Editorial "Leonel Feijóo, Zamora Chinchipe, Ecuador. Pabst, G.F.J., 1956, *Epidendrum ecostatum* in Orchidaceae Paranaenses; in J. A. Angely, **Contrib. Fl. Paraná** 6: 11. Schweinfurth, C., 1959, *Epidendrum lechleri* in Orchids of Peru, **Fieldiana: Bot.** 30(2): 463.





EPIDENDRUM MAVRODACTYLON Hágsater, Edquén & E.Santiago

Plate 1682

EPIDENDRUM MAVRODACTYLON Hágsater, Edquén et E.Santiago, *sp. nov.*

Type: PERU: San Martín, Prov. Rioja, correspondiente al área natural protegida Bosque de Protección Alto Mayo-BPAM, Sector Venceremos, Zona 18, 1807 m, 30 enero 2018, **José Dilmer Edquén Oblitas 401**. Holotype: HURP! (LCDP and photo voucher).

Similar to *Epidendrum althianorum* Hágsater & Collantes but the plants very small, 3 cm tall (vs. 4.5-10 cm tall), leaves 0.5-1.4 cm long, arching (vs. 1.3-5 cm long, straight), flowers yellowish green with copper tinge on sepals and petals, lip elliptic, acute, immaculate (vs. lemon-green, lip orbicular, rounded, with a large heart-shaped red blotch), ovary with an elongate, prominent ventral vesicle (vs. ovary thin, not inflated).

Epiphytic, caespitose, sympodial, compact, small **herb**, 3 cm tall. **Roots** 1 mm in diameter, basal along the rhizome, thin, white. **Stems** 2 x 0.3 cm, cane-like, simple, laterally compressed, somewhat reclining. **Leaves** 4, fleshy, distichous, erect, concave, arching and partially imbricated, somewhat conduplicate, dark green, concolor; sheath 1-3 mm long, tubular, narrow at the base gradually widened towards the apex; blade 0.5-1.4 x 0.2-0.4 cm, narrowly lanceolate obtuse to sub-acute, minutely apiculate, margin entire, dentate at the apex. **Spathe** 1, 9 x 7 mm when spread, elliptic, obtuse, minutely apiculate, conduplicate. **Inflorescence** apical, sessile, single-flowered. **Floral bract** not seen (hidden within the spathe). **Flower** 1, resupinate yellowish green, lip concolor, sepals and petals somewhat tinged bronze; fragrance not registered. **Ovary** 14-15 mm long, ventrally inflated, forming a prominent, elongate vesicle along the apical half of the ovary. **Sepals** 9.5-10 x 3.5-4.0 mm, apex acuminate, minutely apiculate, 3-veined; dorsal sepal free, partly spreading, nearly parallel to the column, narrowly lanceolate, margin minutely papillose towards the apex, spreading; lateral sepals obliquely untied to the base of the column, spreading, narrowly ovate-triangular, oblique, margin entire, revolute. **Petals** 8.5 x 0.5 mm, free, partly spreading, parallel to the dorsal sepal, linear, falcate, acute, 1-veined, margin entire, spreading. **Lip** 7 x 4 mm, united to the column, entire, elliptic, base cuneate, apex acute, minutely apiculate, margin slightly erose; bicallose, the calli short, globose, prominent; disc with a very low mid-rib. **Column** 4 mm long, thin at the base, gradually wider towards the apex, triangular in lateral view. **Rostrum** apical, slit. **Clinandrium-hood** prominent, slightly longer than the body of the column, totally covering the anther, margin erose. **Anther** reniform, 4-celled. **Pollinia** 4, obovate, complanate, convex-flat, caudicles as long as the pollinia, viscidium semi-liquid, white. **Lateral lobes of the stigma** not seen. **Nectary** inflated longitudinally ventrally along the apical half of the ovary. **Capsule** not seen.

OTHER SPECIMENS: None seen.

OTHER RECORDS: PERU: cultivated in Moyobamba in the private collection of José Altamirano, *Rudolf Jenny s.n.*, 16 May 2009, digital images, AMO 113672!

DISTRIBUTION AND ECOLOGY: Known presently only from the limits between the departments of San Martín and Amazonas in northern Peru, in Montane Wet Forests at 1800 m altitude, with abundant moss, and accumulation of organic matter. Epiphytic on *Erythrina sp.* (Fabaceae). Flowering in January and February.

RECOGNITION: *Epidendrum mavrodactylon* belongs to the Porpax Group, which is characterized by the sympodial, somewhat repent habit, usually forming large mats; short, cane-like stems with very fleshy, succulent, articulate, distichous leaves, the apical margin minutely ciliate; single-flowered inflorescence, sessile flowers; and the lip generally reddish purple. The new species is recognized by the very small plants, to 3 cm tall, with leaves 0.5-1.4 cm long, semi-terete, concave and arching, flowers yellowish green, sepals and petals tinged bronze; dorsal sepal and petals nearly parallel to the column, lip elliptic, acute, immaculate and the ovary with a prominent ventral, elongate vesicle, half as long as the ovary. *Epidendrum althianorum* from Cusco has larger plants, 4.5-10 cm tall, leaves 1.3-5 cm long, straight, flowers lime-yellow, lip orbicular, rounded with a heart-shaped red blotch in the middle, and the ovary not inflated, not forming a vesicle. There is a photograph of a species from Bolivia in Vásquez (2004) which somewhat resembles this species, but no data of the origin of that photograph is given, and the cited specimens evidently include several species none of which correspond to *Epidendrum peperomia* Rchb.f.

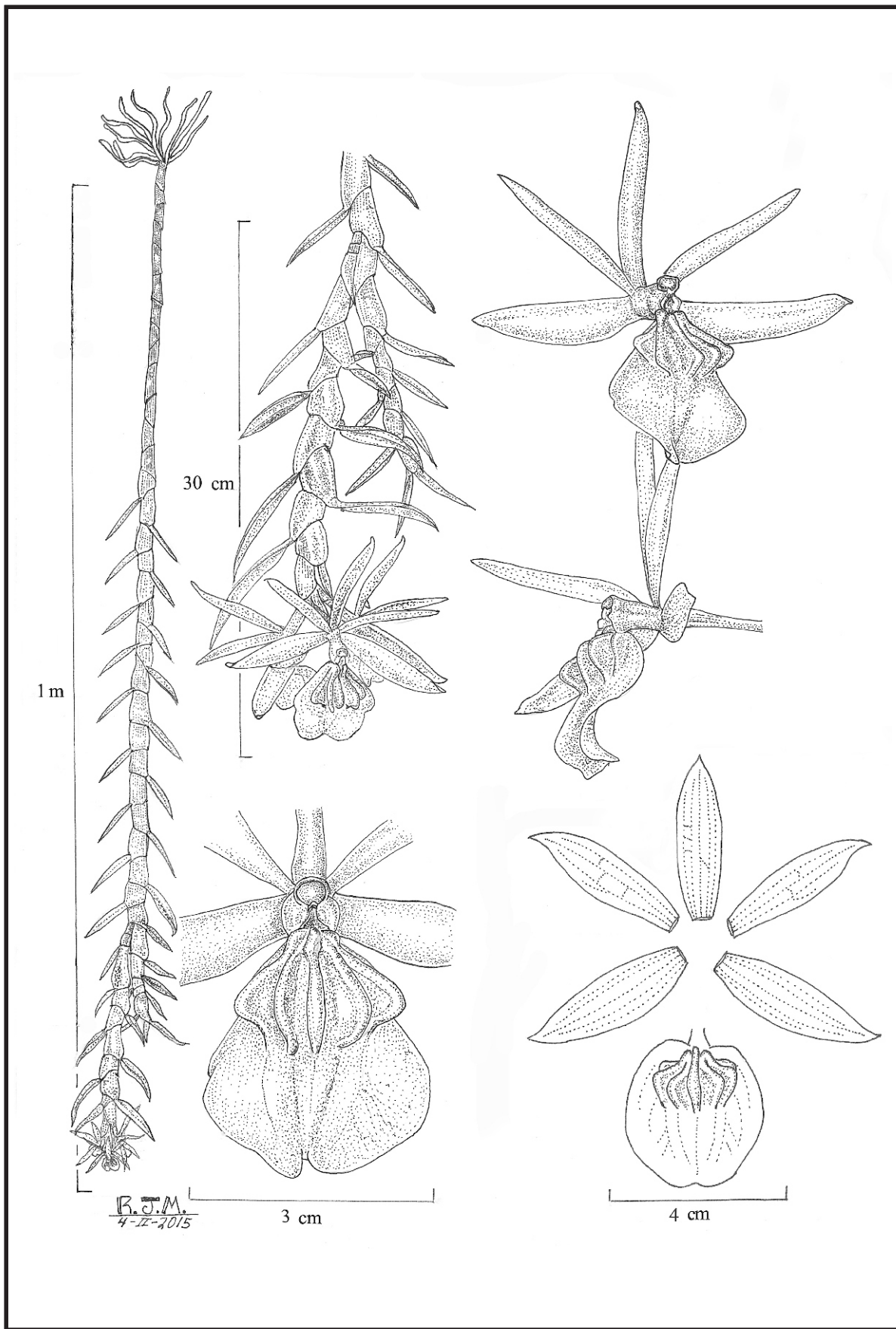
CONSERVATION STATUS: DD. Data deficient. Apparently locally widespread, though only 5 specimens were seen on the tree where the type was collected.

ETYMOLOGY: From the Greek *μαυρος*, Moor, an inhabitant of Mauritania, or in ancient Greek, black, dark, and *δακτυλος*, finger, in reference to the very succulent leaves, which are reminiscent of those of *Lampranthus spectabilis* N.E.Br., popularly known in Spanish as Moor's finger; in English as Trailing Ice Plant, a popular ground cover in semi-arid areas. That species is originally from South Africa.

ACKNOWLEDGMENT: Collections made under project "Efecto de la fragmentación de hábitats de bosque alto andino en diversidad de Orchidaceae y Bromeliaceae del anexo de Diosán, Distrito de Granadas, Amazonas" emitido bajo la resolución de Dirección General (RDG) N° 137-2018-SERFOR/DGSPFFS; correspondiéndole el Código de Autorización N° AUT-IFL-2018-025.

REFERENCES: Hágsater, E., & B. Collantes, 2013, *Epidendrum althianorum*, in E. Hágsater & L. Sánchez S. (eds.) *The Genus Epidendrum* Part 10; **Icon. Orchid.** 14: pl. 1403. Vásquez Ch., R., 2004, *Epidendrum peperomia* in Vásquez Ch., R., & P.L. Ibsch (eds.), **Orchids of Bolivia; diversity and conservation status** 2: 159, photo 73.





EPIDENDRUM MEGALOPENTADACTYLUM Hągsater & Huayta

Plate 1683

EPIDENDRUM MEGALOPENTADACTYLUM Hágsater et Huayta, *sp. nov.*

Type: PERU: Pasco: Prov. Oxapampa, Distrito Huancabamba, trayecto a la Coop. Navarra, 1750 m, colectado abril 2013, cultivado sobre el tronco de un cedro grande, prensado 11 septiembre 2018, *Abel Huayta Baltazar s.n.* Holotype: HOXA! (illustration voucher, floral segments).

Similar to *Epidendrum laxicaule* D.E.Benn. & Christenson but the stems ancipitose (vs. laterally compressed, edges rounded), leaves 4.5-7.5 x 1.5-2.5 cm, narrowly lanceolate (vs. 8.5 x 0.45-0.47 cm, linear), flowers white, sepals faintly tinged pink, petals greenish white, lip pure white (vs. flowers greenish white, lip ivory white), lip with a very prominent 5-ribbed callus reminiscent of a closed fist with 5 bulging fingers (vs. lip with 7-9 evident ribs).

Epiphytic or lithophytic, monopodial, pendant, branching **herb**, ca. 70-400 cm long. Roots thin, basal, only from the primary stem. **Stems** branching, strongly laterally compressed, ancipitose, primary stem 100 x 2.3 cm, secondary stem ca. 20 x 1.8 cm, produced from a sub-apical internode of the previous stem. **Leaves** numerous on the primary stem, ca. 9 on the secondary stem; distributed throughout the stems, distichous, glaucous green, margins slightly tinged lilac, facing downwards, reclining; sheaths, ca. 3.5 x 1.8 cm, tubular, ancipitose, somewhat infundibuliform, partially imbricated; green, margins slightly tinged lilac, blade on the primary stem sub-equal in size, except for the basal and apical ones which are smaller, 7.5 x 2.5 cm; progressively larger on the secondary stem, 4.5-7.5 x 1.5-2.5 cm, coriaceous, narrowly lanceolate, sulcate, apex conduplicate; margin entire, spreading. **Spathe** lacking. **Inflorescence** ca. 0.5-2 cm long, apical, pluri-racemose, sub-corymbose, 3-5-flowered, produced from within up to 6 diminishing sheaths, the lower ones with much reduced leaves, and a short to intermediate rachis, apparently sometimes producing an additional rachis with time. **Floral bracts** very short, triangular, acute, much shorter than the ovary. **Flowers** 3-5, white, sepals faintly tinged pink, petals greenish white, lip pure white and column green, clinandrium-hood white; fragrance not registered. Ovary 16 x 4 mm, progressively thickened towards the apex, not inflated, terete, striated. Sepals dorsal 38 x 10 mm, lateral sepals 40 x 12 mm, spreading, free, narrowly elliptic-ovate, acute, unornamented, 3-veined, margin entire, somewhat revolute; lateral sepals slightly oblique. Petals 38 x 10 mm, spreading, free, narrowly elliptic, apex acute, 3-veined, margin entire, slightly revolute. Lip 33 x 31 mm, united to the column, entire, sub-orbicular, base somewhat cordate, apex rounded, the basal lateral quarters revolute and hidden behind the callus in natural position, the apex somewhat folded forward and appearing emarginate; margin entire; callus very prominent 5-ribbed, reminiscent of a closed fist of 5 bulging fingers that cover the basal half of the lip; the lateral pairs are jointed at the base, thus like an inverted "Y", with the short basal segment forming a small hump; the mid-rib is somewhat lower at the base. **Column** 10 mm long, straight, thick, truncate. **Clinandrium-hood** short, margin entire. **Anther** reniform. **Pollinia**, **nectary** and **lateral lobes of the stigma** not seen. **Capsule** not seen.

OTHER SPECIMENS: None seen.

OTHER RECORDS: PERU: Pasco: Oxapampa, Barrio Miraflores, Fundo La Quebrada, 1850 m, I 2015, *Corcuera s.n.*, digital image series, AMO! (illustration voucher, except for spreading floral segments). Oxapampa, *Arbildo López s.n.*, digital image, AMO! Oxapampa, 1750-1950 m, received 3 II 2017, *Huayta s.n.*, digital image series, AMO! (photo voucher).

DISTRIBUTION AND ECOLOGY: Presently known only from a several plants from the Province of Oxapampa in central Peru; at 1750-1950 m altitude. Epiphytic or lithophytic Growing pendent from tall trunks and branches of *Cedrela odorata* L. trees, up to 20 m off the ground in well ventilated, wet montane forest, as well as from large boulders, usually with bright light. Flowering in January, April, and September.

RECOGNITION: *Epidendrum megalopentadactylum* belongs to Laxicaule group which is characterized by the pendent plants, branching, stems laterally compressed to ancipitose, wide, leaves comparatively short, with short, racemose, few-flowered inflorescences, flowers large, lip with very prominent ribs. The new species can be recognized by the large, pendant plants, with ancipitose stems, and reclining, distichous, fleshy, narrowly lanceolate leaves, flowers large, sepals 37-40 mm long, star-shaped, white, sepals faintly tinged pink, petals greenish white, lip with a very prominent 5-ribbed callus, reminiscent of a closed fist of 5 bulging fingers. *Epidendrum laxicaule* D.E.Benn. & Christenson is very similar, but the leaves are linear, semi-terete, and the flowers are smaller and green, sepals 26-32 mm long, and lateral ridges of the lip are divided into 3-4 ridges on each side of the mid-ridge. The plants at first sight, are reminiscent of a very long stem of the Christmas Cactus, *Schlumbergera sp.* complanate stems. There is a third species with similar vegetative habit, but presently only known from a single digital photo provided by Ricardo Fernández in 2014.

CONSERVATION STATUS: DD. Data deficient. Only a couple of plants have been reported from a private property.

ETYMOLOGY: From the Greek *μεγαλο*, large, *πεντα*, five, and *δακτυλος*, fingers, in reference to the very large, bulging calli formed by five prominent ribs, that characterizes this species.

REFERENCE: Bennett, Jr., D.E., & E.A. Christenson, 1998, *Epidendrum laxicaule*, in *Orchids of Peru*, **Icon. Orchid. Peruvianum**, pl. 462.



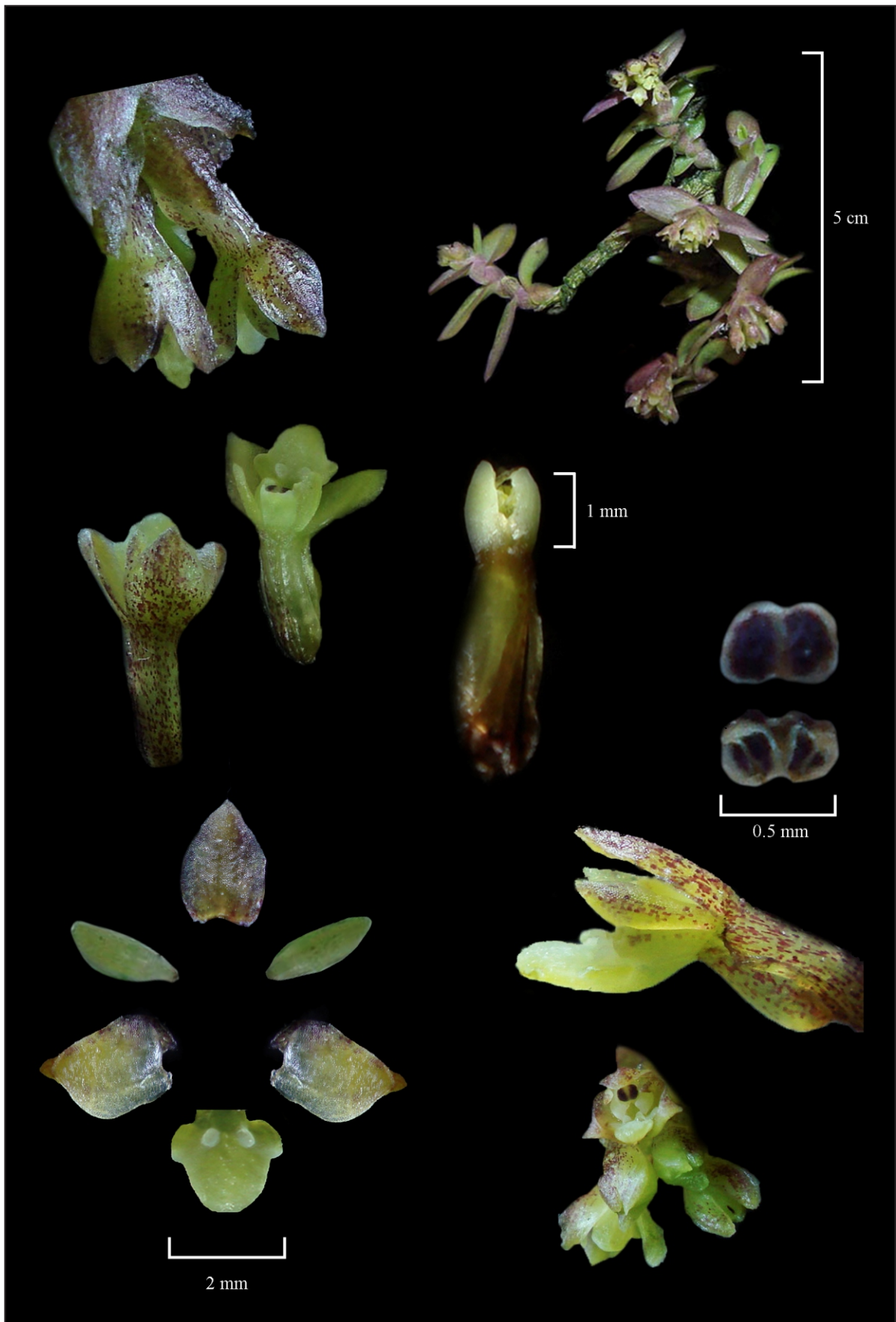
Authors: E. Hágsater & A. Huayta B. Illustrator: R. Jiménez M.

Photo: A. Huayta B. Editors: E. Hágsater & E. Santiago

Herbario AMO

Ciudad de México, MÉXICO

ICONES ORCHIDACEARUM 16(2). 2018. Plate 1683



EPIDENDRUM MICROCAPITELLATUM Hágsater, Medina Tr. & E.Santiago

Plate 1684

EPIDENDRUM MICROCAPITELLATUM Hágsater, Medina Tr. et E.Santiago, *sp. nov.*

Type: COLOMBIA: Putumayo: Mun. San Francisco, El Filo de Minchoy cercano a la vereda Minchoy, 2200 m, colectado 12 junio 2009, prensado 27 julio 2014, **Ramiro Medina Trejo 215**. Holotype: JAUM 74801! (LCDP and photo voucher).

Similar to *Epidendrum capitellatum* C.Schweinf. but the plants and flowers smaller, sepals 2.3-2.5 mm, (vs. sepals 7.0-8.8 mm long), the lip 3-lobed with the lateral lobes much smaller than the mid-lobe (vs. lateral lobes much larger), the ovary, with a very prominent, elongate, ventral vesicle (vs. ovary without a vesicle).

Epiphytic, spreading, sympodial, sub-caespitose **herb**, 3-5 cm tall. **Roots** ca. 0.8 mm in diameter, basal, fleshy, thin, white. **Stems** 3-5 x 0.4-0.6 cm, simple, cane-like, laterally compressed, somewhat ancipitose, erect, producing a new stem from a sub-apical node of the old stem; completely covered by the imbricated sheaths of the leaves. **Leaves** 6-7, distributed throughout the stem, alternate, coriaceous, articulate, unequal in size, often leaves on one side of the stem longer than those on the opposite side, apical leaf much reduced, green on the ventral side, dorsally tinged red; sheaths 0.2-0.6 x 0.4-0.6 cm, imbricated, somewhat laterally compressed, ancipitose, striated when dry; blade 0.5-1.4 x 0.4-0.8 cm, proportion 2-3:1 (length:width) ovate-elliptic, apex unequally narrowly bilobed, apical margin tinged red, crenulate, spreading. **Spathe** lacking. **Inflorescence** 0.5-1.0 cm long, apical, from the mature stem, sessile, capitate, sub-globose, densely flowered; subtended by a single leaf-like conduplicate bract, (folded, i.e. in conduplicate position), dorsally carinate, the apex of the dorsal keel aristate, sub-apical margin somewhat dentate. **Flowers** 4-6, opening in succession, with several open at once, resupinate, green, sepals and petals dorsally dotted red; anther dark violet with a green Y-shaped vertical band in front; fragrance not registered. **Floral bracts** 3 mm long, prominent, about as long as the ovary, ovate, acute to acuminate, more or less dorsally keeled, amplexicaul. **Ovary** 3.0-3.5 x 1.5 mm, thick, striated and forming a long somewhat inflated ventral vesicle along the apical 4/5 of the ovary, thickest beyond the middle. **Sepals** slightly spreading, free, concave, 3-veined, margin entire, spreading, dorsal sepal 2.3 x 1.7 mm, ovate, acute; lateral sepals 2.5 x 2.0 mm ovate, oblique, slightly apiculate, acute. **Petals** 1.9 x 0.7 mm, slightly spreading, free, narrowly oblanceolate, apex oblique, sub-obtuse, 1-veined, lower apical margin denticulate, spreading. **Lip** 1.60 x 1.65 mm, united to the column, 3-lobed, base widely cuneate, apex rounded, margin entire, thick; bicallose, the calli, sub-globose, slightly divergent; disc glabrous; lateral lobes 0.3 x 0.7 mm, obliquely hemi-ovate, upright in natural position; mid-lobe 0.85 x 1.4 mm, semi-elliptic-oblong. **Column** 1 mm long, straight, thick. **Clinandrium-hood** prominent, truncate at the apex of the column body, margin slightly sinuous. **Anther** reniform, 4-celled. **Pollinia** 4. **Rostellum** sub-apical, slit. **Lateral lobes of the stigma** large, about 1/2 as long as the stigmatic cavity. **Nectary** penetrating 4/5 of the ovary, somewhat inflated towards the middle. **Capsule** not seen.

OTHER SPECIMENS: None seen.

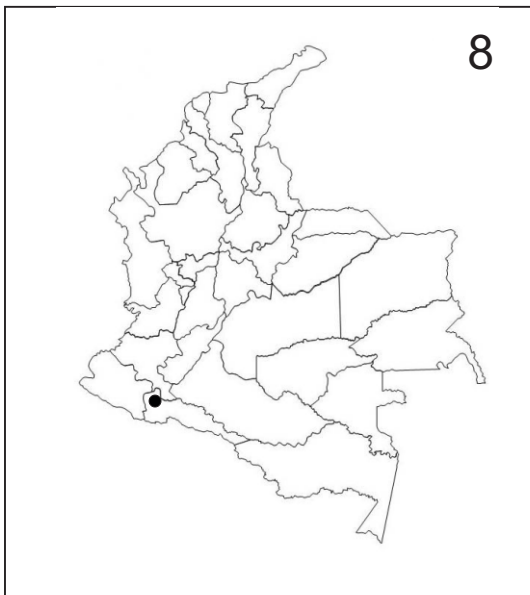
DISTRIBUTION AND ECOLOGY: Known only from Colombia, department of Putumayo, on the eastern slope of the Cordillera Oriental of the Andes, at 2200 m altitude. Flowering in June.

RECOGNITION: *Epidendrum microcapitellatum* belongs to the Capitellatum Group which is characterized by the erect, succulent stems usually with non-articulate leaves, with a spherical head of fleshy greenish flowers, and without any spathaceous bract. The species is recognized by the very small plant, stems 3-10 cm tall, ovate-elliptic leaves 0.5-1.4 x 0.4-0.8 cm, sepals 2.3-2.5 mm long, and the 3-lobed lip, the lateral lobes very small. *Epidendrum isaucapitellatum* Hágsater & E.Santiago has relatively tall plants, (16-23 cm tall), ovate-elliptic leaves, 1.2-5.5 x 1.0-2.2 cm, proportion 2.5:1 (length:width), the leaves slightly imbricating, so that only part of the sheath is visible; the lateral sepals ovate-elliptic, 6.8-7.4 mm long, petals oblanceolate, and the entire reniform lip. *Epidendrum capitellatum* is vegetatively very similar but has narrower leaves (0.5-1.6 cm wide), proportion 3:1 (length:width), more spaced along the stems, the sheath and a part of the stem clearly visible, lateral sepals elliptic, and the lip is 3-lobed, the lateral lobes larger than the mid-lobe. *Epidendrum pterogastrum* Hágsater has shorter plants (10 cm tall), leaves 1.1-3.0 x 0.7-1.0 cm, elliptic sepals 5.8 mm long and the reniform lip has an erose margin. *Epidendrum rhombicapitellatum* Hágsater & Dodson has very short plants (5 cm tall), sepals 3.7-4 mm long, and the distinctly 3-lobed lip has a rhombic mid-lobe, column is 2 mm long with the apex arching upwards.

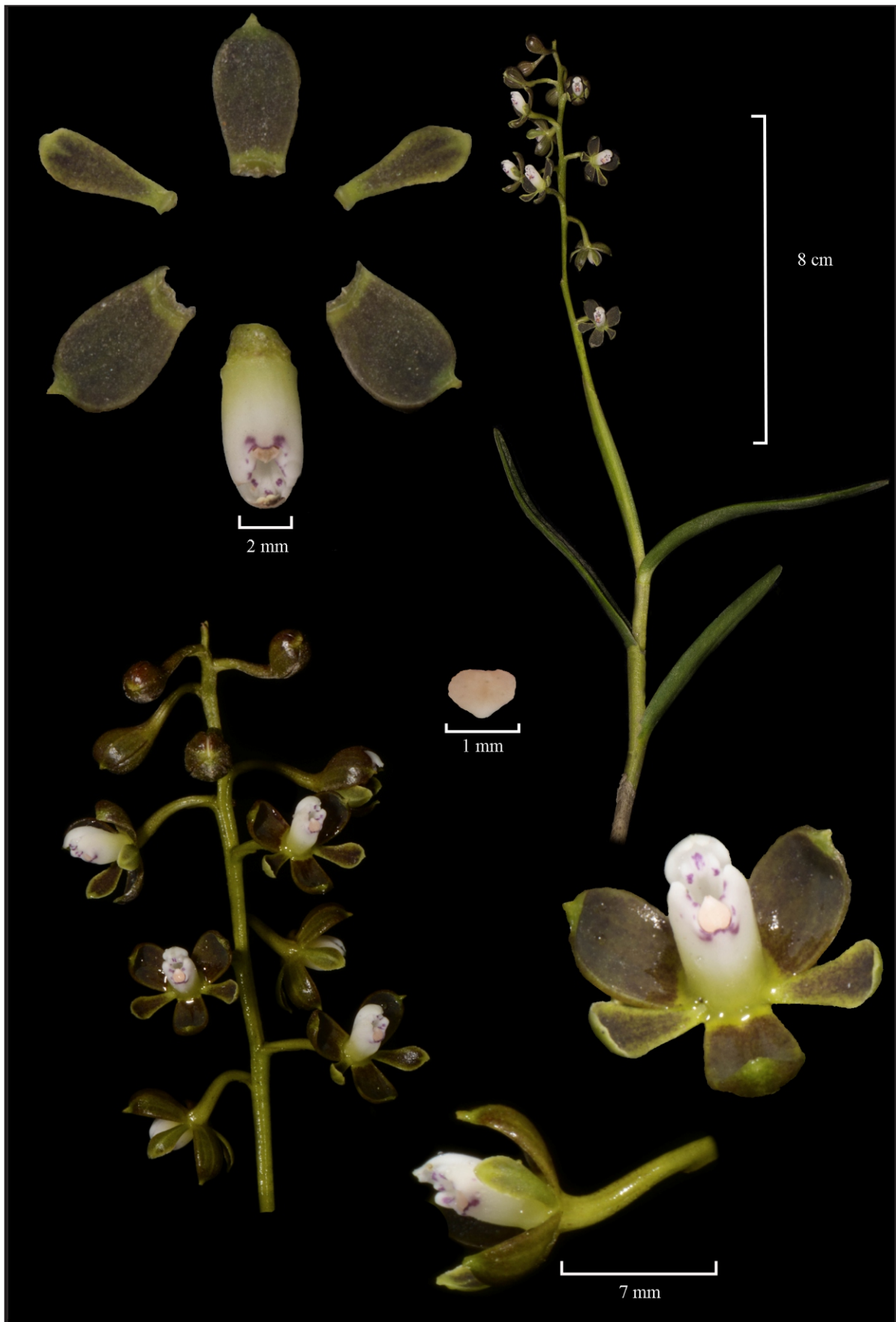
CONSERVATION STATUS: DD. Data deficient. Known only from the type.

ETYMOLOGY: From the Greek μικρός, and the Latin capitulum, head, in reference to the very small size of this species which is closely related to *Epidendrum capitellatum*.

REFERENCES: Hágsater, E., 2004, *Epidendrum pterogastrum*, in E. Hágsater & L. Sánchez S. (eds.) The Genus *Epidendrum* Part 4, **Icon. Orchid.** 7: pl. 784. Hágsater, E., 2006, *Epidendrum capitellatum*, in E. Hágsater & L. Sánchez S. (eds.) The Genus *Epidendrum* Part 5, **Icon. Orchid.** 8: pl. 816. Hágsater, E., & C.H. Dodson, 2007, *Epidendrum rhombicapitellatum*, in E. Hágsater & L. Sánchez S. (eds.) The Genus *Epidendrum* Part 6 **Icon. Orchid.** 9: pl. 980. Hágsater, E., & E. Santiago, 2013, *Epidendrum isaucapitellatum*, in E. Hágsater & L. Sánchez S. (eds.) The Genus *Epidendrum* Part 10, **Icon. Orchid.** 14: pl. 1445. Schweinfurth, C., 1943, *Epidendrum capitellatum*, **Bot. Mus. Leaflet** 11(4): 86.



Authors: E. Hágsater, R. Medina & E. Santiago LCDP: R. Medina & A. Cisneros Photo: R. Medina Editors: E. Hágsater & E. Santiago



EPIDENDRUM MICROMARCIAE Hágsater & E.Santiago

Plate 1685

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

Type: ECUADOR: Cotopaxi: Cantón Sigchos, por camino Sigchos-Latacunga, desviación hacia Cerro Azul, arriba de Cerro Azul, epífita, sobre cerca viva de *Euphorbia laurifolia* Lam., 2971 m, 22 abril 2018, **Eric Hágsater, Gerardo A. Salazar, Francisco Tobar, Itzi Fragoso & Marcia Peñafiel 15808**. Holotype: QCNE! Isotypes: AMO! MEXU! (LCDP and photo voucher).

Similar to *Epidendrum marciae* Hágsater & E.Santiago but with linear-oblong leaves (vs. oblong-elliptic), oblong-obovate petals 5.0 x 2.0 mm, margin slightly erose, (vs. obovate-spatulate, 6.0 x 4.0 mm, margin entire), and lip 1.5 x 2.0 mm, entire, (vs. 3.8 x 5.8 mm, slightly 3-lobed).

Epiphytic, sympodial, sub-caespitose **herb** 21-22 cm tall including the inflorescence. **Roots** 1.5 mm in diameter, basal, fleshy, thick, whitish. **Stems** 9.5-12 x 0.3-0.4 mm; simple, cane-like, fleshy, thickened, laterally compressed, base nearly completely covered by 2 sheaths, tubular, obtuse, striated. **Leaves** 3 distributed along the apical half of the stem, alternate, articulate; sheaths 1.2-2.8 x 0.4-0.5 cm, somewhat laterally compressed, rugose, yellow-green, blade 2.5-7.0 x 0.5-0.9 cm, linear-oblong, conduplicate at the base, apex bilobed, coriaceous, green with the veins marked in pale green, margin entire, spreading. **Spathe** 1, 4.0-5.0 x 0.4-0.5 cm, oblong, acute, tubular, laterally compressed, ancipitose. **Inflorescence** 10-13 cm long, apical, racemose, erect; peduncle 5.5-6.0 x 1.6 cm, without bracts; rachis 4.5-7.0 cm long, straight. **Floral bracts** 2-4 mm long, about half as long as the ovary, triangular, acuminate, embracing. **Ovary** 7.0-8.0 x 1.4 mm, terete, slightly thickened near the apex, longitudinally furrowed. **Flowers** 12-14, nearly simultaneous, non-resupinate; sepals and petals brown, the base, apex and margins of the petals green, lip white with purple dots on the calli, mid-rib, and apex of the column. **Sepals** 5.7-5.9 x 3.0-3.5 mm, partly spreading, forming a wide cup together with the petals, free, obovate, apex rounded, apiculate; lateral sepals slightly oblique. **Petals** 5.0-5.5 x 2.0 mm, spreading, fleshy, free, narrowly oblong-obovate, apex obtuse, margin slightly erose, spreading. **Lip** 1.5 x 2.0 mm, united to the column, small, no wider than the column, entire, semi-orbicular, apex rounded, slightly apiculate, concave in natural position; bicallose, the calli fleshy, prominent, parallel, extending to the middle of the disc with a thickened mid-rib slightly longer than the calli. **Column** 4.5 mm long, straight, thick, terete, apex with a wide tooth on each side about as long as the calli. **Clinandrium hood** reduced, margin entire. **Anther** ovoid, apex narrowly triangular, 4-celled. **Pollinia** 4, obovoid, laterally compressed, caudicles granulose, much shorter than the pollinia. **Rostellum** sub-apical, slit. **Lateral lobes of the stigma** large, about half the length of the stigmatic cavity. **Nectary** penetrating as far as the perianth, unornamented. **Capsule** not seen.

OTHER SPECIMENS: ECUADOR: Cotopaxi; Cantón Sigchos, Campo Alegre, 2460 m, 15 VII 2003, Ramos 6082, CUVCI! QCNE!

OTHER RECORDS: None seen.

DISTRIBUTION AND ECOLOGY: Endemic to Ecuador, presently known only from the Canton of Sigchos, in the valley south of the Illinizas mountains, basin of the Río Toachi, epiphytic on live fence shrubs of *Euphorbia laurifolia* Lam. together with *Epidendrum marciae*, and various low trees in wet cloud forest, at 2640-2970 m altitude. Flowering in April-May.

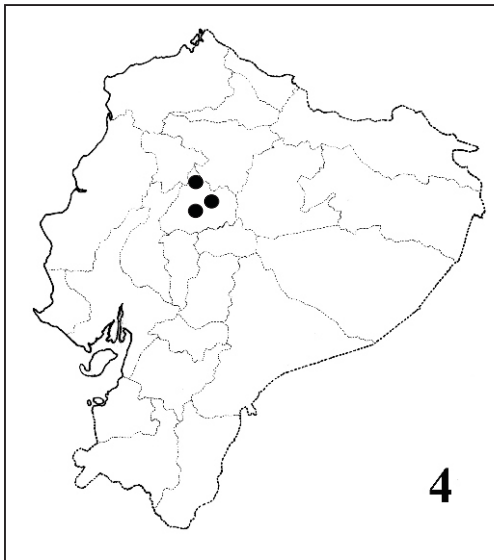
RECOGNITION: *Epidendrum micromarciae* belongs to the Mancum Group and Subgroup, which is characterized by the sympodial growth, narrow spatheaceous bracts with parallel sides, erect raceme with non-resupinate flowers and a generally reduced, fleshy lip. The new species can be recognized by overall smaller size compared to *E. marciae*, a single spathe, inflorescence lax, fewer flowered, petals 5.0-5.5 x 2.0 mm, narrowly oblong-obovate, obtuse, and the entire lip, 1.5 x 2.0 mm, with a mid-rib in between the calli and slightly surpassing them. *Epidendrum marciae* is very similar, but somewhat larger overall, also has 2-4 leaved stems, leaves 3.5-8.0 x 0.7-1.4 cm, the inflorescence subtended by 1-2 spathes, flowers dark brown with column and lip white with purple dots on apex of column and calli, petals 5.5-6.0 x 3.3-4.0 mm, obovate-spatulate, apex rounded, and lip 3.8 x 5.8 mm, united to the column, reniform, base cordate, with a pair of apical incisions, thus slightly 3-lobed, apex rounded, concave in natural position; bicallose, the calli fleshy, prominent, parallel, extending to the middle of the disc or more. *Epidendrum punense* Hágsater & Dodson has a solitary leaf 11-13 x 2.0-2.2 cm, single, ancipitose spathe covering the whole peduncle, obovate petals 7.8-8.0 x 3.5-3.7 mm, with the margin undulate and laminar, and entire, reniform lip 4.8-5.0 x 6.5-6.8 mm, with a pair of incisions at the apex. *Epidendrum montisillincense* Hágsater et Dodson, from the same general area is vegetatively similar, flowers also similarly colored, petals 5.2-5.5 x 2.0-2.3 mm, spatulate, apex obtuse, but lip 4.0-4.2 x 4.3-5.0 mm, is deeply 3-lobed, lateral lobes sub-quadrate, apical margin dentate; mid-lobe sub-quadrate, apiculate. *Epidendrum mancum* Lindl., has 2-3 wider leaves 2-6 x 1.3-2.7 cm, the inflorescence subtended by single spathe, flowers red-brown, column and lip white, petals 5.0-6.0 x 3.0-4.0 mm, asymmetrically spatulate, obtuse, marginally entire to sinuate, and a reduced, entire, sub-quadrate lip 4.8-5.0 x 2.4-3.5 mm.

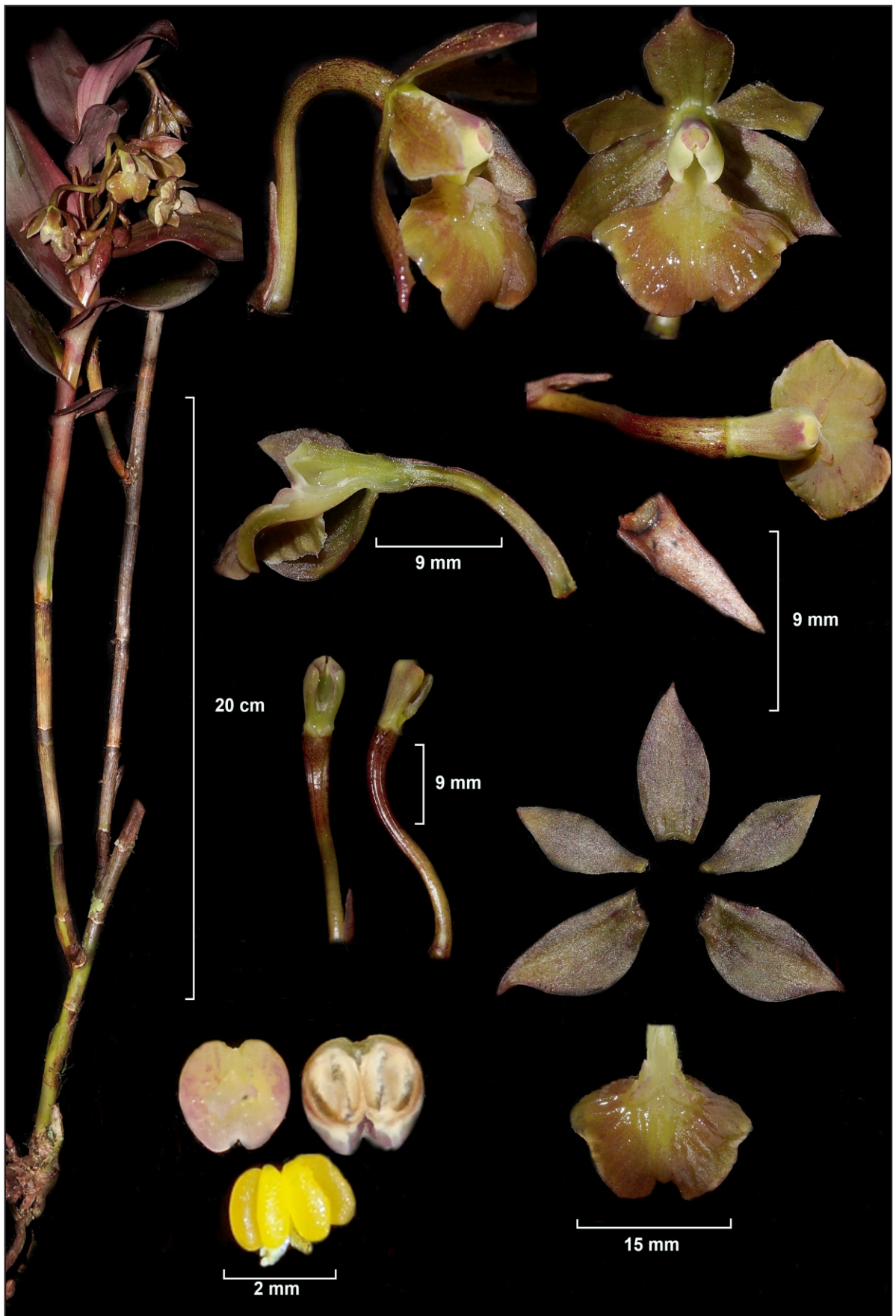
CONSERVATION STATUS: NT. Not Threatened. The species is common and grows freely on shrubs of live fences, in the upper basin of the Toachi River.

ETYMOLOGY: From the Greek μικρός, small, and Marcia, due to the resemblance with *Epidendrum marciae*, but smaller. In honor of Marcia Cecilia Peñafiel Cevallos (1965-), Ecuadorean Botanist, Administrator of the National Herbarium of Ecuador, QCNE, who participated in the collection of the type and other specimens. Marcia has specialized in the flora of the paramos of Ecuador, in particular with her paper on the Flora and Vegetation of Cuicocha, published in 2003.

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

REFERENCES: Hágsater, E., & C.H. Dodson in L. Sánchez S., 2004, *Epidendrum montisillincense*, in E. Hágsater & L. Sánchez S. (eds.), The Genus *Epidendrum*, Part 4, **Icon. Orchid.** 7: pl. 763. Hágsater, E., & C.H. Dodson in L. Sánchez S., 2004, *Epidendrum punense*, in E. Hágsater & L. Sánchez S. (eds.), The Genus *Epidendrum*, Part 4, **Icon. Orchid.** 7: pl. 785. Hágsater, E., & E. Santiago, 2018, *Epidendrum marciae*, in E. Hágsater & E. Santiago (eds.), The Genus *Epidendrum*, Part 12, **Icon. Orchid.** 16(2): pl. 1680. Sánchez S., L., & E. Hágsater, 2004, *Epidendrum mancum*, in E. Hágsater & L. Sánchez S. (eds.), The Genus *Epidendrum*, Part 8, **Icon. Orchid.** 12: pl. 1262.





EPIDENDRUM MONTISCAMPANARIO Hágsater, Edquén & E.Santiago

Plate 1686

EPIDENDRUM MONTISCAMPANARIO Hágsater, Edquén et E.Santiago, *sp. nov.*

Type: PERU: Amazonas: Chachapoyas; Distrito de Granada; comunidad campesina de Diosán, 2490 m, 15 enero 2018, **José Dilmer Edquén Oblitas 348**. Holotype: HURP! (LCDP and photo voucher).

Similar to *Epidendrum ampelospatum* Hágsater & Dodson, but the leaves elliptic, wide (vs. narrowly lanceolate), the sepals and petals proportionately longer, petals 12.5 x 5.5 mm, obtrullate-elliptic (vs. about as wide as they are long, 8.4-8.6 x 8.4-9.2 mm, widely ovate-sub-trullate), and the lip oblate in general outline, somewhat bilobed, base widely cuneate, apex widely emarginate and apiculate (vs. 3-lobed, base cordate, apex of the mid-lobe rounded).

Epiphytic, monopodial, **herb**, 42-45 cm tall, branching sub-apically. **Roots** 3-4 mm in diameter, basal, fleshy. **Stems** 15-22 x 0.6-0.8 cm, cane-like, branching sub-apically when mature, terete at base, laterally compressed towards the apex, erect, straight; base covered by sheaths 21-50 mm long, tubular, non-foliar, scarious. **Leaves** 4-5 on the branches, aggregate towards the apical ¼ of the branch, ascendant, distichous, articulate, sub-coriaceous, unequal in size, progressively larger; sheaths 1.0-2.2 x 0.8-0.9 cm, tubular, minutely striated red; blade 3.4-7.2 x 1.4-3.0 cm, elliptic, obtuse, margin entire, spreading, deep green, tinged reddish, mainly on the ventral surface. **Spathes** 3.3 cm long; lanceolate, obtuse, conduplicate, reddish brown. **Inflorescence** 6-7 cm long, apical, racemose, arching-nutant, sub-densely few-flowered; peduncle 15-25 mm long, laterally compressed, reddish green, rachis straight totally hidden by the flowers. **Flowers** 6-10, resupinate, fleshy, opening in succession from the base of the inflorescence towards the apex eventually all open at the same time; reddish brown with the column and lip greenish yellow, lip tinged with reddish brown; fragrance not registered. **Floral bracts** 8-9 mm long, triangular, acuminate, embracing. **Ovary** 14-18 mm long, terete, thin, slightly dilated behind the perianth, minutely striated, reddish brown. **Sepals** 15-17 x 7.0-7.5 mm, partly spreading, free, 3-veined, margin entire, spreading; dorsal sepal elliptic, apex acute; lateral sepals obliquely ovate, apex acuminate. **Petals** 12.5 x 5.5 mm, partly spreading, free, obtrullate-elliptic, apex acute, 3-veined, margin entire, spreading. **Lip** 11 x 15 mm, united to the column, convex and apically reflexed in natural position, oblate in general outline, somewhat bilobed, base widely cuneate, apex widely emarginate and apiculate, widest near the middle, the basal margin slightly curved, at the widest point forming a narrow half circle and then the apical half forming an oblique arch, closing towards the emarginate apex; margin irregular, spreading; bicallose, fleshy, widely divaricate, somewhat laterally compressed; disc with multiple thickened veins and a low, fleshy mid-rib that reaches the apex of the lip. **Column** 9 mm long, thick, straight. **Clinandrium-hood** short, margin entire. **Anther** ellipsoid, 4-celled, apex emarginate. **Pollinia** 4, yellow, obovoid, somewhat laterally compressed; caudicles short, granulose, pale yellow. **Rostellum** apical, slit. **Lateral lobes of the stigma** small, ¼ the length of the stigmatic cavity. **Nectary** shallow, barely penetrating the ovary, slightly inflated, without forming any vesicle, unornamented. **Capsule** not seen.

OTHER SPECIMENS: None seen.

OTHER RECORDS: None seen.

DISTRIBUTION AND ECOLOGY: Presently known only from the type, from the ridge that runs along the eastern side of the Marañón river, near its northern end, near the Cerro de Campanario, at 2490 m altitude. Flowering in January.

RECOGNITION: *Epidendrum montiscampanario* belongs to the Ampelospatum Group, which is recognized by the scandent habit, with new stems produced from the middle of the previous stems, roots produced at the base of the main stem, and occasionally from the base of the successive stems, an apical, arching, racemose inflorescence subtended by 1-2, large, acute spathes, and flowers with an entire or 3-lobed lip and 2, divaricate calli. The new species is recognized by the wider leaves, 3.4-7.2 x 1.4-3.0 cm, elliptic, the proportionately wider sepals, 15-17 x 7.0-7.5 mm, and especially by the lip which is oblate in general outline, somewhat bilobed, base widely cuneate, apex widely emarginate and apiculate. It resembles *Epidendrum ampelospatum* Hágsater & Dodson, from the Cordillera Oriental in southern Ecuador, which has smaller flowers, sepals 10.5-14 x 6.3-7.5 mm, short-oblong, sub-acute, minutely apiculate, petals widely ovate-sub-trullate, rounded, 5-veined, and the lateral lobes of the lip reniform, obliquely orbicular, rounded; flowers dry dark brown in herbarium specimens. *Epidendrum ampelomelanoxeros* Hágsater, E.Santiago & E.Parra, from central Colombia, has acuminate sepals, 16-18 x 5.5-6.0 mm, acute petals, and by the dolabriform lateral lobes of the lip, the apical margin erose. The flower is reminiscent of the illustration in Pabst & Dungs (1975) fig. 725, identified as *E. robustum* Cogn. but closer to *Epidendrum josiana* M. Frey & V.P. Castro (2005), which is clearly different vegetatively, the stems being simple, tall, many leaved, with an inflorescence where the peduncle is covered by numerous imbricating bracts, and producing several densely flowered racemes over several years from the same peduncle, the flowers green sometimes tinged with purple or reddish brown, the column and base of the lip white.

CONSERVATION STATUS: DD, Data deficient.

ETYMOLOGY: In reference to Cerro de Campanario, which is in the vicinity of the locality where the species has been collected.

ACKNOWLEDGMENT: Collections made under project "Efecto de la fragmentación de hábitats de bosque alto andino en diversidad de Orchidaceae y Bromeliaceae del anexo de Diosán, Distrito de Granadas, Amazonas" emitido bajo la resolución de Dirección General (RDG) N° 137-2018-SERFOR/DGGSPPFFS; correspondiéndole el Código de Autorización N° AUT-IFL-2018-025.

REFERENCES: Frey, M., & V.P. Castro Neto, 2005, Une nouvelle espèce d'*Epidendrum* (Orchidaceae: Laeliinae) du Minas Gerais (Brésil), *Richardiana* 5(2): 103-109. Hágsater, E., & C.H. Dodson, 2004, *Epidendrum ampelospatum*, in The Genus *Epidendrum*, Part 4, *Icon. Orchid.* 7: pl. 703. Hágsater, E., E. Santiago & E. Parra, 2013, *Epidendrum ampelomelanoxeros*, in The Genus *Epidendrum*, Part 10, *Icon. Orchid.* 14: pl. 1403. Pabst, G.F.J., & F. Dungs, 1975, *Epidendrum robustum* Cogn. in *Orchidaceae Brasilienses* 1: 188, fig. 725.



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

LCDP: J. D. Edquén

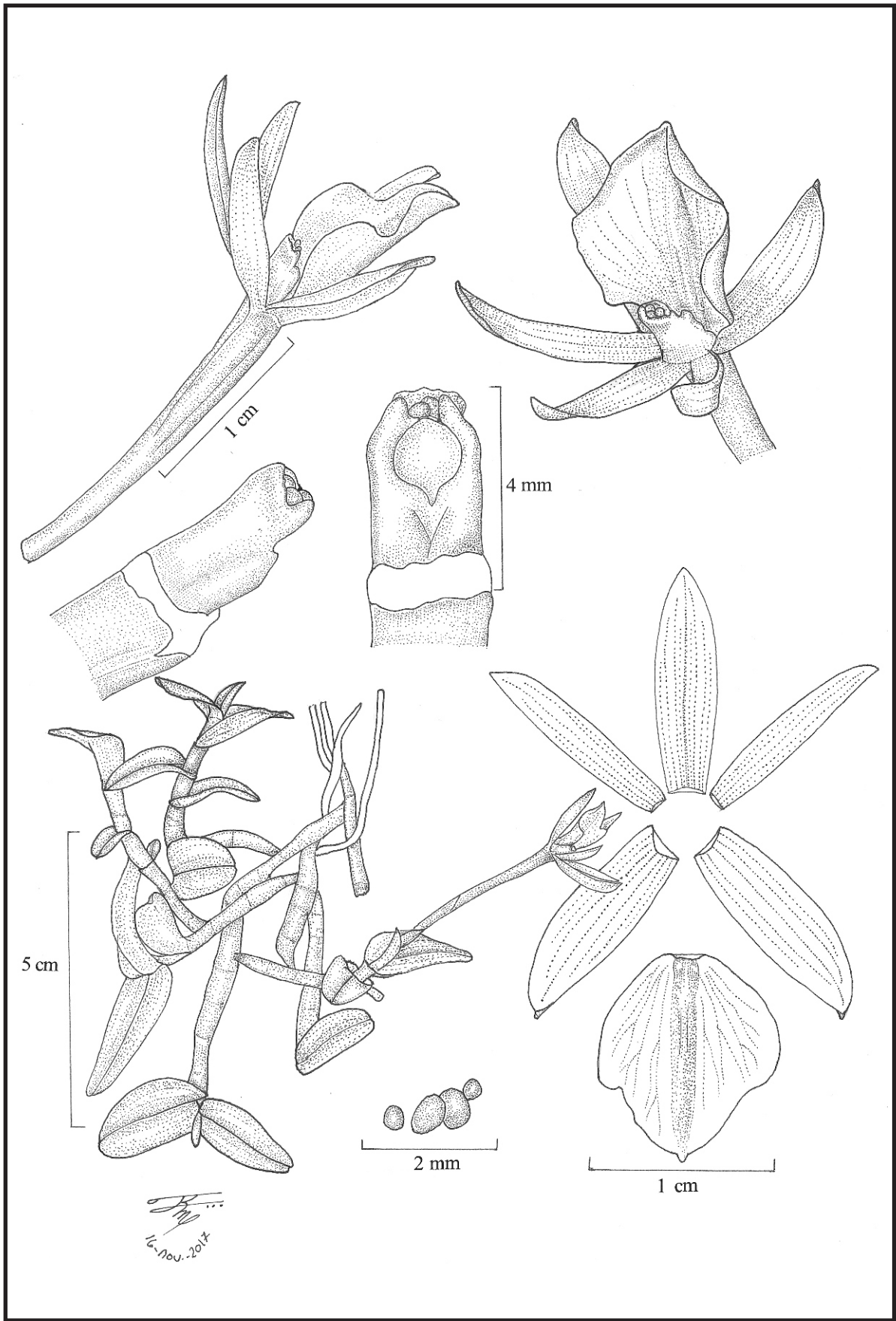
Photo: J. D. Edquén

Editors: E. Hágsater & E. Santiago

Herbario AMO

Ciudad de México, MÉXICO

ICONES ORCHIDACEARUM 16(2). 2018. Plate 1686



EPIDENDRUM NIEBLIENSE Hågsater & E.Santiago

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

Type: ECUADOR: Pichincha, Cantón Quito, Parroquia Calacalí; Reserva Geobotánica Pululahua, Pelagallo-Yunguilla a Hacienda Tanachi a Niebli, 1 km arriba de Niebli, 2088 m, col. 2 octubre 2016, floreció 16 noviembre 2017, epífita en cerca viva, **Eric Hágsater, Gerardo A. Salazar, Francisco Tobar y Alex Hirtz 14962**. Holotype: QCNE! (illustration and photo voucher).

Similar to *Epidendrum cleistogastrum* Hágsater & Dodson, but the flowers green, open (vs. yellow, cleistogamous, only partly open), petals 5-veined, 2.0 mm wide (vs. 3-veined, 1.5 mm wide), lip sub-orbicular-rhombic, spreading, nearly entire, lateral lobes incipient, totally free from the column, 11.4 x 10.0 mm (vs. lip clearly 3-lobed, embracing the column, 12 x 7 mm, united to the base of the column and embracing).

Epiphytic, sub-caespitose, sympodial, prostrate repent **herb**, ca 8 cm long. **Roots** 1 mm in diameter, basal, thin, scarce. **Stems** 2.5-6.0 x 0.3-0.5 cm, terete, thick, fleshy, the new stem arising from a lower internode of the previous stem. **Leaves** 3-4, unequal, distributed throughout the apical half of the stem, green; sheath striated; blade 1.5-2.6 x 0.6-1.3 cm, articulate, fleshy, elliptic-ovate, apex bilobed. **Spathes** 10 x 2 mm, single, conduplicate, narrowly obovate, obtuse. **Inflorescence** apical, sessile, from mature stem, flowering only once, producing a single flower. **Floral bracts** 3 x 4 mm, much shorter than the ovary, narrowly triangular, acuminate, embracing. **Ovary** 20 x 3 mm, slightly thickened towards the apex, furrowed, unornamented. **Flowers** 1, non-resupinate, green, concolor; fragrance, none registered. **Sepals** 12.7 x 3.2-3.8 mm, spreading, somewhat arching forward forming a wide cup together with the petals, narrowly oblong-elliptic, acute, 7-veined, margin entire, spreading; lateral sepals somewhat oblique, slightly aristate. **Petals** 11.5 x 2.0 mm, spreading, arching forward, narrowly oblong, acute, 5-veined, margin entire, spreading. **Lip** 11.4 x 10.0 mm, free from the column, but sub-parallel to it, flat, sub-orbicular-rhombic, nearly entire, lateral lobes incipient, base cuneate; ecallose, disc unornamented; lateral lobes 8.1 x 1.4 mm, narrowly hemi-obovate, barely narrow, in the same flower separated by a wide sinus or short narrow sinus, occupying about half the length of the lip; mid lobe 3.8 x 6.8 mm, semi-orbicular, apex rounded, apiculate. **Column** 4 mm long, free, short, thick, wide. **Clinandrium-hood** short, margin sinuous, fleshy. **Anther** not seen. **Pollinia** 4, unequal, the outer pair about half the size of the inner pair; caudicles small, soft and granulose. **Rostellum** apparently slit, apical. **Stigmatic Cavity** sub-orbicular, forming an acute angle at the base. **Nectary** not seen. **Capsule** not seen.

OTHER SPECIMENS: ECUADOR: Pichincha: Quito: Parroquia Calacali. Reserva Geobotanica Pululahua. Camino de Moras Pungo 1800-3356 m, 23 VIII 1987 *Cerón 1934*, QCA! QCNE!

OTHER RECORDS: None seen.

DISTRIBUTION AND ECOLOGY: Presently known only from Ecuador, Pichincha, in the area of the Reserva Geobotánica Pululahua, at 2088 m altitude, epiphytic on live fence. Flowering in April and November.

RECOGNITION: *Epidendrum niebliense* belongs to the Cleistogatrium Group, characterized by the small plant, stems produced from the middle internodes of the previous stem, inflorescences with 1-2 spathes, erect with 1-2 non-resupinate flowers, lip ecallose, entire or clearly 3-lobed, the lip is nearly completely free from the column. The species has green non-resupinate flowers, a sub-orbicular-rhombic lip free from the column, flat, spreading, ecallose, petals 5-veined. *Epidendrum cleistogastrum* has yellow, cleistogamous flowers, narrow petals, 3-veined, and the shape of the lip, which is trilobed and cuneate, embracing the column and joined to the base of the column, with the lateral lobes semi-obovate. *Epidendrum amplexigastrum* Hágsater & Dodson is very similar but the flowers are copper-colored, and wide open, the sepals being 7-veined, and the lip excavate in the disc. *Epidendrum marsupiale* F. Lehm. & Kraenzl. has a similar lip in both shape and size but the lateral lobes are separated by deep sinuses and spreading in front of the column, the disc of the lip excavate. These last two species having an excavate lip and the column united to the lip belong to the Marsupiale Group.

CONSERVATION STATUS: DD. Data deficient. Only known from the type at this time, growing on live fence.

ETYMOLOGY: In reference to the locality where the species has been collected, the town of Niebli, in the Pululahua Geobotanical Reserve near Quito, and where many collectors explored the surroundings since the XIX century.

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

REFERENCES: Hágsater, E., & C. H. Dodson, 1999, *Epidendrum amplexigastrum* in The Genus *Epidendrum*, Part 2, **Icon. Orchid.** 3: pl. 304. Hágsater, E., & C. H. Dodson, 2001, *Epidendrum cleistogastrum* in The Genus *Epidendrum*, Part 3, **Icon. Orchid.** 4: pl. 428. Kränzlin, F. W. L., 1921, *Epidendrum marsupiale* in Orchidaceae Lehmannianae in Guatemala, etc., **Bot. Jahrb. Syst.** 26: 174-175.



Authors: E. Hágsater & E. Santiago

Illustrator: R. Jiménez

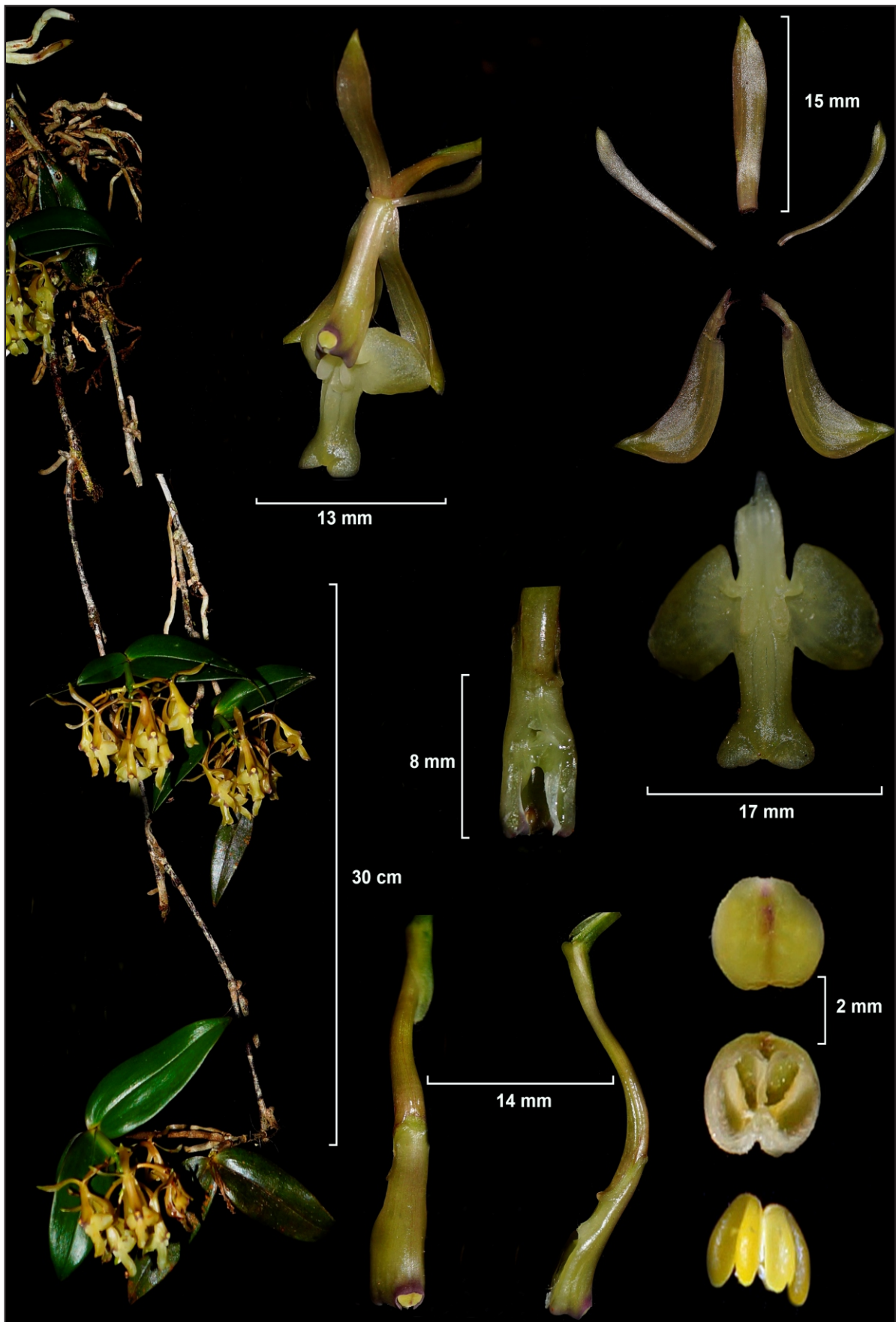
Photo: R. Jiménez

Editors: E. Hágsater & E. Santiago

Herbario AMO

Ciudad de México, MÉXICO

ICONES ORCHIDACEARUM 16(2). 2018. Plate 1687



EPIDENDRUM ORNIS Hágsater, Edquén, E.Santiago & E.Mondragón

Plate 1688

EPIDENDRUM ORNIS Hágsater, Edquén, E.Santiago et E.Mondragón, *sp. nov.*

Type: PERU: San Martín: Prov. Rioja; Distr. Pardo Miguel Naranjos, Sector Venceremos, 5°40'55.04"S, 77°45'8.73"E, 1650 m, Bosque de protección Alto Mayo, m, 5 febrero 2017, **José Dilmér Edquén Oblitas & Elmer Mondragón Ramírez 98**. Holotype: HURP! (LCDP and photo voucher).

Similar to *Epidendrum tamaense* Foldats but the leaves narrowly ovate-lanceolate, 6-9 x 1-1.8 cm, (vs. elliptic 3-14 x 2-4.3 cm); flowers ochre-yellow, the apical margin of the column purple (vs. olive green with purple veins on the lip), petals linear-oblancheolate, 14-15 x 2 mm, (vs. narrowly obrullate, 14-20 x 7.0-7.8 mm); lip with obliquely dolabriform lateral lobes (vs. lateral lobes orbicular).

Epiphytic, sympodial, erect to pendent herb, 60 cm tall. **Roots** 2-3 mm in diameter, fleshy, white, abundant at the base of the primary stem, occasional and scarce at the base of some of the successive stems. **Stems** 6-13 x 0.2-0.3 cm, produced from the sub-apical internodes of the previous stem, cane-like, terete, thin, straight; the basal internodes covered by sheaths 1.2-1.5 cm long, tubular, non-foliar, minutely striated, scarious. **Leaves** 2, aggregate at the apex of each stem, distichous, sub-coriaceous, dark green, concolor; sheaths 1.2-1.4 x 0.4-0.6 cm, infundibuliform when dry; blade 6.0-9.0 x 1.0-1.8 cm, narrowly ovate-lanceolate, apex acute, margin entire, spreading. **Spathes** lacking. **Inflorescence** 2-3 cm long, apical, racemose, flowering only once, densely few-flowered, peduncle 1.3 cm long, laterally compressed, green, straight, without bracts. **Flowers** 7-12, simultaneous, resupinate, ochre-yellow, with the apical margin of the column purple; fragrance not registered. **Floral bracts** 6-8 mm long, green, much shorter than the ovary, narrowly triangular, acuminate, embracing. **Ovary** 18 mm long, terete, thin, not inflated. **Sepals** oblong-oblancheolate, slightly concave, 3-veined, margin entire, spreading; dorsal sepal 15 x 4 mm, free, spreading, apex acute; lateral sepals 13 x 5 mm, obliquely adnate to the base of the column, apex short acuminate, falcate. **Petals** 14-15 x 2 mm, spreading, free, linear-oblancheolate, 1-veined, acute, slightly falcate, margin entire, spreading. **Lip** 16 x 17 mm, united to the column, slightly convex, 3-lobed, base cordate, margin entire, spreading; bicallose, the calli globose, slightly divaricate; disc provided with 3 parallel ribs, smooth, disappearing before the sinus of the mid-lobe; lateral lobes 7 x 7 mm, obliquely dolabriform, spreading at a right angle from the axis of the lip; mid-lobe 7-8 x 6 mm, rectangular-oblong, with the apex expanded, bilobed and emarginate, thus forming two small rounded lobes. **Column** 14 mm long, nearly as long as the ovary, thin at the base, gradually widened vertically towards the apex. **Clinandrium-hood** reduced, margin entire. **Anther** reniform, 4-celled. **Pollinia** 4, obovoid, somewhat laterally compressed; caudicles soft and granulose, shorter than the pollinia. **Rostellum** apical, slit. **Lateral lobes of the stigma, nectary and capsule** not seen.

OTHER SPECIMENS: None seen.

OTHER RECORDS: None seen.

DISTRIBUTION & ECOLOGY: Presently known only from the type in Peru, San Martin, growing epiphytic in sparsely dispersed bushes sclerophyllous wet cloud forest with abundant moss, on *Clusia* sp., at 1850 m altitude. Flowering in January and February.

RECOGNITION: *Epidendrum ornis* belongs to the Incomptum Group which is characterized by the erect habit with successive lateral growths produced from the middle of the previous growth, few leaves aggregate towards the apex of the stems, roots generally only from the base of the primordial stem, and with fleshy yellowish to green to violet-green to black flowers with short ovaries, the lip entire to 3-lobed. The species is recognized by the bifoliate stems, leaves ovate-lanceolate, inflorescence with up to 12 ochre-yellow flowers, lateral sepals falcate, 13 mm long, petals linear-oblancheolate, narrow, 2 mm wide, and lip clearly 3-lobed, the lateral lobes spreading, obliquely dolabriform, mid-lobe oblong, apically expanded and bilobed. It is reminiscent of *Epidendrum tamaense* from the Eastern Andes in Venezuela and neighboring Colombia*, which has 2-4 elliptic leaves, up to 17, green to olive-green flowers with purple veins on the lip, lateral sepals oblique, 15-21 mm long, petals narrowly obrullate, 7.0-7.8 mm wide, and the lateral lobes of the lip orbicular. *Epidendrum macuchiense* Hágsater & E.Santiago, from the western slope of the Andes in Ecuador has 4 lanceolate leaves, green flowers, lateral sepals 10 mm long, oblique, petals linear-oblancheolate, 1 mm wide, lip with transversely elliptic to sub-orbicular lateral lobes, and the mid-lobe sub-quadrate-cuneate. *Epidendrum boekei* Hágsater, from the eastern Andes in southern Peru, has narrowly elliptic leaves, 5-7, green to greenish yellow flowers, lateral sepals oblique, 12 mm long, petals oblancheolate, 3-6 mm wide, and the lateral lobes of the lip obovate, mid-lobe sub-quadrate.

*NOTE: In an earlier publication, (Hágsater, 2006) we included specimens from Ecuador and Peru, but a reevaluation of the specimens indicates they require further study.

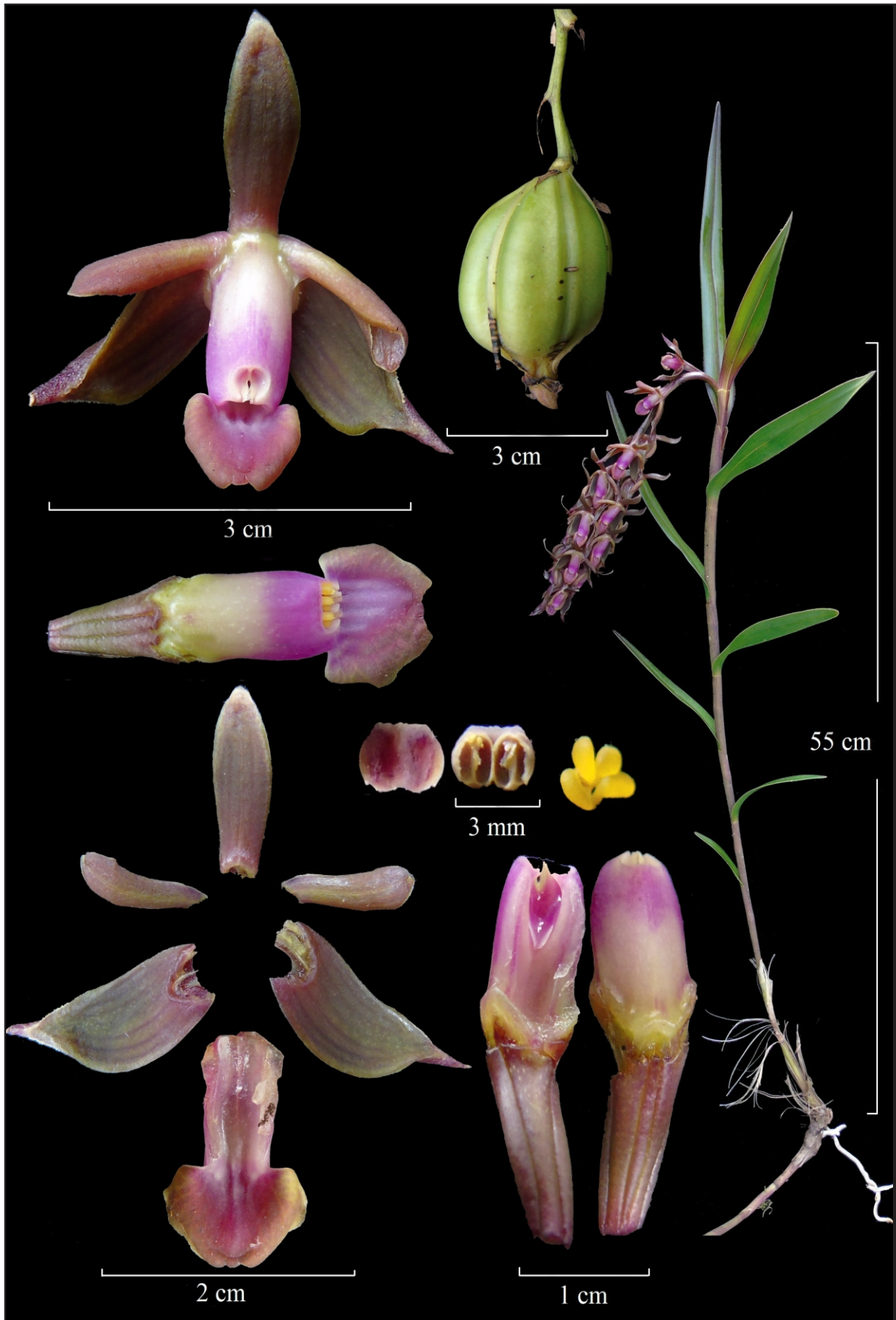
ETYMOLOGY: From the Greek *orpn̄s*, bird, in reference to the shape of the lip which is reminiscent of a bird in flight.

CONSERVATION STATUS: DD. Data deficient. The species is presently known from a single locality and only 7 individuals were recorded.

ACKNOWLEDGMENT: Collections made under project "Efecto de la fragmentación de hábitats de bosque alto andino en diversidad de Orchidaceae y Bromeliaceae del anexo de Diosán, Distrito de Granadas, Amazonas" emitido bajo la resolución de Dirección General (RDG) N° 137-2018-SERFOR/DGGSPPFFS; correspondiéndole el Código de Autorización N° AUT-IFL-2018-025.

REFERENCES: E. Hágsater, 2006, *Epidendrum tamaense* in E. Hágsater & L. Sánchez S. (eds.) The Genus *Epidendrum*, Part 5, *Icon. Orchid.* 8: pl. 891. E. Hágsater, 2009, *Epidendrum boekei* in E. Hágsater & L. Sánchez S. (eds.) The Genus *Epidendrum*, Part 8, *Icon. Orchid.* 12: pl. 1210. Hágsater, E., & E. Santiago, 2015, *Epidendrum macuchiense* in E. Hágsater & L. Sánchez S. (eds.) The Genus *Epidendrum*, Part 11, *Icon. Orchid.* 15(1): pl. 1537.





EPIDENDRUM PACHYSTELE Hágsater, Edquén, E.Santiago & Salas Guerr.

Plate 1689

EPIDENDRUM PACHYTELE Hágsater, Edquén, E.Santiago et Salas Guerr., *sp. nov.*

Type: PERU: Amazonas: Prov.: Chachapoyas; Comunidad campesina Diosán, límite entre los departamentos de San Martín y Amazonas, 7 Lagunas, Camino antiguo de los Chachapoyas (Las Ventanas), límite entre los distritos de Molinopampa y Granada, 3630 m, 14 enero 2018, **José Dilmer Edquén Oblitas 322**. Holotype: HURP!

Similar to *Epidendrum aristisepalum* Hágsater & Dodson, but the lip entire, reniform, (vs. prominently 3-lobed), petals narrowly oblong, sub-spatulate, apically rounded (vs. elliptic, acute).

Epiphytic, sympodial, caespitose, sub-erect, tall **herb**, ca. 60 cm tall. **Roots** 3-4 mm in diameter, basal, fleshy. **Stems** 39-53 x 0.5-0.8 cm, simple, cane-like, thin, terete at base, laterally compressed towards the apex, (but not ancipitose); base covered by sheaths 1.7-5.5 cm long, tubular, non-foliar, scarious. **Leaves** 8-9, distributed along the apical 2/3 of the stems, alternate, distichous, articulate, coriaceous, sub-erect with respect to the stem, green, concolor; leaf sheaths 1.7-6.0 x 0.5-0.8 cm, tubular, striated, red-brown; blades 6.6-22 x 0.8-1.8 cm, unequal, progressively larger, sometimes the apical leaf much reduced and somewhat bract-like, narrowly lanceolate, obtuse to sub-acute, margin crenate, somewhat revolute. **Spathes** lacking. **Inflorescence** 7-11 cm long, apical, racemose, densely flowered, arching-nutant; peduncle 1.0-3.0 x 0.4 cm long, terete, green, concolor, thick; rachis 6-8 cm long, nearly totally hidden by the flowers. **Floral bracts** 11-13 mm long, shorter to nearly as long as the ovary, linear-triangular, acuminate, embracing. **Flowers** 9-18, resupinate, opening in succession from the middle towards the ends, eventually all open simultaneously, sepals and petals buff to olive-green, somewhat tinged pink near the base, lip deep to pale purple, somewhat turning buff towards the margins, column greenish tinged fuchsia towards the apical half; fragrance especially strong from morning to mid-day, agreeable, reminiscent of mint. **Ovary** ca. 11-12 mm long, short, conical, thick at apex, striated. **Sepals** fleshy, dorsal sepal 15-17 x 6.4-7.0 mm, free, spreading, oblong-elliptic, apex sub-acute, 5-veined, margin entire, slightly revolute; lateral sepals 18-20 x 9.2-10 mm, obliquely united to the base of the column partly spreading, nearly parallel to the column, oblique, elliptic, the upper margin straight, apex prominently aristate, 7-veined, margin slightly revolute. **Petals** 12-13 x 4.7-5.0 mm, free, spreading, narrowly oblong, sub-spatulate (when spread), base strongly oblique, apex rounded, 3-veined, the vein branching above, margin entire, strongly revolute. **Lip** 8-9 x 11-12 mm, united to the column, entire, base truncate, margin entire, revolute, reniform in outline, the apex widely sinuate; ecallose; disc provided with 3 low, parallel ribs, the mid-rib starting in front of the stigmatic cavity and nearly reaching the apex. **Column** 13-14 mm long, straight, thick, apex truncate, forming an obtuse angle with the ovary. **Lateral lobes of the stigmatic cavity** small, the cavity itself occupying about 1/3 of the column. **Rostellum** apical, slit. **Clinandrium-hood** reduced, margin entire. **Anther** reniform, 4-celled. **Pollinia** 4, narrowly obovoid, laterally compressed; caudicles in two pairs, granulose, shorter than the pollinia, viscidium semi-liquid. **Capsule** sub-globose, 27.5 x 17 mm, pedicel obsolete, body 24 x 17 mm, apical neck 3.5 mm.

OTHER SPECIMENS: None seen.

OTHER RECORDS: PERU: Amazonas: Leimebamba; Salas *s.n.* digital images, AMO! (LCDP voucher). Prov.: Chachapoyas, Distr.: Granada: Comunidad campesina de Diosán, 3400-3650 m, 1 IX 2017, *Edquén s.n.*, digital image, AMO! (photo voucher).

DISTRIBUTION AND ECOLOGY: Known presently only from northern Peru, from the border of the departments of San Martín and Amazonas, on the drier western slopes of the Alto Mayo, epiphytic at 3400-3650 m altitude, on *Polylepis sp.* (Rosaceae), the tree known locally as “queñoal”, “quinual” o “quenuel” from the Quechua “quiwiña”. Flowering in January and September.

RECOGNITION: *Epidendrum pachystele* belongs to the *Aristisepalum* Group which has a caespitose habit, simple stems, sub-coriaceous leaves, a racemose inflorescence without spathes, and the aristate sepals; the lip may be 3-lobed or entire and bicallose or ecallose, and then with several mid-ribs on the disc. The new species is recognized by the entire, reniform lip in outline, the margins somewhat revolute, lacking calli, and with 3 low parallel ribs on the disc of the lip; lateral sepals 19-20 mm long, petals narrowly oblong, slightly spatulate, the base strongly oblique, apex rounded. *Epidendrum aristisepalum* has cream-green to brown-orange flowers, a prominent 3-lobed lip, lateral sepals are 11-16 mm long, and petals elliptic, acute. *Epidendrum jalcaense* Chocce, Dalström, Hágsater & J.Arnaiz, has 6-veined petals, a 3-lobed lip with 5-7 ribs, mid-lobe is emarginate forming a couple of semi-orbicular lobes. *Epidendrum vegae* Chocce & Hágsater which is a short, lithophyte, upright leaves, with large red to bright orange flowers with a short (7.5 mm), thin column, 5-veined sepals and petals, the lip 3-lobed with 3 low parallel keels, and a very small, semi-orbicular, entire, mid-lobe. *Epidendrum camilo-diazii* Hágsater & Chocce has tall stems (to 90 cm), red to bright orange flowers, bilobed, emarginate lip with a single wide, low, fleshy keel, and straight, obovate, emarginated petals, sepals and petals 5-veined. *Epidendrum chachapoyarum* Chocce, Hágsater, M.E.Acuña & Vega-Vera has short stems (to 18 cm), yellow flowers, sepals 3-veined, petals 1-veined, the sub-3-lobed lip is bicallose, the calli elongate, and a thickened rib in between, disappearing before the mid-lobe.

CONSERVATION STATUS: DD. Data deficient. Known from three localities in Peru, at Diosán 70 plants were counted in an area of 400 m², only 8 in flower.

ETYMOLOGY: From the Greek *παχυς*, thick, and *στηλη*, column, in reference to the thick column that distinguishes this species.

ACKNOWLEDGMENT: Collections made under project “Efecto de la fragmentación de hábitats de bosque alto andino en diversidad de Orchidaceae y Bromeliaceae del anexo de Diosán, Distrito de Granada, Amazonas” emitido bajo la resolución de Dirección General (RDG) N° 137-2018-SERFOR/DCGSPFFS; correspondiéndole el Código de Autorización N° AUT-IFL-2018-025.

REFERENCES: Chocce-Peña, M., & E. Hágsater, 2013, *Epidendrum camilo-diazii* in Hágsater, E. & L. Sánchez S. (eds.), The Genus *Epidendrum*, Part 9, *Icon. Orchid.* 13: t. 1308. Chocce-Peña, M., & E. Hágsater, 2013, *Epidendrum vegae* in Hágsater, E. & L. Sánchez S. (eds.), The Genus *Epidendrum*, Part 9, *Icon. Orchid.* 13: t. 1397. Chocce-Peña, M., E. Hágsater, M. Acuña-Tarazona & N. Vega-Vera, 2013, *Epidendrum chachapoyarum* in Hágsater, E. & L. Sánchez S. (eds.), The Genus *Epidendrum*, Part 10, *Icon. Orchid.* 14: t. 1415. Chocce-Peña, M., & E. Hágsater, 2013, *Epidendrum jalcaense*, in Hágsater, E. & L. Sánchez S. (eds.), The Genus *Epidendrum*, Part 10, *Icon. Orchid.* 14: t. 1446. Hágsater, E., & C. H. Dodson, 2001, *Epidendrum aristisepalum* in Hágsater, E. & L. Sánchez S. (eds.), The Genus *Epidendrum*, Part 3, *Icon. Orchid.* 4: t. 412.



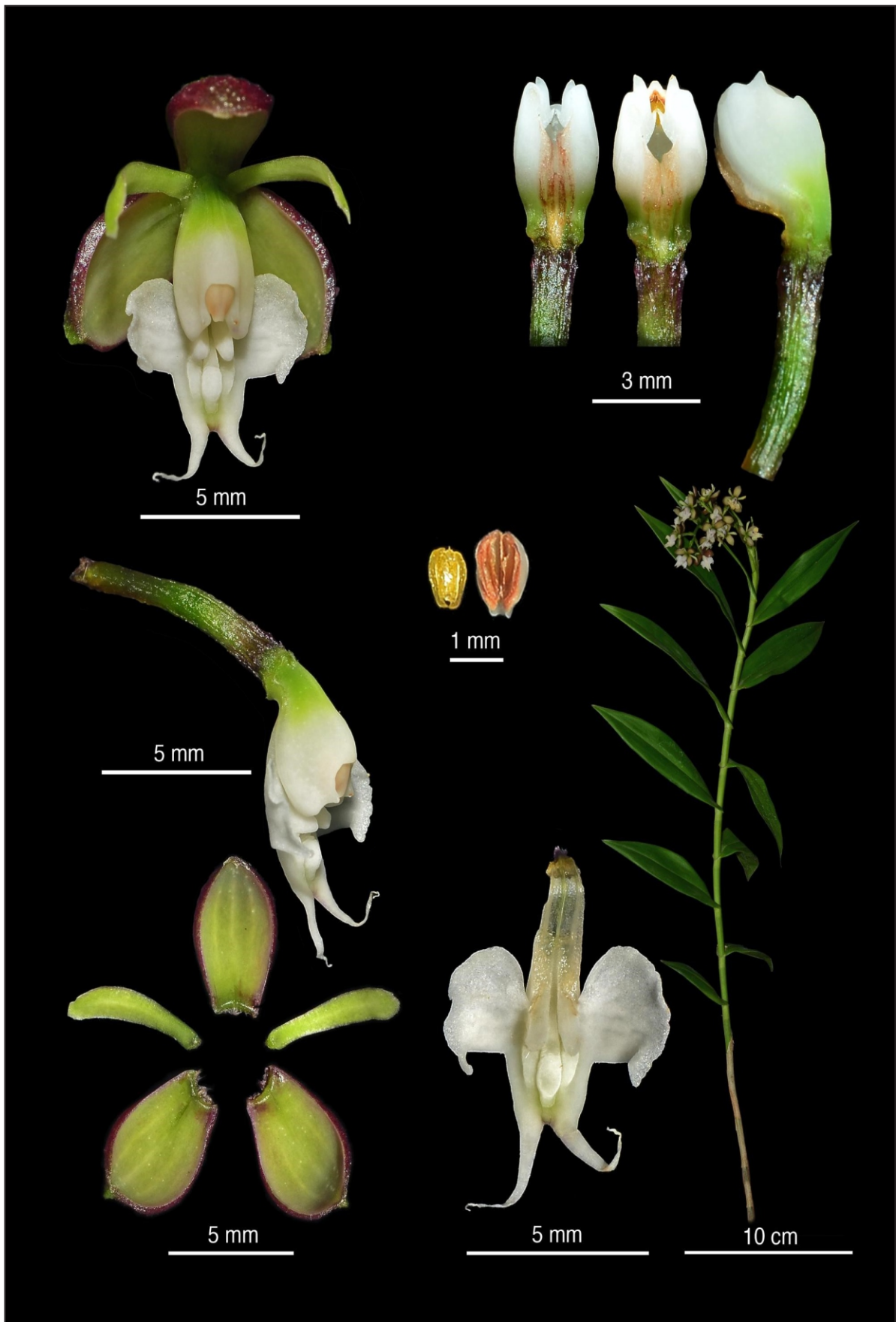
Authors: E. Hágsater, J. D. Edquén & E. Santiago LCDP: J. D. Edquén

Herbario AMO

Ciudad de México, MÉXICO

Photo: J. D. Edquén Editors: E. Hágsater & E. Santiago

ICONES ORCHIDACEARUM 16(2). 2018. Plate 1689



EPIDENDRUM PANGUIËNSE Hågsater & H.Medina

Plate 1690

EPIDENDRUM PANGUIËNSE Hágsater et H. Medina, sp. nov.

Type: ECUADOR: Zamora-Chinchipec: El Pangui, sector el Remolino entre los Ríos Zamora y Machinaza, ca. 800 m, noviembre 2016, **Hugo Medina 93**. Holotype: UDA! (LCDP and photo voucher).

Similar to *Epidendrum enantilobum* Hágsater, but the flowers slightly larger, sepals 6.0 x 3.5-4.0 mm, dorsally dark reddish brown (vs. 4.0 x 5.0 mm, dorsally green); lip widest between the lateral lobes (vs. wider between the lobes of the mid-lobe); lateral lobes semi-orbicular (vs. strongly falcate, oblong and subacute); lobes of the mid-lobe linear triangular, ciliate, somewhat divergent, arched forward, reminiscent of a snake tongue (vs. apical lobes linear-triangular, ciliate, sinuous, strongly divergent, opposite).

Epiphytic, sympodial, caespitose **herb**, 30-39 cm, tall. **Roots** 1.5-2.0 mm in diameter, basal, fleshy, white. **Stems** 30-35 x 0.3-0.4 cm, cane-like, simple, erect, terete, thin, the basal portion covered by several non-foliar sheaths, becoming grayish, imbricate, tubular, acute. **Leaves** up to 19 per stem, distributed throughout the apical half of the stem, sub-erect, fleshy, appearing as wax covered; sheaths 10-20 x 4 mm, tubular, pale green; blade 4.0-8.5 x 1.2-2.0 cm, lanceolate, acuminate, 7 veins apparent on the underside, smooth above, margin entire, spreading. **Spathes** lacking. **Inflorescence** apical, paniculate, arching, densely flowered; peduncle 24 x 1.8 mm, thin, somewhat laterally compressed, short, covered by 2 bracts ca. 2.3 x 5.8 mm, linear-lanceolate, acuminate, embracing; racemes 3, with 8-11 flowers each, subtended by a prominent bract 19-20 mm long, embracing. **Floral bracts** 5-10 mm long, progressively longer, shorter than the ovary, linear-triangular, acuminate, embracing. **Flowers** ca. 30, simultaneous, resupinate, sepals dorsally dark reddish brown, green inside, petals green, column and lip white, anther pale ochre; without fragrance. **Ovary** 7-10 mm long, terete, thin, longitudinally furrowed, somewhat rugose towards the apex. **Sepals** 6.0 x 3.5-4.0 mm, partly spreading, somewhat concave, obovate-elliptic, obtuse, fleshy-thickened, 3-veined, dorsally slightly pustulate, margin entire; lateral sepals slightly wider, somewhat oblique, slightly apiculate. **Petals** 5.5 x 1.0 mm, partly spreading, free, oblong-oblancoelate, slightly falcate, apex rounded, 1-veined, margin spreading. **Lip** 8.0 x 7.0 mm, united to the column, deeply 3-lobed, base deeply cordate, wider between the lateral lobes than between the lobes of the mid-lobe, margins entire; bicallose, calli prominent, thick, disc with 3 prominent ribs, the mid-rib nearly reaching the apical sinus of the lip, the lateral ones shorter and lower; lateral lobes 2.5 x 2.8 mm, semi-orbicular, with the distal margin straight; mid-lobe 4.8 mm long, x 2.3 mm at the base, somewhat cuneate at base, then deeply bifid, forming a pair of linear-triangular, long acuminate, ciliate, somewhat divergent and involute. **Column** 5 mm long, thin at the base, then becoming somewhat globose, apex truncate with a short, triangular tooth on each side, next to the apex of the anther. **Clinandrium-hood** reduced, entire. **Rostellum** apical, slit. **Anther** obovoid, apex truncate, 4-celled. **Lateral lobes of the stigma** not seen. **Nectary** not seen. **Pollinia** 4, bird-wing type, oblong-obovate, strongly laterally compressed, translucent, unequal, the inner pair somewhat smaller. **Capsule** not seen.

OTHER SPECIMENS: None seen.

OTHER RECORDS: None seen.

DISTRIBUTION AND ECOLOGY: Known presently only from the type locality, near the confluence of the Machinaza and Zamora rivers at the foot of the Cordillera del Cóndor in southern Ecuador, at 800 m altitude. Flowering in November.

RECOGNITION: *Epidendrum pangiense* belongs to the Bicirrhatum Group, a small group of species which has appeared recently and is characterized by the caespitose habit, simple, leafy, short stems, compact, nodding inflorescence, conspicuous bracts about as long as the ovary, numerous fleshy, green and/or white flowers, with the mid-lobe deeply bilobulate, the lobules sometimes ciliate; the pollinia are thin and unequal, the inner pair smaller, without being of the bird-wing-type. The new species is recognized by the dark reddish-brown, pustulate dorsal surface of the sepals, flowers green inside with a pure white column and lip, lateral lobes of the lip semi-orbicular, mid-lobe deeply bifid, forming a pair of linear-triangular, long acuminate, ciliate, somewhat divergent and involute lobes. *Epidendrum enantilobum* Hágsater has green to cream-colored flowers, lip and column white, sepals 4-5 mm long, dorsally smooth, lateral lobes falcate-oblong, mid-lobe formed by two opposite, narrow, ciliate, short lobes. *Epidendrum xelidonourum* Hágsater & H. Medina has sepals 6.4-7.0 mm long, very pale greenish white flowers, base of sepals, petals and column green, column and lip white, lateral lobes of the lip ¼ circle, mid-lobe basal half sub-rectangular, slightly slimmer at the middle, apical half bilobed, lobes linear triangular, acuminate, arching-divaricate, reminiscent of the tail of barn swallows. *Epidendrum brachyblastum* Hágsater & Dodson has narrower, hémio-ovate lateral lobes of lip, and deep green flowers with lip and apical half of column snow white. *Epidendrum hugomedinae* Hágsater has snow-white flowers with keels of lip tinged violet and obtusely mid-lobe formed by two, rounded, somewhat divergent, lobes. *Epidendrum tiwinzaense* Hágsater & Dodson has green flowers with a white lip and apical half of column, and sepals some 7 mm long, lip terminating in a pair of ciliate lobes. *Epidendrum bicirrhatum* D.E. Benn. & Christenson from northern Peru has pale cream-orange flowers with base of the sepals and petals green, tips of keels of the lip lavender, flowers are smaller, sepals being 4.6-5.2 mm long, and lip has denticulate margins on sub-orbicular lateral lobes, and ciliate lobules on mid-lobe. The Bolivian *E. ophidiön* Dodson & R. Vásquez is quite similar to latter, but has successive, yellow flowers with three purple lines on the disc, pustulate sepals 6-8 mm long, and dolabriform lateral lobes with a crenulate margin, mid-lobe formed by two strongly curved, short ciliate lobes.

CONSERVATION STATUS: DD. Data deficient. This attractive species will hopefully be propagated by Ecuagenera in Gualaquiza, Ecuador.

ETYMOLOGY: In reference to the town and municipality of El Pangui, where the species was collected, and where Ecuagenera maintains a large greenhouse complex where they grow warm species.

ACKNOWLEDGMENT: Collections by Hugo Medina of Ecuagenera were made under permit: Autorización de Investigación Científica N° 004-2016-IC-FLO-DNB/MA

REFERENCES: Bennet, Jr., D. E., & E. A. Christenson, 1998, *Epidendrum bicirrhatum* D.E. Benn. & Christenson, in *Orchids of Peru*, **Icon. Orchid. Peruvianum** pl. 453. Dodson, C. H., & R. Vásquez, 1989, *Epidendrum ophidiön* in *Orchids of Bolivia*, **Icon. Pl. Trop.** ser 2, 4: pl. 331. Hágsater, E., 2018, *Epidendrum enantilobum*, in E. Hágsater & E. Santiago (eds.), *The Genus Epidendrum*, Part 12, **Icon. Orchid.** 16: pl. 1616. Hágsater, E., & H. Medina, 2017, *Epidendrum xelidonourum*, in E. Hágsater & E. Santiago (eds.), *The Genus Epidendrum*, Part 12, **Icon. Orchid.** 16: pl. 1666. Hágsater, E., & C. H. Dodson, 2004, *Epidendrum brachyblastum*, in E. Hágsater & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 4, **Icon. Orchid.** 7: pl. 713. Hágsater, E., & C. H. Dodson, 2004, *Epidendrum tiwinzaense*, in E. Hágsater & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 4, **Icon. Orchid.** 7: pl. 795.



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Photo: H. Medina

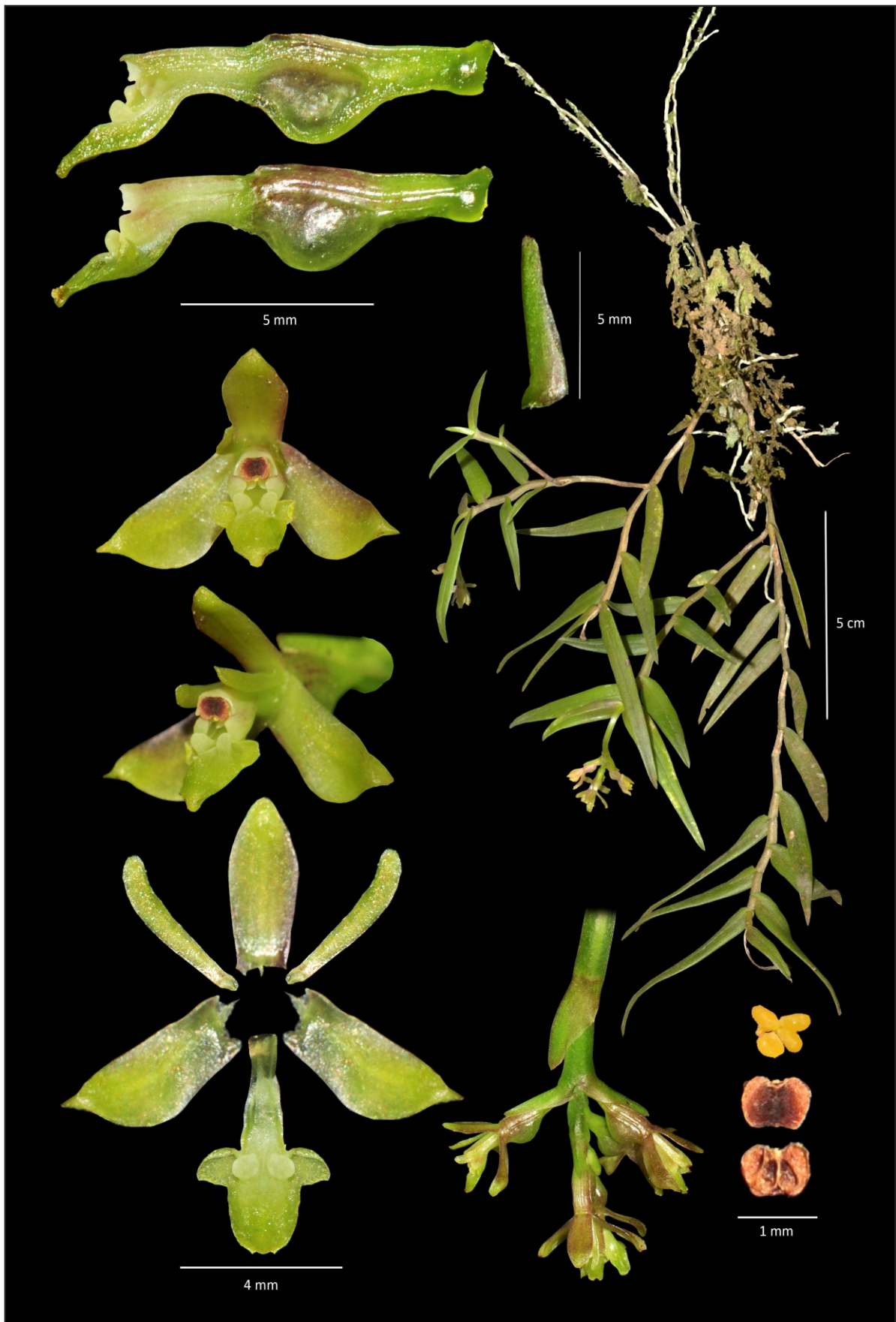
Editors: E. Hágsater & E. Santiago

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ICONES ORCHIDACEARUM 16(2). 2018.

Plate 1690



EPIDENDRUM PARALLELOPETALUM Hágsater, A.Díaz & E.Santiago

Plate 1691

EPIDENDRUM PARALLELOPETALUM Hágsater, A. Díaz et E. Santiago, *sp. nov.*

Type: PERU: Lambayeque; Prov. Ferreñafe; Distr. Kañaris; a 2.9 km al SE de Kañaris, 2793 m, 22 febrero 2018, *Alex Díaz 99*.

Holotype: HUT! (LCDP and photo voucher).

Similar to *Epidendrum bonitense* Hágsater & Dodson, but leaves, fewer and clearly separated on the sinuous stem, (vs. leaves closely spaced), flowers forming alternating opposite pairs (vs. a sub-umbellate raceme), inflorescence on a laterally compressed peduncle (vs. raceme sessile), flowers bright green, sepals somewhat dorsally tinged brown, small, dorsal sepal 4.1 mm long (vs. flowers glaucous green with a faint purple tinge, dorsal sepal 12 mm long, and the petals parallel to the column (vs. spreading).

Epiphytic, monopodial, pendent, **herb** ca. 20 cm long. **Roots** 1 mm in diameter, basal, from the primary stem. **Stems** 4-15 x 0.12-0.5 cm, cane-like, pendent, more or less sinuous, laterally compressed, the new stem arising from a middle node of the previous stem completely concealed by ancipitose, tubular sheaths, the lower ones non-foliar, red-brown, turning pale brown with age. **Leaves** 6-15 per stem, fleshy, distributed along the apical 2/3 of the stems, distichous, articulate with the leaf sheaths; sheaths 0.2-1.8 x 0.12-0.5 cm, tubular, ancipitose, minutely rugose, red-brown; blade 1.0-5.0 x 0.4-0.9 cm, spreading, twisted 90° so as to be on the same planes as the stem, lanceolate, acute, coriaceous, deep green, margin entire, spreading, **Spathe** lacking. **Inflorescence** 3 cm long, including the flowers, apical, from the mature stem, flowering only once, racemose, the flowers in opposing pairs and at 90° between pairs; peduncle 1.2-2 x 0.3 cm, laterally compressed, ancipitose, curved, with a spathe-like bract near the apex, 8 mm long, conduplicate, acute, somewhat incurved; rachis ca. 12 mm long. **Floral bracts** ca. 5.5 mm long, triangular, apex truncate, embracing, slightly shorter than the ovary. **Ovary** 4-5 mm long, 1 mm in diameter near the base, 2.6 mm thick near the apex, ventrally strongly inflated near the apex, forming a prominent short vesicle. **Flowers** 2-5, approximately in opposing pairs, simultaneous, bright green, sepals somewhat dorsally tinged brown, the anther brown, fragrance not registered. **Sepals** partly spreading, free, margins entire, spreading, 3-veined; dorsal sepal 4.1 x 1.7 mm, oblong-ovovate, apex rounded; lateral sepals 4.7 x 1.9 mm, oblong-ovovate, oblique, the upper margin straight, apex acuminate-aristate. **Petals** 4.0 x 0.7 mm, parallel to the column, oblong, somewhat falcate upwards, slightly wider towards the rounded apex, 1-veined, margin entire, spreading. **Lip** 2.5 x 3.2 mm, united to the column, 3-lobed, base somewhat cordate, margins entire; bicallose, the calli sub-globose, prominent, disc smooth; lateral lobes 0.8 x 0.9 mm, very small, ¼ circle, the posterior margin rounded and somewhat involute, the anterior margin straight; mid-lobe 1.7 x 1.8 mm, semi-orbicular-oblong, the apex rounded. **Column** 3.5 mm long, straight, somewhat constricted near the middle, widened thereafter, apex with the clinandrium-hood forming a short, inverted channel, and a rounded tooth on each side. **Clinandrium-hood** slightly surpassing the body of the column, thin, margin entire. **Rostellum** apical, slit. **Anther** reniform-quadrangle, 4-celled. **Pollinia** 4, obovoid, laterally compressed, caudicles short. **Nectary** forming a prominent sub-spherical, ventral vesicle behind the perianth somewhat triangular in longitudinal section, unornamented. **Lateral lobes of the stigma** not seen. **Capsule** not seen.

OTHER SPECIMENS: None seen.

OTHER RECORDS: None seen.

DISTRIBUTION AND ECOLOGY: Known only from the type, from the summit of the Cordillera Occidental of the Andes in northern Peru, just east of the Continental Divide, epiphytic at 2800 m altitude. Flowering in February.

RECOGNITION: *Epidendrum paralelopetalum* is reminiscent of the Nanum Group which has the leaves spreading and twisted 90° so as to be on the same plane as the stem (as in *Dichaea*), lanceolate, acute; the flowers are produced in opposite pairs in species like *Epidendrum renzii* Garay & Dunsterv. and have the nectary inflated ventrally behind the perianth. The flowers are reminiscent of *Epidendrum bonitense* the 3-lobed lip with large calli, and narrow, oblong petals. The species differs from all these, however in the sparsely leaved sinuous stems, and most notably by the laterally compressed peduncle of the inflorescence, with a relatively large, spathe-like bract near the apex.

ETYMOLOGY: From the Greek παράλληλος, parallel, and πέταλον, petal, in reference to the petals which are parallel to the column, and each other, in this species.

ACKNOWLEDGEMENT: Type collected under project "Estudios taxonómicos selectos de la flora del norte del Perú", Resolución: 247-2016-Serfor/Dggspffs y la ampliación Resol. 430-2017.

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LCDP: A. Díaz

Photo: A. Díaz

Editors: E. Hágsater & E. Santiago

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ICONES ORCHIDACEARUM 16(2). 2018. Plate 1691



EPIDENDRUM PHLEBONOCTURNUM Hágsater & R.Jiménez

Plate 1692

EPIDENDRUM PHLEBONOTURNUM Hágsater et R.Jiménez, sp. nov.

ECUADOR: Pastaza: Santa Clara: San José, camino a San José de Punín, pasando antenas microondas, cerca de Comunidad San Cristóbal, 924 m, 20 noviembre 2017, **Eric Hágsater & Marco Marcelo Jiménez León 15396**. Holotype: QCNE x2! digital images of plant before pressing, AMO! (LCDP & photo voucher).

Similar to *Epidendrum minus* (Cogn.) Hágsater, but the stems shorter, 9-11 cm tall (vs. 10-20 cm), leaves wider, 15-70 x 11-23 mm; 2-3:1 (vs. 50-75 x 8-14 mm, 5:1), and the lateral lobes of the lip with prominently thickened raised veins, the veins radiating from the base, sub-parallel (vs. lateral lobes of the lip without prominently thickened veins).

Epiphytic, sympodial, caespitose, erect **herb**, 14-15 cm tall including the inflorescence. **Roots** 1.5-2.5 mm in diameter, basal, fleshy. **Stems** 9-11 x 0.3-0.4 cm, simple, cane-like, laterally compressed above but not ancapitose, terete at base, straight. **Leaves** 5-6, distributed along the apical half of stem, articulate, very unequal, progressively larger; foliar sheaths 1.5-2.2 x 0.3-0.4 cm, striated, laterally compressed; blade 1.5-7.0 x 1.1-2.3 cm, 2-3:1 (length:width), elliptic, obtuse, apex retuse, sub-coriaceous, slightly dorsally carinate, light to dark green on both sides. **Spathes** lacking. **Inflorescence** 10-17 mm long, apical, racemose, producing new racemes in subsequent years, and becoming pluri-racemose over time, producing one flower at a time per raceme; peduncle very short, rachis short. **Floral bract** 3-5 mm long, much shorter than the ovary, triangular, acute, embracing. **Ovary** 47 x 3 mm, terete, unornamented. **Flowers** successive, one at a time per raceme, resupinate, sepals buff, green tinged red to red-purple dorsally, petals pale green, lip white, calli yellow, the yellow color spilling on to the base of the lip, column pale green at base, white towards the apex; fragrance not registered. **Sepals** 39-46 x 4.0-5.0 mm, spreading, linear-lanceolate, acuminate, 5-veined, with secondary veins between the main veins, lateral veins branching, margins entire, revolute; lateral sepals oblique, falcate, descending. **Petals** 42 x 2.5 mm, spreading, falcate, linear-elliptic, acuminate, 3-veined, the lateral veins branching, margins entire, spreading. **Lip** 28 x 15 mm, united to the column, deeply 3-lobed, base cordate; bicallose, the calli laminar, prominent; lateral lobes 15-16 x 7 mm, slightly divergent, semi-ovate, rounded, margin entire, spreading, surface deeply striated due to 9 high, thickened, raised veins, the veins radiating from the base, sub-parallel, arching and bifid near the margins; mid-lobe 23 x 2.5 mm, revolute in natural position, forming a wide arch, the apical half thus pointing backwards, ensiform, linear-triangular, acuminate, 3-veined, margins entire. **Column** 14.5 x 3.5 mm, slightly arched, dilated towards the apex. **Clinandrium-hood** prominent, erose. **Anther** transversely elliptic, unornamented, 4-celled. **Pollinia** 4, pale yellow, unequal, the outer pair smaller, semi-orbicular, laterally compressed, the side facing the caudicles nearly straight, the apex a right angle; caudicles soft and granulate, longer than the pollinia. **Rostellum** lacking, the pollinia in contact with the stigma. **Lateral lobes of the stigma** prominent, half as long as the stigmatic cavity. **Nectary** deep, penetrating half the pedicellate ovary. **Capsule** 52 x 18 mm, ellipsoid, the body centered, occupying nearly the whole length; pedicel 10 x 2.5 mm, body 35 x 18 mm, apical neck 7 x 4 mm.

OTHER SPECIMENS: None seen.

OTHER RECORDS: ECUADOR: Morona-Santiago: hort. Ecuagenera, Gualaceo, from Plan de Milagro, 2000 m, 23 IX 2016, Hágsater 14789, digital image, AMO!

DISTRIBUTION AND ECOLOGY: Presently known from the two collections only, from the ridge that runs north south just east of the Troncal Amazónica highway, above Santa Clara in the province of Pastaza, at ca. 900 m altitude, and for the eastern slope of the Andes in the province of Morona Santiago at 2000 m altitude. Flowering in November and August, probably during several months as flowers are successive.

RECOGNITION: *Epidendrum phlebonoturnum* belongs to the Nocturnum Group which is characterized by the sympodial, caespitose plants, cane-like stems, short, racemose or pluri-racemose inflorescence, without spathe, usually large, star-shaped, successive flowers, with similar sepals and petals. The species is recognized by the epiphytic habit, short stems 9-11 cm long, laterally compressed, bright green, 5-6 unequal leaves, ovary about as long as the 42-46 mm long sepals, deeply 3-lobed lip, with large yellow calli, and the lateral lobes with prominently raised veins radiating from the base and sub-parallel; mid-lobe 23 x 2.5 mm, i.e. 10:1 (length:width). *Epidendrum porphyreonocturnum* Hágsater & R.Jiménez has stems 16-40 cm tall, 3-8 narrowly elliptic, acute leaves of similar size, 6.5-8.0 x 0.8-1.8 cm, dark green above, purple on the underside, ovary 43 mm long, sepals 18-21 mm long, lip 12-14 x 12-14 mm, the lateral lobes ovate, with 6 thickened, radiating veins, mid-lobe 8.7-9.0 x 2.0 mm, i.e. 4:1 (length:width). *Epidendrum minus* (Cogn.) Hágsater has stems 10-20 cm long, leaves 5.0-7.5 x 0.8-1.4 cm, 5:1, green on both sides, ovary 30 mm long, sepals 21-24 x 4.0 cm (Cogniaux 1907), it is found at lower altitudes in the Amazon basin.

NOTE: The description of *E. minus* given by Sánchez & Hágsater (2010) is the sum of lumping together several species of similar size, including the one here described, and thus the data given above is based solely on the type (Cogniaux, 1907).

CONSERVATION STATUS: DD. Data deficient. We are surprised that in this heavily collected area of Ecuador, we have not been able to trace any other specimen, whereas it grows sympatric with *Epidendrum porphyreonocturnum* Hágsater & R.Jiménez, for which we have traced numerous specimens.

ETYMOLOGY: From the Greek φλεβωδης, full of veins, with large veins, and the Latin *nocturnum* in reference to the characteristic prominently raised veins of the lateral lobes of the lip, which distinguishes this species from the rest of the nocturnum group.

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

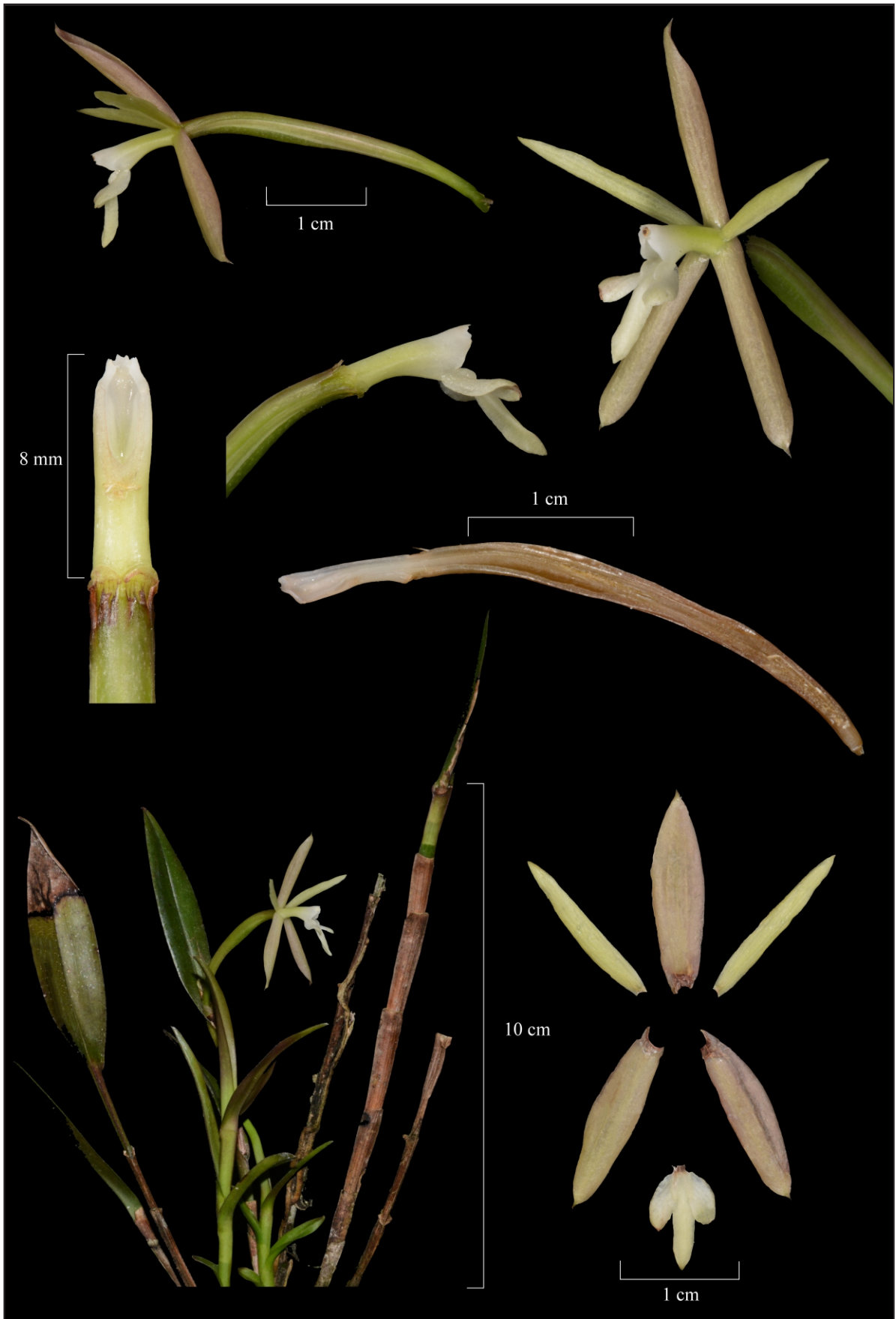
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Photo: R. Jiménez Editors: E. Hágsater & E. Santiago
ICONES ORCHIDACEARUM 16(2). 2018. Plate 1692



EPIDENDRUM PLATYNOCTURNUM Hágsater & R.Jiménez

Plate 1693

EPIDENDRUM PLATYNOCTURNUM Hágsater et R.Jiménez, sp. nov.

Type: ECUADOR: Pastaza; Cantón: Santa Clara; San José, camino a San José de Punín, 924 m, 4 noviembre 2017, *Eric Hágsater y Marco Jiménez León 15415*, Holotype: QCNE! (LCDP & photo voucher).

Similar to *Epidendrum minus* (Cogn.) Hágsater but smaller plants, stems 11-17 cm tall, (vs. 10-20 cm tall), leaves relatively small, green above, slightly reddish underneath, 3-5 x 0.9-1.2 cm, 4:1 (vs. leaves larger, green on both sides, 5.0-7.5 x 0.8-1.4 cm; 5:1), flowers smaller floral segments proportionately wider, sepals 15-16 x 4.0-5.0 mm, 3:1 (vs. sepals 21-24 x 4.0 mm), lip 9.0 x 5.5 mm (vs. lip 16 x 12 mm).

Epiphytic, sympodial, caespitose, erect herb, 11-17 cm tall including the inflorescence. **Roots** 2.0-2.5 mm in diameter, basal, fleshy. **Stems** 6-12 x 0.3-0.4 cm, simple, cane-like, erect, laterally compressed, straight, the basal portion covered by several imbricated, non-foliar sheaths. **Leaves** 4-5, distributed along the apical half of the stem, sub-erect, distichous; sheaths 1.5-2.0 x 0.3-0.4 cm, laterally compressed, green; blade 3-5 x 0.9-1.2 cm, narrowly elliptic, acute, length to width ratio: 4:1, sub-coriaceous, dorsally carinate, margin entire, spreading; dark green above, slightly reddish green on the underside. **Spathes** lacking. **Inflorescence** 0.5 cm long, apical, racemose, turning pluri-racemose with time, as new racemes appear over several years, producing one flower at a time from one or more racemes; peduncle and rachis very short. **Floral bracts** 3 mm long, much shorter than the ovary, triangular, obtuse, embracing. **Flowers** several, successive, produced one at a time per raceme, resupinate, sepals buff, petals pale green, lip white including calli, column green at base, turning white towards the apex; fragrance not registered. **Ovary** 31 x 3 mm, terete, slightly inflated ventrally along the apical half, unornamented. **Sepals** 15-16 x 4.0-5.0 mm, spreading, narrowly-elliptic, acute, mucronate, 7-veined, with a secondary vein on each side of the mid-vein, margins entire, revolute; lateral sepals slightly falcate, oblique. **Petals** 14 x 2.0 mm, spreading, linear-elliptic, acute, 5-veined, with secondary veins towards the margins, margin entire, slightly revolute. **Lip** 9.0 x 5.5 mm, united to the column, shallowly 3-lobed, base cuneate; bicallose, calli laminar, prominent, parallel, widely separate; lateral lobes 5.0 x 2.0 mm, semi-elliptic, apex obtuse, outer margin rounded, inner margin nearly straight, surface smooth, margins entire; mid-lobe 4.0 x 2.0 mm, 2:1, widely ensiform, sub-acute, margins entire, spreading. **Column** 8 x 2-3 mm, terete, straight, dilated towards the apex. **Clinandrium hood** slightly surpassing the anther, margin bidentate. **Anther** ovate, 4-celled. **Pollinia** not seen. **Rostellum** sub-apical, slit. **Lateral lobes of the stigma** half as long as the stigmatic cavity. **Nectary** deep, penetrating half the pedicellate ovary, unornamented. **Capsule** not seen.

OTHER SPECIMENS: None seen.

OTHER RECORDS: None seen.

DISTRIBUTION AND ECOLOGY: Presently known from the type collection only, from the ridge that runs north south just east of the Troncal Amazónica highway (E45), above Santa Clara in the province of Pastaza, at ca. 900 m altitude. Flowering in November, probably during several months as flowers are successive.

RECOGNITION: *Epidendrum platynoctrinum* belongs to the Nocturnum Group which is characterized by the sympodial, caespitose plants, cane-like stems, short, racemose or pluri-racemose inflorescence, without spathaceous bracts, usually large, star-shaped, successive flowers, with similar sepals and petals. The new species is recognized by the epiphytic habit, stems 6-12 cm long, laterally compressed, short leaves 3.0-5.0 x 0.9-1.2 cm, narrowly elliptic, acute, dark green above, reddish green on the underside, ovary 31 mm long, sepals 15-16 mm long, lip 9.0 x 5.5 mm, shallowly elliptic with lobes proportionately wide, mid-lobe 4 x 2 mm, i.e. 2:1 (length:width). In the same general area there is *Epidendrum porphyreonoctrinum* Hágsater & R.Jiménez which has stems 16-40 cm long, 3-8 narrowly elliptic, acute leaves of similar size, 6.5-8.0 x 0.8-1.8 cm, dark green above, purple on the underside, ovary 43 mm long, sepals 18-21 mm long, lip 12-14 x 12-14 mm, the lateral lobes ovate with 6 thickened, radiating veins, mid-lobe 8.7-9.0 x 2.0 mm, i.e. 4:1 (length:width). *Epidendrum phlebonoctrinum* Hágsater has short stems 9-11 cm long, laterally compressed, bright green, 5-6 unequal leaves, 1.5-7.0 x 1.1-2.3 cm, ovary about as long as the 42-46 mm long sepals, deeply 3-lobed lip, with large yellow calli, and the lateral lobes with prominently raised veins radiating from the base and sub-parallel, mid-lobe 23 x 2.5 mm, i.e. 10:1 (length:width). *Epidendrum minus* (Cogn.) Hágsater has longer stems 10-20 cm long, leaves

CONSERVATION STATUS: DD. Data deficient. No other material has been traced in herbaria in this general area which has been heavily collected in the past 40 years. Perhaps due to the relatively small size of the plant, it has been overlooked.

ETYMOLOGY: From the Greek πλατύς, wide, broad, and the Latin *nocturnum* in reference to the proportionately wide mid-lobe of the lip, 2:1, which distinguishes this species from the rest of the nocturnum group. The common length:width relation is 4-20:1 for other species.

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

REFERENCES: Congiaux, A., 1907, *Epidendrum nocturnum* (Jacq.) var. *minus*, *Bull. Soc. Roy. Bot. Belgique*, 43: 323. Hágsater, E., & R. Jiménez M., 2018, *Epidendrum phlebonoctrinum* in E. Hágsater & E. Santiago (eds.), The Genus *Epidendrum* Part 12, *Icon. Orchid.* 16(2): pl. 1692. Hágsater, E., & R. Jiménez M., 2018, *Epidendrum porphyreonoctrinum* in E. Hágsater & E. Santiago (eds.), The Genus *Epidendrum* Part 12, *Icon. Orchid.* 16(2): pl. 1697. Sánchez, L., & E. Hágsater, 2010, *Epidendrum minus* in E. Hágsater & L. Sánchez S. (eds), The Genus *Epidendrum* Part 9, *Icon. Orchid.* 13: pl. 1358.



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Photo: R. Jiménez

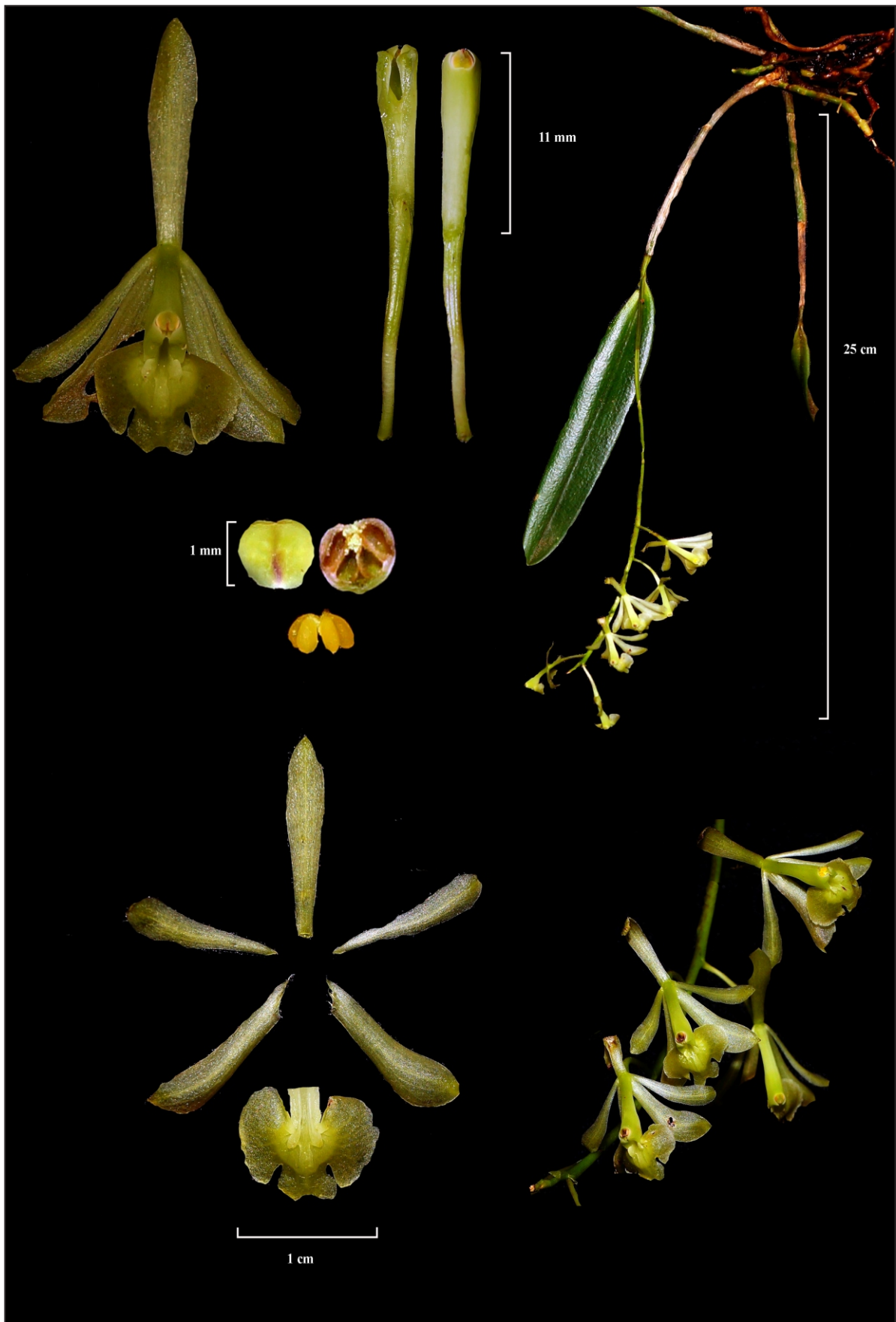
Editors: E. Hágsater & E. Santiago

Herbario AMO

Ciudad de México, MÉXICO

ICONES ORCHIDACEARUM 16(2). 2018.

Plate 1693



EPIDENDRUM PLEUROTALLIPNEVMA Hágsater, Edquén & E.Santiago

Plate 1694

EPIDENDRUM PLEUROTHALLIPNEVMA Hágsater, Edquén et E.Santiago, *sp. nov.*

Type: PERU: Dept. San Martín; Prov.: Rioja, Distr.: Pardo Miguel Naranjos, Sector Venceremos, 5°41'14.36"S, 77°45'36.86"W, 1670 m, Bosque de protección Alto mayo, 27 February 2017, **José Dilmer Edquén Oblitas 99**. Holotype: HURP! (LCDP and photo voucher).

Similar to *Epidendrum chalmersii*, Hágsater & Ric.Fernández, but the stem has a single oblong-elliptic leaf, 11 x 1.7 cm, (vs. 3-4 elliptic leaves, 5.0-9.5 x 2.2-2.8 cm), sepals oblanceolate, 14-15 mm long, (vs. sepals 11.5-13.0 mm long), lip 8 x 11 mm, mid-lobe 2 x 4, obtrapezoid, the base narrower than the apex, apex emarginate and bilobed, forming two rounded lobules (vs. lip 7 x 9.5 mm, mid-lobe 3 x 3 mm, rectangular-oblong, apex truncate).

Epiphytic and lithophytic, caespitose, pendent **herb**, 25 cm tall including the inflorescence. **Roots** 1.5-2.0 mm in diameter, basal, fleshy, white. **Stems** 9.5-10.0 x 0.2-0.4 cm, simple, cane-like, terete at base, laterally compressed towards the apex, unifoliate, sub-erect, straight; nearly totally covered by 2 bracts 2.7-5.0 cm long, non-foliar, tubular, scarious and becoming fibrous with age. **Leaf** 1, at the apex of stem, erect, articulate, coriaceous, stiff; sheath 1.4 x 0.4 cm, tubular, laterally compressed, green with base tinged red; blade 11 x 1.7 cm, oblong-elliptic, apically rounded, green, concolor, margin entire, spreading. **Spathe** 2, 2-3 x 0.4-0.7 cm, tubular, ancipitose, apex obtuse, slightly imbricated. **Inflorescence** 15 cm long, apical, racemose, erect, laxly few-flowered; peduncle 6 cm long, laterally compressed, somewhat ancipitose, green, concolor. **Flowers** 12, resupinate, simultaneous, membranous, dark yellow-greenish to pale green; fragrance not registered. **Floral bracts** 1 mm long, much shorter than the ovary, widely triangular, acute, embracing. **Ovary** 12-13 mm long, terete, thin at base, gradually thickened behind the perianth, greenish white. **Sepals** 14-15 x 3.0-4.0 mm, spreading, oblanceolate, 3-veined, margin entire, revolute; dorsal sepal free, apex obtuse; lateral sepals obliquely united to the base of column, slightly convex, falcate, acute, minutely apiculate. **Petals** 13.5 x 2.5 mm, descending, free, oblanceolate-spatulate, apex rounded, 3-veined, margin entire, slightly revolute. **Lip** 8 x 11 mm, united to the column, 3-lobed, base cordate, convex and slightly reflexed in natural position; margin erose, spreading; bicallose, calli laterally compressed, slightly divaricate; disc slightly fleshy, with very short thickened veins, mid-rib short, disappearing before the sinus of the mid-lobe; lateral lobes 4 x 7 mm, dolabriform; mid-lobe 2 x 4 mm, proportionately much smaller than the lateral lobes, obtrapezoid, the base narrower than the apex, apex emarginate and bilobed, forming two rounded lobules. **Column** 12 mm long, thin, straight. **Clinandrium-hood** much reduced, margin entire. **Anther** globose, 4-celled. **Pollinia** 4, obovoid, somewhat laterally compressed, sub-equal, yellow; caudicles shorter than the pollinia, soft and granulose. **Rostellum** apical, slit. **Lateral lobes of the stigma** about half as long as the stigmatic cavity. **Nectary** narrow, penetrating about 1/3 of the ovary. **Capsule** not seen.

OTHER SPECIMENS: None seen.

OTHER RECORDS: None seen.

DISTRIBUTION AND ECOLOGY: Known presently from a single collection from northern Peru, San Martín, near the border with Amazonas, at 1500 m altitude, epiphytic on Myrtaceae shrub in non-amazonian secondary forest, on deforested terrace. Flowering from November to February.

RECOGNITION: *Epidendrum pleurothallipnevma* is reminiscent of the Ampliracemum Group which is characterized by the simple, cane-like, one to few-leaved stems with tubular, tight bracts at the base of the peduncle of a racemose, simple inflorescence, the flowers resupinate. The species is recognized by the single leafed stem 9.5-10 cm long, with a single apical leaf, 11 x 1.7 cm, coriaceous, oblong-elliptic, apically rounded, the racemose inflorescence longer than the leaf, subtended by two imbricated bracts, flowers dark yellow-green to pale green, sepals 14-15 mm long, lip 3-lobed; lateral lobes dolabriform, mid lobe smaller, obtrapezoid, apically bilobulate, forming two rounded lobules. *Epidendrum chalmersii* has relatively small plants (20-30 cm tall including the inflorescence), with 3-4 elliptic leaves 5-9.5 x 2.2-2.8 cm, the 6-10 flowered inflorescence, sepals obovate-oblanceolate, 11.5-13 mm long, and the mid-lobe of the lip truncate and minutely bilobed at the apex. *Epidendrum ampliracemum* C.Schweinf. has 3-4 larger leaves, 6-13 x 4 cm, a many-flowered inflorescence, elongate (19 cm long), lateral sepals oblanceolate (17-18 mm long), and the mid-lobe the lip? cuneate, sub-obtuse, minutely apiculate.

CONSERVATION STATUS: DD. Data deficient, known presently from a single collection in secondary forest.

ETYMOLOGY: $\pi\lambda\epsilon\upsilon\rho\alpha$ rib, $\theta\alpha\lambda\lambda\omicron\varsigma$, stem, and $\pi\nu\epsilon\upsilon\mu\alpha$ spirit, in the German sense of *geist*, appearance, in reference to the appearance of the plant that looks much like many Plerothallid species, with a long, thin stem and a single oblong, coriaceous leaf.

ACKNOWLEDGMENT: Collections made under project "Efecto de la fragmentación de hábitats de bosque alto andino en diversidad de Orchidaceae y Bromeliaceae del anexo de Diosán, Distrito de Granadas, Amazonas" emitido bajo la resolución de Dirección General (RDG) N° 137-2018-SERFOR/DGSPFFS; correspondiéndole el Código de Autorización N° AUT-IFL-2018-025.

REFERENCES: Hágsater, E., & R. Fernández, 2009, *Epidendrum chalmersii*, in E. Hágsater & L. Sánchez (eds.), The Genus *Epidendrum*, Part 10, **Icon. Orchid.**: 14: pl. 1416. 2013. Schweinfurth, C., 1959, *Epidendrum ampliracemum* in *Orchids of Peru*, **Fieldiana (Bot.)** 30(2): 406-407.



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LCDP: J. D. Edquén

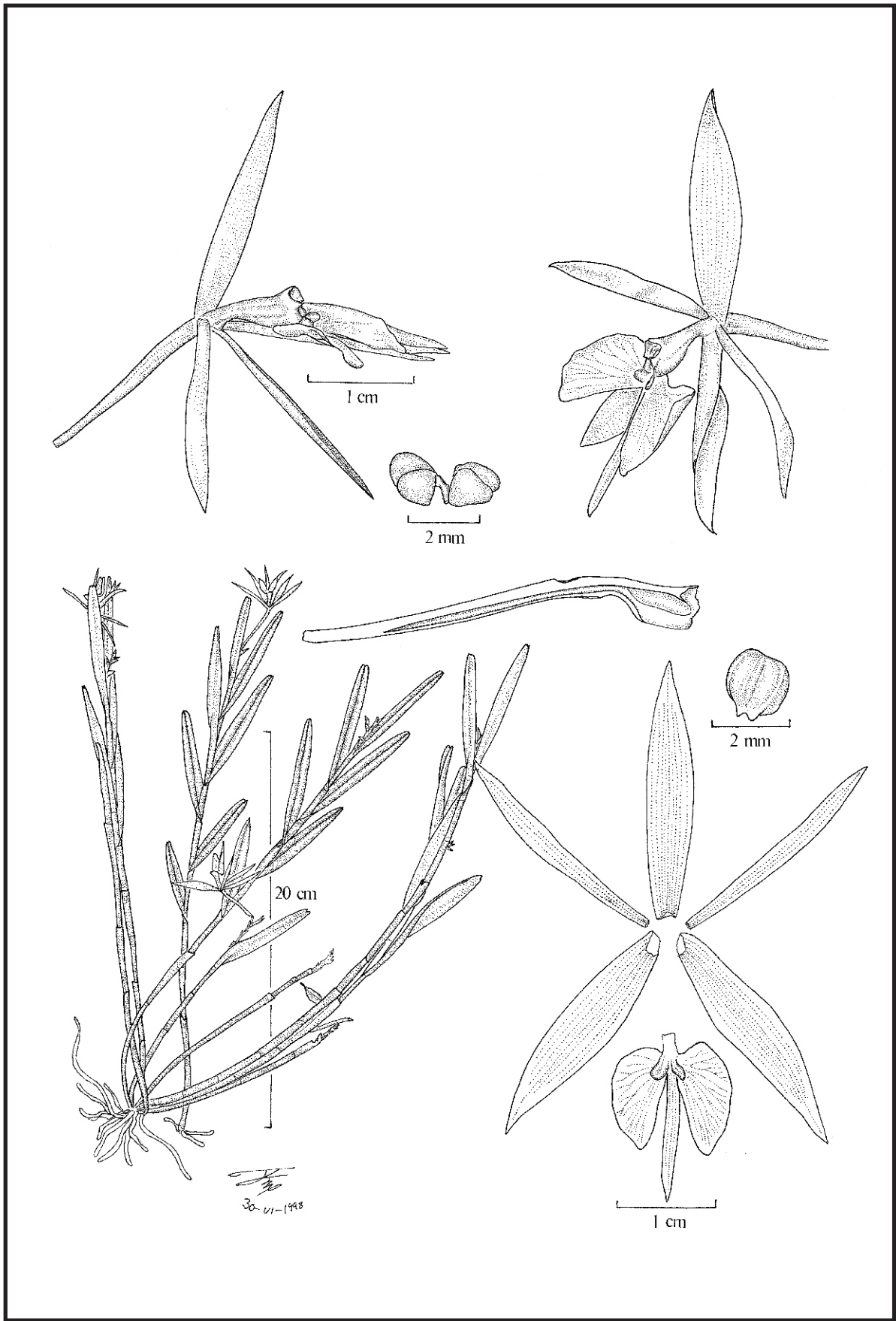
Photo: J. D. Edquén

Editors: E. Hágsater & E. Santiago

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ICONES ORCHIDACEARUM 16(2). 2018. Plate 1694



EPIDENDRUM PLURIFOLIONOCTURNUM Hágsater & L.Sánchez

Plate 1695

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

Type: ECUADOR: Sucumbíos: Cuyabeno: Reserva Faunística Cuyabeno, Laguna Grande, 265 m, 25 III 1989, **Henrik Balslev, R. Valencia, G. Paz & Miño 84584**, Holotype: QCA! Isotype: AAU! (illustration voucher).

Similar to *Epidendrum longicolle* Lindl. but the lateral lobes of the lip free from the mid-lobe and similar to *E. minus* (Cogn.) Hágsater, but the stems longer, 15-28 cm (vs. 10-20 cm) and with narrower leaves, 4.5-10 x 0.5-0.8 cm (vs. 5.0-7.5 x 0.8-1.4 cm) and larger flowers, sepals 30-42 mm long, (vs. sepals 21-24 mm long*).

Epiphytic or lithophytic, sympodial, caespitose herb 20-33 cm tall including the inflorescence. **Roots** 1.0-2.5 mm in diameter, basal, fleshy, thick. **Stems** 15-28 x 0.13-0.20 cm, simple, cane-like, terete at the base, laterally compressed towards the apex, straight. **Leaves** 7-11, distributed along the upper 2/3 of the stem; sheath 1.4-2.0 cm long, laterally compressed; blade 4.5-10 x 0.5-0.8 cm, lanceolate, apex narrowly rounded, mucronate, grass-like, slightly carinate, 10:1 to 13:1. **Spathe** lacking. **Inflorescence** 2 cm long, apical, racemose, producing new racemes with time and thus becoming pluri-racemose, producing one flower at a time from each raceme during several years. **Floral bracts** 4 mm long, much shorter than the ovary, embracing, triangular, acute to acuminate. **Ovary** 30-40 x 0.13-0.22 mm, terete, slightly inflated, unornamented, slightly longer than the sepals. **Flowers** 1-2 per raceme, successive, produce done at a time, resupinate, sepals pale green to yellow, lip white; fragrant. **Sepals** 30-42 x 4 mm, spreading, linear-lanceolate, acuminate, margin entire, spreading; lateral sepals falcate, oblique. **Petals** 28-40 x 2-3 mm, spreading, linear-lanceolate, acuminate, margin entire, spreading. **Lip** 17-22 x 10-13 mm, united to the column, 3-lobed, the mid-lobe appearing twice as long as the lateral lobes; bicallose, calli laminar, prominent, with a short, low mid-rib in between; lateral lobes 11-16 x 5-6 mm, free from the mid-lobe; semi-ovate, obtuse to acute, margin entire; mid-lobe 15-24 x 2-3 mm, linear to linear-lanceolate, acute, margin entire. **Column** 10-15 x 3.0-3.5 mm, arched to slightly arched, dilated towards the apex. **Clinandrium-hood** short, entire to slightly dentate. **Anther** reniform, apex deeply slit, 4-celled. **Pollinia** 4, triangular, the inner margin straight, laterally compressed, caudicles granulose, slightly shorter than the pollinia. **Lateral lobes of the stigma** not seen. **Nectary** penetrating about half the pedicellate ovary, unornamented. **Capsule** not seen.

OTHER SPECIMENS: COLOMBIA: Amazonas-Vaupés: Río Apaporis, Cachivera de Jirijirimo y alrededores, ca. 250 m, 16 IX 1951, *Schultes 14092*, AMES! [Vaupés]: Río Apaporis, Raudal Yayaocopi (La Playa) and vicinity, ca. 800 ft, 15 II 1952, *Schultes 15336*, AMES! **ECUADOR: Orellana:** Aguarico: Yasuní National Park. Laguna Jatuncocha, near mouth of Río Yani, 180 m, 8 XI 1981, *Neill 9938*, QCNE! **Sucumbíos:** Cuyabeno Nature Reserve, Laguna Grande, 240 m, 9 XI 1982, *Asanza 41133*, AAU! QCA! *Ibid.*, 9 XI 1982, *Asanza 41142*, AAU! *Ibid.*, 11 XI 1982, *Asanza 41166*, AAU! QCA! Río Güepipi, 200 m, 7 V 1980, *Brandbyge 30581*, AAU! Lagunas de Cuyabeno, second lake, situated some 3 km W of the first lake, 300 m, 23 VIII 1981, *Brandbyge 36020*, AAU! Lagunas de Cuyabeno, 300 m, 23 VIII 1981, *Brandbyge 36021*, AAU! Reserva Faunística Cuyabeno, Laguna Grande, 265 m, 18 III 1989, *Balslev 84457*, AAU! QCNE! Shushufindi, Reserva Faunística Cuyabeno, S of Laguna Garzacocha, 265 m, 1 IV 1989, *Balslev 84691*, AAU! Reserva Faunística Cuyabeno, near Palma Roja in Laguna Grande, 265 m, 6 IV 1989, *Balslev 84863*, AAU! MO! QCA! Reserva Faunística Cuyabeno. Laguna Grande and surroundings, including Río Cuyabeno from Pto. Bolívar to above Laguna Cananguña, 265 m, 11 III 1990, *Balslev 97168*, MO! QCA! QCNE! *Ibid.*, *Balslev 97372*, MO! QCNE! Río Lagartococha, 220 m, *Dodson 18832*, MO! digital image of live flower, AMO! Laguna Cuyabeno, 7 VII 1980, *Jaramillo 2875*, AAU! QCA! Shushufindi: Laguna de Cananguña, 23 IV 1986, *Jaramillo 8386*, AAU! QCA! Estación Científica Cuyabeno, 220 m, 15 VII 1992, *Jaramillo 14819*, QCA! Río Lagarto Cocha, 2 hours upstream from Río Aguarico. Above Gamitana Cocha, 190 m, 13 VI 1983, *Lawesson 44341*, AAU! Río Lagarto Cocha, 2 hours upstream from Río Aguarico, 190 m, 13 VI 1983, *Lawesson 44350*, AAU! QCA! Reserva de producción Faunística Cuyabeno, Laguna Grande, 265 m, *Nielsen 76088*, MO! Reserva Cuyabeno, área totalmente inundada por Laguna Grande (aguas negras), 230 m, 16 XI 1991, *Palacios 9075*, QCNE! Reserva Faunística Cuyabeno, Laguna Grande and surroundings, including Río Cuyabeno from Pto. Bolívar to above Laguna Cananguña, 230 m, 18 XI 1991, *Palacios 9115*, QCNE! **GUYANA:** Beyond Mure-Mure; along Mure-Mure Creek to ca. 3 miles above mouth, 1400 ft, 15 III 1962, *Cowan 2202*, US! Kaieteur Falls, Potaro River, 23 X 1923, *De la Cruz 4468*, AMES! NY! US! Barima-Waini: Assakatta, 7°45'N 59°05'W, 18-28 IX 1923, *J. S. De la Cruz 4276*, US! (Illustration AMO) AMES! **TRINIDAD & TOBAGO:** Without locality, *Dawns 42*, AMES!

OTHER RECORDS: VENEZUELA: Amazonas: Municipio Autónomo Maroa, Maroa, bana al oeste del punto más al norte del aeropuerto, 4 IX 2008, *Romero 4026-A*, illustration, (*Romero et al.* 2010), pg. 169, fig. 2, parts B-G. Part A, the large stem in flower corresponds to the real *E. longicolle* (Part A, based on *García Barriga 15778*, AMES 115073) from Colombia, Vaupés, Río Kuyadari, sabana con arenisca [cerro] Yapoboda, lithophytic at 300 m altitude.

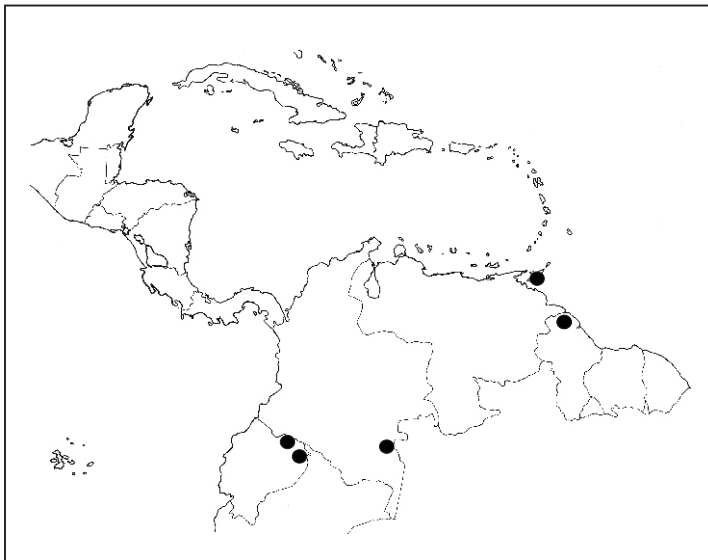
DISTRIBUTION AND ECOLOGY: Widespread and common along the upper Amazon basin in the Cuyabeno Reserve in Ecuador, the Río Negro basin in Colombia and Venezuela, as well as coastal Guyana and Trinidad. Epiphytic at 240-450 m altitude, often in seasonally inundated forests. Flowering throughout the year.

RECOGNITION: *Epidendrum plurifolionocturnum* 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 can be recognized by the laterally compressed stems 20-33 cm tall, with 7-11 linear-lanceolate, acuminate leaves, 10:1 to 13: 1, 4.5-10 x 0.5-0.8 cm, sepals 30-42 mm long, lateral lobes of the lip free from the mid-lobe; ovary 30-41 mm long. It is similar to *Epidendrum longicolle* Lindl. which has somewhat taller plants, 17-40 cm tall, lateral lobes of the lip united to the mid-lobe united along 1/3 to 1/2 their length, leaves 5-12, 5-15 x 0.4-0.8 cm. *Epidendrum minus* (Cogn.) Hágsater, widespread in the Amazon basin, has up to 6 lanceolate leaves, 5-6:1, 5.0-7.5 x 0.8-1.4 cm, sepals 21-24 mm long, lateral lobes of the lip free from the mid-lobe, divergent, the ovary 30 mm long [Cogniaux 1907]. *Epidendrum micronocturnum* Carnevali & G.A. Romero generally has 2-4[6] leaves distributed along the apical half of the stem, 0.4-0.6 cm wide, small flowers, sepals 15-20 mm long, and the ovary 22-26 mm long. *Epidendrum mininocturnum* Dodson, ranging along the Pacific slope in southern Colombia and northern Ecuador, has small plants, 5-15 cm tall, 4-5 narrow leaves (8-20 mm wide), small flowers, sepals 27-28 mm long, ovary 27-30 mm long, and is easily recognized by the numerous thickened veins on the lateral lobes of the lip. *Epidendrum bahiense* Rchb.f. has stems 9-11 cm long, leaves 40-82 x 5-10 mm, ovary 28 mm long, sepals 19 mm long, the lateral lobes of the lip sub-ovate-rhombic, acute, divergent, about half the length united to the mid-lobe which is ensiform, acute [based on the type at W-42385].

*NOTE: In an earlier note, Hágsater & Sánchez (2015) had reduced *E. minus* to a synonym of *E. bahiense* Rchb.f., but after careful consideration, in the present evaluation, it is evidence that we had lumped together species of similar size, though the color of leaves and proportion of length:width had not been considered. We thus consider them distinct species. Specimens here listed were also listed under *E. minus* in Sánchez & Hágsater (2010b). The description of *E. minus* given by Sánchez & Hágsater (2010) is the sum of lumping together several species of similar size, including the one here described, and thus the data given above is based solely on the type (Cogniaux, 1907).

ETYMOLOGY: In reference to the many-leaved stem, which is characteristic to this species, and only shared by *Epidendrum longicolle*, with which has been confused.

REFERENCES: Carnevali, G. & G. A. Romero, 1996, Orchidaceae Dunstervilleorum VII: The *Epidendrum nocturnum* Alliance in the Venezuelan Guyana and Guianas, *Lindleyana* 11(4): 239-249. Cogniaux, A., 1907, *Epidendrum nocturnum* (Jacq.) var. *minus*, *Bull. Soc. Roy. Bot. Belgique*. 43: 323. Sánchez S., L., & E. Hágsater, 2010, *Epidendrum longicolle* in E. Hágsater & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 9, Icon. Orchid. 13: pl. 1350. Sánchez S., L., & E. Hágsater, 2010, *Epidendrum micronocturnum* in E. Hágsater & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 9, Icon. Orchid. 13: pl. 1356. Sánchez S., L., & E. Hágsater, 2010, *Epidendrum mininocturnum* in E. Hágsater & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 9, Icon. Orchid. 13: pl. 1357. Sánchez S., L., & E. Hágsater, 2010, *Epidendrum minus* in E. Hágsater & L. Sánchez S. (eds.), *The Genus Epidendrum*, Part 9, Icon. Orchid. 13: pl. 1358. Romero-González, G.A., C. Gómez & G. Carnevali F.C., 2010, *Novelties in the Orchid Flora of Venezuela III-Epidendrum*, *Harvard Pap. Bot.* 15(1): 168.



Authors: E. Hágsater & L. Sánchez†

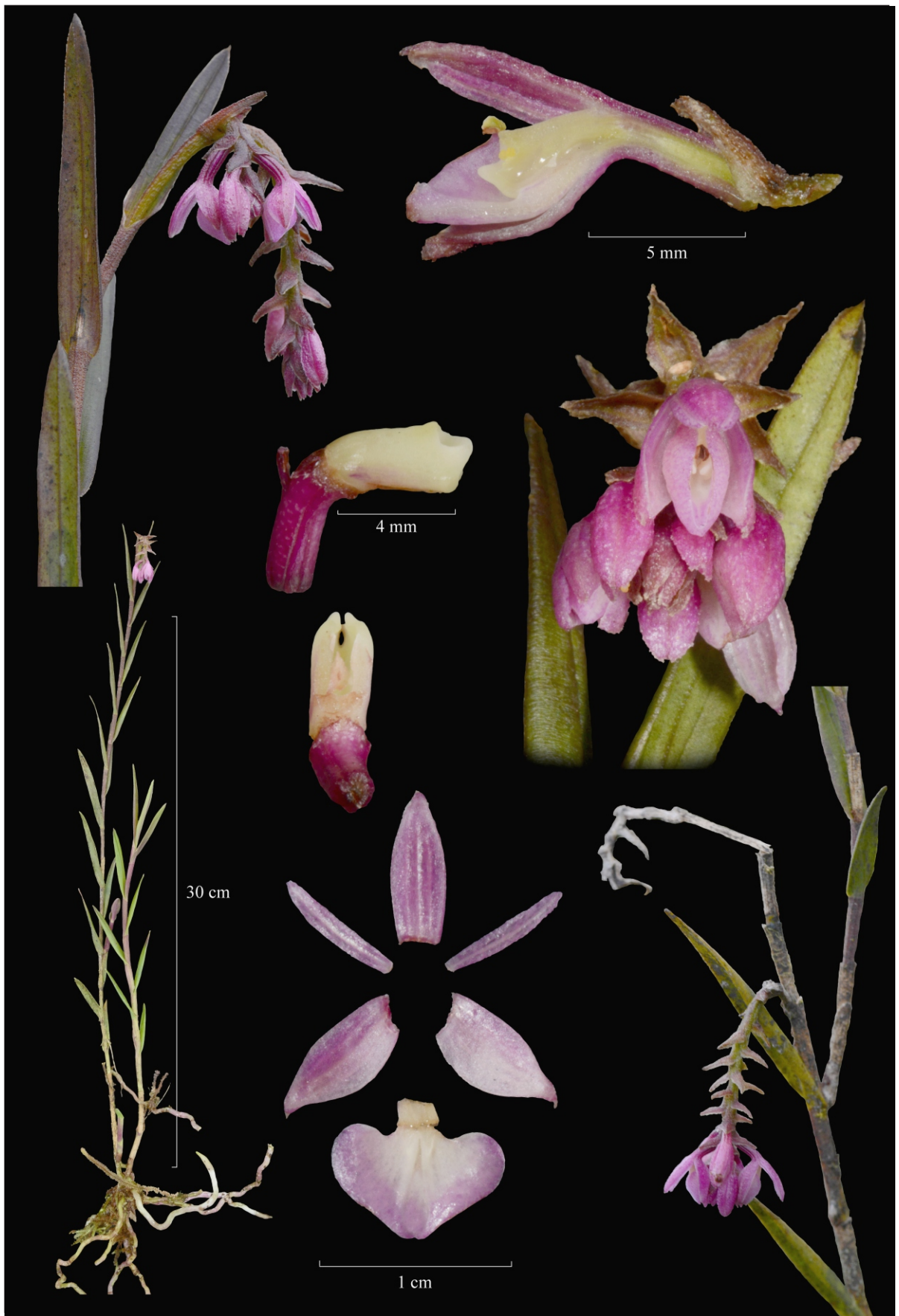
Illustrator: R. Jiménez

Editors: E. Hágsater & E. Santiago

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ICONES ORCHIDACEARUM 16(2). 2018. Plate 1695



EPIDENDRUM PODOCARPENSE Hágsater & E.Santiago

Plate 1696

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

Type: ECUADOR: Zamora-Chinchipe: Cantón Palanda; Parroquia Valladolid; subida de Yangana al Cerro Toledo, cuchilla sureste, pasando la cima, 3319 m, en pajonal arbustivo montano alto, 20 octubre 2018. **Eric Hágsater & Elizabeth Santiago Ayala 16031**. (LCDP voucher.)
Holotype: QCNE! Isotypes: AMO! MEXU!

Similar to *Epidendrum leptanthum* Hágsater, especially in the vegetative structures, but the flowers fuchsia-pink (vs. cretaceous, whitish, outside more or less tinged green with minute red-brown dots, and lip with a pair of triangular, narrow calli (vs. lip callus cuneate, apically bilobed forming a "W").

Terrestrial, sympodial, caespitose, erect **herb** 25-42 cm tall. **Roots** 2-3 mm in diameter, fleshy, as thick as the stems, white. **Stems** 21-35 x 0.2-0.3 cm, cane-like, terete, thin, erect, straight, scarcely branching when mature; base covered with sheaths 15-23 mm long, tubular, non-foliar, rugose, scarious. **Leaves** 11-17, distributed throughout the stem, alternate, articulate, sub-erect, sub-coriaceous; foliar sheaths 10-25 x 2.3 mm, tubular, verrucose, green tinged purple-brown; blade 3.5-5.5 x 0.6-0.8 cm, narrowly lanceolate, acute, minutely apiculate, margin finely crenulate, slightly revolute (without being in-rolled), giving the leaf a convex aspect. **Spathes** lacking. **Inflorescence** 6 cm long, racemose to simply paniculate, producing short, few-flowered racemes, apical in young stems, lateral in mature stems, arching-nutant; peduncle 22 x 2 mm, short, laterally compressed but not ancipitose, thin without being filiform, minutely papillose, provided in the middle with a bract 15 x 4 mm (without spreading), amplexicaul at the base, acute, rugose-papillose. **Floral bracts** 4-10 x 3-4 mm, as long or slightly longer than the ovary, progressively shorter towards the apex of the inflorescence, triangular, acuminate, embracing, dorsally slightly papillose, reddish. **Ovary** 4-5 mm long, thin, not inflated, furrowed, forming a 45° angle with the column. **Flowers** 6-28 per raceme, successive, producing a helicoid around the rachis, fuchsia colored, the lip and ventral surface of the tepals pink, column ivory white; without any apparent fragrance. **Sepals** partly spreading, free, somewhat concave, 3-veined, acute, minutely apiculate, slightly pustulate of the dorsal surface, margin entire, spreading; dorsal sepals 8.0 x 3.0 mm, narrowly elliptic; lateral sepals 8.3 x 4.0 mm, elliptic. **Petals** 7 x 1.2 mm, partly spreading, free, parallel to the dorsal sepal, oblong, obtuse, 1-veined, margin entire, spreading. **Lip** 6.0 x 9.0 mm, totally united to the column, entire, cymbiform and embracing the apex of the column nearly totally covering it in natural position, widely cordiform when spread, base cordate, apex rounded, margin entire, spreading; bicallose, the calli narrowly triangular, parallel, glabrous. **Column** 5 mm long, straight, with a rounded tooth on each side. **Clinandrium-hood** reduced, margin entire. **Anther** reniform, 4-celled. **Pollinia** 4, obovate, laterally compressed; caudicles soft and granulose, slightly longer than the pollinia; viscidium semiliquid. **Nectary** shallow, not penetrating behind the perianth, not inflated, unornamented. **Rostellum** apical, slit. **Lateral lobes of the column** small, ¼ the length of the stigmatic cavity. **Capsule** not seen.

OTHER SPECIMENS: ECUADOR: Loja: Vilcabamba: Horta-Naque, 3500-3700 m, 9 IX 1946, *Espinoza 981*, AMES! Ibid. *Espinoza 1010*, AMES! Yangana, Cerro Toledo, 3300 m, 20 II 2002, *Merino E-723*, LOJA! Parroquia San Pedro de Vilcabamba; Parque Nacional Podocarpus: [Laguna] Banderillas, 3300 m, 21 III 2002, *Merino E-1106*, LOJA! [Laguna] Banderillas, 3400 m, 21 III 2002, *Merino E-1152*, LOJA! Cantón Espíndola: Parroquia Jimbura: Parque Nacional Yacurí, 3441 m, 15 X 2018, *Salazar 10196*, QCNE! (photo voucher). [Laguna] Banderillas, 3400 m, 3 XII 2004, *Tinitana s.n.*, HUTPL!

OTHER RECORDS: None seen.

DISTRIBUTION AND ECOLOGY: The species is widespread in southern Ecuador on the Cordillera Occidental in the Parque Nacional Yacurí, from the Peruvian border to the Nudo de Sabanilla where it connects with the Cordillera Oriental and the Parque Nacional Podocarpus; Loja and Zamora-Chinchipe provinces; terrestrial in "Pajonal arbustivo montano alto" (Báez *et al.*, 2010), at 3300-3400 m altitude, in wet, foggy, windy conditions throughout the year. Flowering from October to March.

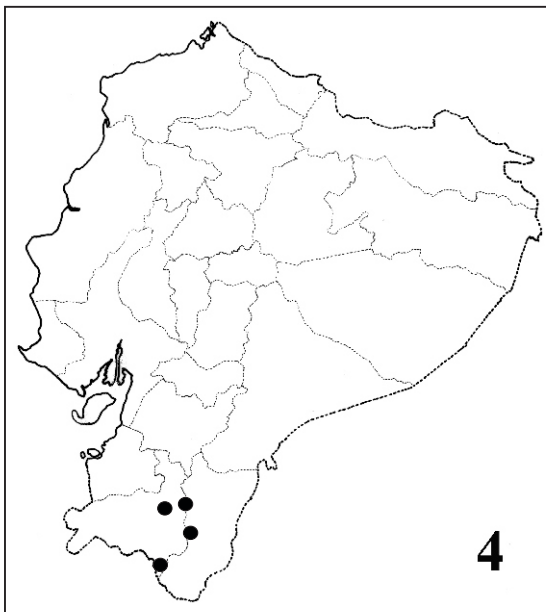
RECOGNITION: *Epidendrum podocarpense* belongs to the Frutex Group recognized by the caespitose habit, usually simple stems, lanceolate leaves, lacking spathes, nutant racemes, widely cordiform to reniform lip and Leptanthum Subgroup which is characterized by the thin stems, scarcely branched when mature, leaves short, linear-lanceolate to lanceolate oblong, nearly parallel to the stem, inflorescence arching-nutant, apical and lateral in mature stems, racemose to paniculate, few-flowered. The new species is recognized by the erect stems, leaves 3.3-5.5 x 0.6-0.8 cm, linear-lanceolate, flowers fuchsia-pink, sepals apically acute, minutely apiculate, petals 7 x 1.2 mm, oblong, apex obtuse, and lip 6.0 x 9.0 mm, widely cordiform with a pair of triangular, narrow calli. Vegetatively it is very similar to *Epidendrum choccei* M.E.Acuña, Hágsater & E.Santiago (in press), but that species has prostrate stems, leaves 2.7-3.4 x 0.3 cm, narrowly lanceolate, flowers similar in color, but sepals acuminate, petals 6-7 x 0.7 mm, linear-oblong, falcate, and the lip 5.5 x 6.0 mm, widely ovate with the apex acuminate, ecallose. *Epidendrum leptanthum* Hágsater also has erect stems and similar leaves, but the flowers are cretaceous, greenish white, outside more or less tinged green with red-brown minute dots, lip widely cordiform, callus cuneate, apically bilobed forming a "W", with a low, narrow central mid-rib reaching the apex. *Epidendrum effusipetalum* Hágsater, Edquén & E.Santiago has yellowish green flowers, the sepals tinged brown, dorsal sepal obtuse, petals 10 x 1 mm, outstretched, and the lip 6.5 x 7 mm, ovate-cordiform, ecallose.

CONSERVATION STATUS: DD. Data deficient. The species is widespread in southern Ecuador and expected in adjoining Peru. One population seen had a couple of dozen individuals.

ETYMOLOGY: In reference to the Parque Nacional Podocarpus, where the species has been collected.

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

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Photo: G. Salazar

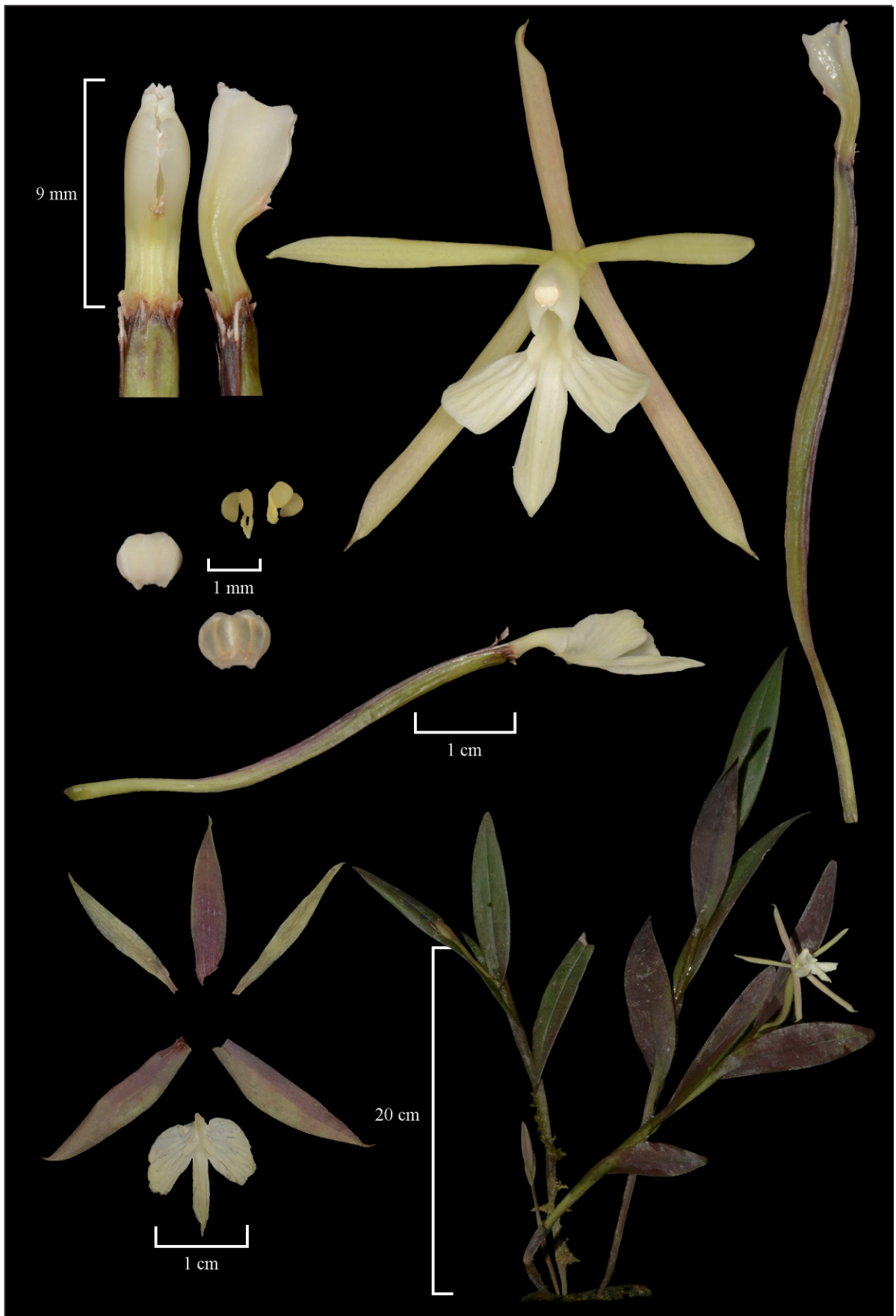
Editors: E. Hágsater & E. Santiago

Herbario AMO

Ciudad de México, MÉXICO

ICONES ORCHIDACEARUM 16(2). 2018.

Plate 1696



EPIDENDRUM PORPHYREONOCURNUM Hągsater & R.Jiménez

Plate 1697

EPIDENDRUM PORPHYREONCTURNUM Hágsater et R.Jiménez, sp. nov.

Type: ECUADOR: Napo: Archidona: Parroquia Archidona; km 26 E20, (E45A), Troncal Amazónica, 1090 m, col. 2 noviembre 2017, prensado 13 agosto 2018, **Eric Hágsater y Marco Marcelo Jiménez León 15360**. (LCDP, AMO! photo voucher) Holotype: QCNE! Isotype AMO! (flowers in spirit).

Similar to *Epidendrum minus* (Cogn.) Hágsater, but the leaves dark green above, purple on the underside (vs. green on both sides), ovary longer, 43 mm (vs. 30 mm long), sepals about the same size, 18–21 mm (vs. 21–24 mm long), and the lateral lobes of the lip with 6 raised, thickened veins radiating from the base (vs. surface of lateral lobes flat).

Epiphytic, sympodial, caespitose, erect herb, 30–40 cm tall including the inflorescence. **Roots** 2.0–3.0 mm in diameter, basal, fleshy. **Stems** 16–40 x 0.17–0.37 cm, simple, cane-like, terete at base, laterally compressed towards the apex, erect, straight. **Leaves** 3–8, distributed along the apical half of the stem, alternate, sub-equal, articulate; foliar sheaths 2–4 x 0.20–0.37 cm, laterally compressed, striated; blade 6.5–8.0 x 0.8–1.8 cm, narrowly elliptic, acute, apex narrowly rounded, sub-coriaceous, slightly dorsally carinate, upper side dark green, underside purple. **Spathe** lacking. **Inflorescence** 1.0–1.5 cm, long, apical, racemose, producing new racemes in successive years and the pluri-racemose, producing one flower at a time from a raceme; peduncle and rachis abbreviated. **Floral bracts** 4.0–4.2 mm long, much shorter than the ovary, triangular, acute, embracing. **Ovary** 33–43 x 2.5 mm, terete, apical half ventrally thickened, unornamented. **Flowers** several, successive, produced one at a time from a raceme, resupinate; sepals red-brown, petals pale green, lip white, including calli, column green at base, apex of column white; fragrance not registered. **Sepals** 18–21 x 3.5–4.0 mm, spreading, lanceolate, acute and apiculate, 5-veined, with secondary veins in between the main veins, the lateral veins branching; margin entire, revolute; lateral sepals oblique. **Petals** 18–21 x 2.0–3.0 mm, spreading, linear-elliptic, acute, 5-veined, margin entire, spreading. **Lip** 12–14 x 12–14 mm, united to the column, deeply 3-lobed, base truncate, to slightly cuneate; bicallose, calli laminar, prominent; lateral lobes 7.5–10.0 x 4–5 mm, divergent, ovate, rounded, margin entire, surface with 6 thickened, radiating veins, bifurcate towards the margins; mid-lobe 8.7–9.0 x 2.0 mm, linear-ensiform, acute, straight, 3-veined, margin entire, sides somewhat revolute, apex spreading so as to apex appear somewhat rhomboid in natural position. **Column** 9 x 3–5 mm, slightly arched, dilated towards the apex. **Clinandrium-hood** prominent, margin erose, 3-dentate. **Anther** transversely elliptic, unornamented, 4-celled. **Pollinia** 4, obovate-triangular, laterally compressed, caudicles soft and granulose, longer than the pollinia, viscidium semi-liquid. **Rostellum** apical, slit. **Lateral lobes of the stigma** long, about half as long as the stigmatic cavity. **Nectary** deep, penetrating half the pedicellate ovary, unornamented. **Capsule** 34 x 12 mm, ellipsoid-globose, body in the middle, pedicel 6 mm, body 19 x 12 mm, apical neck 9 mm.

OTHER SPECIMENS: ECUADOR: Napo: Archidona, [arriba de carretera E20], 1542 m, 8 XI 2008, *Carvajal 452*, QCA! road between Baeza and Archidona, 16 km S of turn off to Loreto and Cocola, 925 m, 19 IV 2003, *Croat 87419*, QCNE! Tena: Km 5 Tena-Puerto Napo, 550 m, 18 VI 1983, *Dodson 14070*, SEL! km 4, Tena to Puerto Napo, 550 m, 23 VI 1987, *Dodson 17225*, MO! Reserva Biósfera Sumaco, Comunidad Mushullacta, al oeste de la Cordillera de Galeras, 960 m, 24 II 2003, *Farfán 445*, QCNE! carretera Archidona-Baeza hacia Francisco de Orellana, Río Machangara, 1105 m, col. 2 XI 2017, pressed 9 VIII 2018, *Hágsater 15360*, QCNE! Cotundo River, Baeza-Tena, 800 m, VIII 1984, *Hirtz 1875*, MO! (digital image of flower, AMO!) Carlos Julio Arosemena Tola, Between Puyo and Tena, 600 m, 28 III 1984, *Höijer 686*, SEL! Just north of Archidona, 500 m, 27 VII 1975, *Luer 436*, SEL! Tena-Baeza km 34, 5000–7000 ft, 7 VI 1983, *Thurston 3057* sub *Hágsater 7496*, digital image, flowers in spirit, AMO! Road from Archidona to Loreto, km 14, 1000 m, 24 II 1991, *Whitten 91130*, QCNE! **Morona-Santiago:** Palora, Along the road from the main Puyo-Macas road to Palora, departing main Puyo-Macas km 38 SE, of Puyo 9.8 km from main road, 1336 m, 20 VIII 2002, *Croat 86711*, QCNE! Santiago de Méndez, Río Upano near Méndez, 700 m, I 1989, *Hirtz 4030*, MO! (digital image of fresh flower, AMO!) Along new road Mendez-Morona, 650 m, 16 VIII 1989, *van der Werff 11139*, MO! **Orellana:** Loreto, Carretera Coca-Loreto, entre la Comuna 10 de Agosto y el Río Pingullo, 1000 m, 20 X 1988, *Cerón 5295*, QCNE! **Pastaza:** Between Mera and Moravia, 1000 m, 16 XII 1955, *Asplund 18876*, AMES! B! G! K! NY! km 56 de Tena para Puyo, 950 m, 30 III 1994, *Camevali 3489*, CICY! Along road between Tena and Puyo, 14 km N of Puyo, 1160 m, 22 XII 1979, *Croat 49675*, MO! 2.5 km N of Mera, 1050 m, 27 II 1985, *Dodson 15624*, MO! km 53 Puerto Napo to Puyo, 1000 m, 30 V 1986, *Dodson 16484*, MO! Puyo-Mera km 4.3, 940 m, 10 XII 1986, *Hágsater 9065*, flower in spirit, AMO C-133 Mera, 1100 m, 24 II 1972, *Harling 11027*, CBI Mera on the road Baños to Puyo, 1200 m, 13 IV 1985, *Hirtz 2516*, MO! Between Tena and Puyo, 1200 m, 28 II 1984, *Höijer 687*, SEL! E of Puyo, 4 km, 16 II 1953, *Prescott 425*, NY! Puyo, sector Tarqui, 1100 m, 8 IX 1991, *Tipaz 407*, QCNE! **Tungurahua:** Río Negro on road from Baños to Puyo, 1300 m, 12 III 1963, *Dodson 2364*, SEL! Topo, Rd. Baños to Puyo, 1400 m, 20 XI 1981, *Dodson 11089*, SEL! (illustration, Dodson, 1982) Baños to Puyo, 1200 m, 13 IV 1985, *Hirtz 2516*, MO! **Zamora-Chinchipec:** Nangaritza, Al norte del centro Shuar-Shaimi, 1000–1100 m, 27 X 1991, *Cerón 17256*, QCNE! Ibid. *Cerón 17279*, QCNE! Guayzimi, entre Zamora y Zumba, hort. Ecuagenera, 8 III 2003, *Hágsater 13859*, AMO!

OTHER RECORDS: ECUADOR: Napo: Archidona: carretera Archidona-Baeza hacia Francisco de Orellana, Río Machangara, 1105 m, 2 XI 2017, *Hágsater 15362*. (digital photo series, LCDP voucher) South of Archidona, 600 m, 6 XII 2001, *Hirtz 7952*, digital image, AMO!

DISTRIBUTION AND ECOLOGY: Widespread along the foothills of the eastern Andes of Ecuador, and the parallel ridge east of the Troncal Amazónica E45 at 550–1530 m altitude. In wet high montane forest, and in premontane forest along streams. Flowering apparently throughout the year.

RECOGNITION: *Epidendrum porphyreoncturnum* belongs to the Nocturnum Group which is characterized by the sympodial, caespitose plants, cane-like stems, short, racemose or pluri-racemose inflorescence, without spathe, usually large, star-shaped, successive flowers, with similar sepals and petals. The species is recognized by the epiphytic habit, stems 16–40 cm tall, 3–8 narrowly elliptic, acute leaves of similar size, 6.5–8.0 x 0.8–1.8 cm, dark green above, purple on the underside, ovary 33–43 mm long, sepals 18–21 mm long, lip 12–14 x 12–14 mm, the lateral lobes ovate, with 6 thickened, radiating veins, mid-lobe 8.7–9.0 x 2.0 mm, i.e. 4:1 (length:width). *Epidendrum phlebonoctrum* Hágsater & R.Jiménez has short stems 9–11 cm long, laterally compressed, bright green, 5–6 unequal leaves, 1.5–7.0 x 1.1–2.3 cm, ovary about as long as the sepals 39–46 mm long, deeply 3-lobed lip, with large yellow calli, and the lateral lobes with prominently raised veins radiating from the base and sub-parallel, mid-lobe 23 x 2.5 mm, i.e. 10:1 (length:width). Most other species do not have prominently raised veins on the lateral lobes of the lip, they are flat. In the area you can also find *Epidendrum platynoctrum* Hágsater & R.Jiménez which has stems 6–12 cm long, laterally compressed, leaves 3–5 x 0.9–1.2 cm, narrowly elliptic, acute, dark green above, slightly reddish on the underside, ovary 31 mm long, sepals 15–16 mm long, lip 9.0 x 5.5 mm, shallowly elliptic with lobes proportionately wide, mid-lobe 4 x 2 mm, i.e. 2:1 (length:width). *Epidendrum minus* (Cogn.) Hágsater has stems 10–20 cm long, leaves 5.0–7.5 x 0.8–1.4 cm, green on both sides, ovary 30 mm long, sepals 21–24 x 4.0 mm, it is found at lower altitudes in the upper Amazon basin.

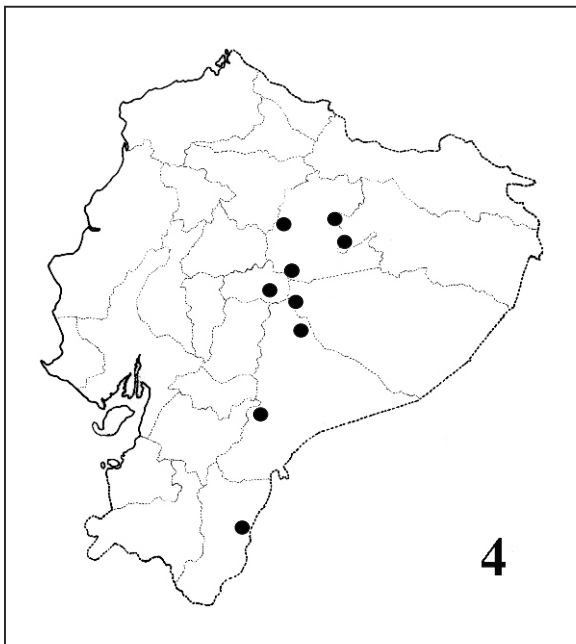
CONSERVATION STATUS: NT. Not threatened. The species is widespread along the foot of the Andes in Ecuador, though many of the sites where the species has been collected have been turned into pastures.

NOTE: The description of *E. minus* given by Sánchez & Hágsater (2010) is the sum of lumping together several species of similar size, including the one here described.

ETYMOLOGY: From the Greek πορφύρεος, purple, and the Latin nocturnum in reference to the leaves which are purple on the underside, which distinguishes this species from similar species of the nocturnum group.

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

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Editors: E. Hágsater & E. Santiago

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Ciudad de México, MÉXICO

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Plate 1697



EPIDENDRUM TAMBILLENSE Hågsater

Plate 1698

EPIDENDRUM TAMBILLENSE Hágsater, sp. nov.

Type: ECUADOR: Morona-Santiago: Gualaquiza; parroquia San Miguel de Cuyes; Desviación de Carretera Cuenca-Loja hacia Jima y Tambillo-San Miguel de Cuyes; Cerro Moriré, pasando el puerto, 3356 m, páramo de alta montaña con arbustos, en talud, 26 abril 2018. *Eric Hágsater, Gerardo. A. Salazar, Francisco Tobar, Itzi Fragoso y Marcia Peñafiel 15892*. Holotype: QCNE! (LCDP voucher).

Similar to *Epidendrum papallactense* Hágsater & Dodson but leaves half as wide 0.9-1.1 cm wide (vs. 1.4-2.0 cm wide), inflorescence erect, branching, peduncles short 1.8 cm long (vs. inflorescence arching, racemose to branching, peduncle elongate, 5-15 cm long), flowers dark wine-red, inside green (vs. blue to black, lip and column green to black), callus ovoid, flat plate (vs. callus "Y" shaped).

Terrestrial, caespitose, sympodial, **herb**, ca. 50 cm tall. **Roots** 3 mm diameter, basal, fleshy. **Stems** ca. 50 x 0.5-0.8 mm, terete, totally covered by sheaths of the leaves; sheaths 2.2-2.7 x 0.5-0.8 cm, tubular, striated, rugose, yellow-brown. **Leaves** 8.5-9.5 x 0.9-1.1 cm, numerous per stem ca. 10 remaining at flowering, sub-parallel to the stem, imbricated, sub-coriaceous narrowly lanceolate, apex narrowly rounded, surface rugose, margin minutely and irregularly crenulate, especially towards the apex, spreading when young, becoming slightly revolute with age. **Spathes** lacking. **Inflorescence** ca. 13 cm long, apical, paniculate, erect, whole surface irregularly and scarcely pustulate; peduncle ca. 1.8 x 0.3 cm, erect, terete; rachis developing through time as successive flowers develop, branches spreading, arching somewhat, to ca. 6 cm long. **Floral bracts** 5-8 mm long, progressively shorter, semi-ovate, apex rounded, embracing, wine-red. **Flowers** successive, 1-2 flowers open at a time per raceme, dark wine-red, inside green, especially the column and anther; fragrance apparently absent. **Ovary** 8 x 2 mm, grooved, minutely and scarcely pustulate. **Sepals** 8.5 x 3.0-4.2 mm, partly spreading, ovate-oblong, apex narrowly rounded, 3-veined, very fleshy, thick, margin entire, somewhat involute, lateral sepals oblique the upper margin straight. **Petals** 8.0 x 1.0 mm, spreading, linear-oblong, straight, fleshy, 1-veined, apex acute. **Lip** 6.4 x 11.0 mm, widely reniform, fleshy, base cordate, apex obtuse, united to the column, embracing the apex of the column without covering it, callus an entire, ovoid, flat plate without ribs. **Column** 5.5 mm long, geniculate with the ovary, straight, apex sub-truncate. **Clinandrium hood** reduced, margin entire. **Rostellum** sub-apical, slit. **Anther** ovoid, 4-celled. **Pollinia** 4, obovoid, laterally compressed; caudicles granulose, about as long as the pollinia. **Lateral lobes of the stigma** short, about 1/3 the length of the stigmatic cavity. **Capsule** not seen.

OTHER SPECIMENS: AZUAY: Cantón Sigsig, parroquia San Miguel de Jima, Comuna Moya Pinzhuma, antes del Puerto Tambillo, 3382 m, 17 X 2018, *Hágsater 16006*, QCNE! (Photo voucher).

OTHER RECORDS: None seen.

DISTRIBUTION AND ECOLOGY: Known presently from two collections, on the mountainous border between Azuay and Morona-Santiago at 3356-3382 m altitude. The area has been recently designated (2018) as an Área Protegida Comunitaria, to be administered by the Cooperativa de Desarrollo de la Comunidad Jima Limitada. It has been protected since 1991. In sub páramo, high Andean bush, cloud forest, flowering in April and October, probably throughout the year.

RECOGNITION: *Epidendrum tambillense* belongs to the Frutex Group recognized by the caespitose habit, usually simple stems, lanceolate leaves, lacking spathes, nutant racemes, widely cordiform to reniform lip. The species is recognized by the moderately thick stems, leaves 8.5-9.5 x 0.9-1.1 cm, the erect, paniculate inflorescence with spreading, slightly arching branches, flowers fleshy, wine-red outside, green inside, especially the column, reniform lip, with an entire callus, ovoid, flat plate. It is very similar florally to *Epidendrum yacuambiense*, but that species has a racemose, arching nutant inflorescence, producing new racemes with time and thus becoming paniculate, but the branches closely arching and nutant. It resembles *Epidendrum papallactense* which is larger in every way, stems 46-70 cm long, somewhat laterally compressed, leaves 7.5-14 x 1.4-2.0 cm, flowers blue to black, lip green to black, column green, lip widely reniform, base truncate, embracing the column, with a "Y" shaped callus. *Epidendrum leptanthum* Hágsater, from the same area, has thin stems to 40 cm tall, narrowly lanceolate leaves 2.6-8.0 x 0.4-0.7 cm, the inflorescence with the peduncle sub-erect, ca. 2.2 cm long, arching-nutant raceme with successive, cretaceous, whitish flowers, delicate in substance, sepals 8.0-8.4 cm long, and the lip deeply and widely cordiform, 6.0 x 6.5 mm, embracing the column, callus "W" shaped. *Epidendrum harlingii* Hágsater & Dodson has sub-spreading leaves 5.4-12.1 x 0.7-1.2 cm, inflorescence is paniculate, erect, spreading, flowers yellowish green to brown-violet, lip somewhat spreading, not embracing the column, widely cordiform, base nearly truncate, callus "Y" shaped.

CONSERVATION STATUS: DD. Data deficient. Known presently from the type collection, on the mountainous border between Azuay and Morona-Santiago, in the Parroquia San Miguel de Cuyes, at 3356 m altitude. The area has been recently designated (2018) as an Área Protegida Comunitaria, to be administered by the Cooperativa de Desarrollo de la Comunidad Jima Limitada. It has been protected since 1991.

ETYMOLOGY: In reference to the Bosque Protector Tambillo, where the species has been collected.

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

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LCDP: E. Hágsater & C. Álvarez

Photo: E. Hágsater

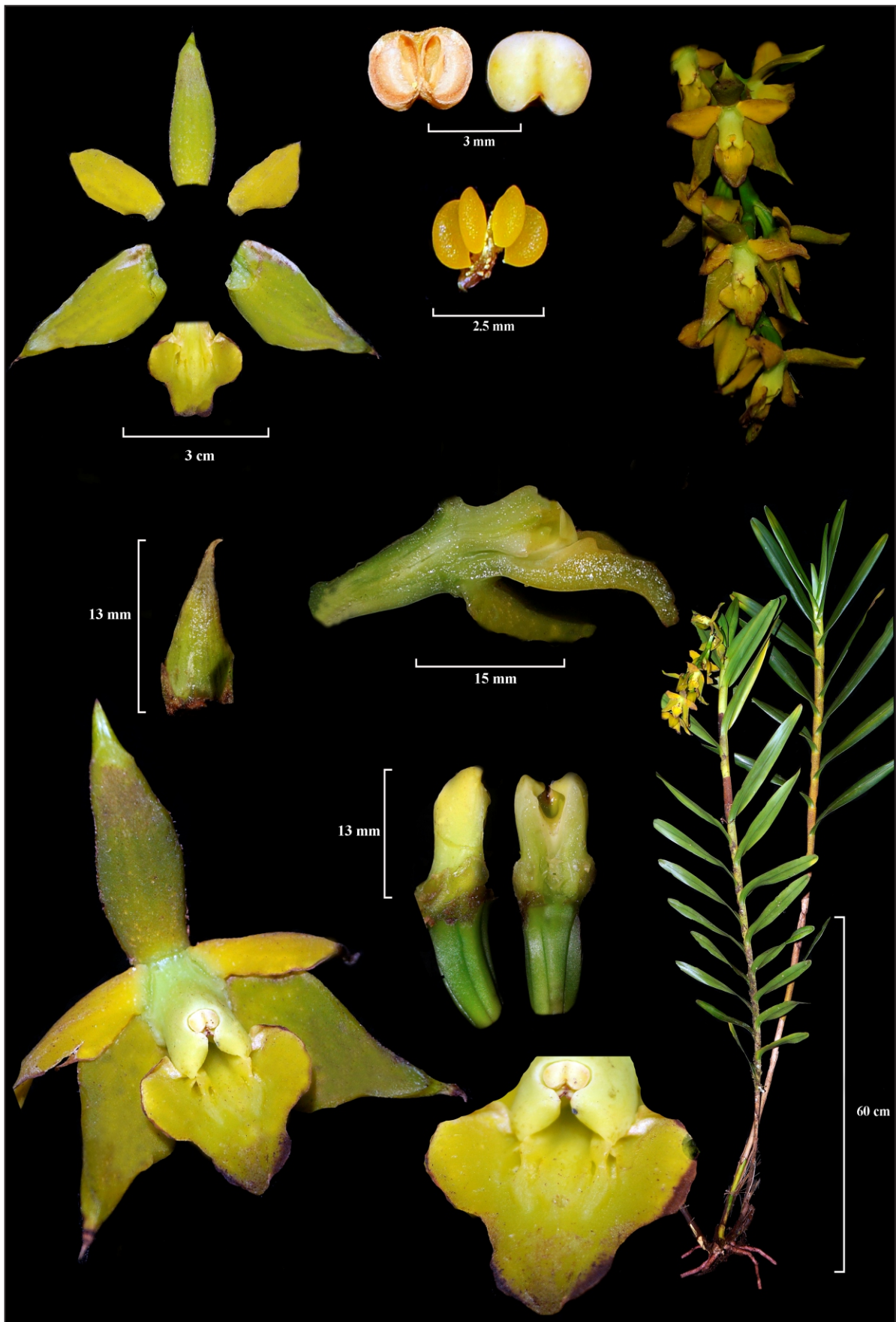
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Herbario AMO

Ciudad de México, MÉXICO

ICONES ORCHIDACEARUM 16(2). 2018.

Plate 1698



EPIDENDRUM TETRACUNCULATUM Hágsater, Edquén, E.Santiago & Náquira

Plate 1699

EPIDENDRUM TETRACUNICULATUM Hágsater, Edquén, E.Santiago et Náquira. *sp. nov.*

Type: PERU: Amazonas: Chachapoyas; Distrito de Granada, comunidad campesina de Diosán, 3450 m, 15 January 2018, **José Dilmer Edquén Oblitas & Teobaldo Náquira Villarroel 339**. Holotype: HURP! (LCDP and photo voucher).

Similar to *Epidendrum aristisepalum* Hágsater & Dodson, but the leaves larger, 9-20 x 2.0-2.4 cm (vs. leaves 6-14.5 x 0.7-1.1 cm), flowers larger, sepals 28-37 mm long (vs. sepals 8-16 mm long), flowers green, with the petals and lip yellow (vs. cream-green to brownish-orange, the column and disc of the lip cream colored) and the lip, bicallose, lateral lobes 6 x 8 mm, hemi-elliptic; mid-lobe 7 x 9 mm, sub-quadrate when spread (vs. lip ecallose, lateral lobes sub-orbicular, margin finely erose; mid-lobe semi-orbicular, rounded, in natural position the sides upturned).

Epiphytic, sympodial, caespitose **herb**, ca. 112-125 x 0.35 cm tall. **Roots** 3.5 mm in diameter, basal, fleshy thick. **Stems** 103-125 x 0.35 cm, simple, cane-like, terete at base, somewhat laterally compressed towards the apex, erect to arching, straight; base covered by non-foliar sheaths 6.5-10 cm long, tubular, becoming scarious and fibrous with time. **Leaves** 14-25, distributed throughout the stem; sub-erect, alternate, articulate, coriaceous, similar in size and shape; sheath 1.4-2.2 x 0.35 cm, tubular, minutely striated greenish yellow with minute red warts; blade 9-20 x 2.0-2.4 cm, lanceolate, apex rounded, green, concolor, margin entire, slightly revolute. **Spathe** lacking. **Inflorescence** 9 cm long, apical, racemose, arching-nutant, sub-densely few-flowered, distichous; peduncle 1.5 cm long, somewhat laterally compressed green, concolor, without bracts; rachis straight, totally hidden by the flowers. **Flowers** 7, resupinate, very fleshy, opening simultaneously, green with the petals and lip yellow; fragrance not registered. **Floral bracts** 13 mm long, nearly as long as the ovary, triangular, acuminate, embracing. **Ovary** 14-15 mm long, terete, thick, striated, green. **Sepals** very fleshy, with a prominent dorsal keel, acuminate, aristate, apical margin crenulate, spreading; dorsal sepal 28 x 10 mm, free, spreading, lanceolate, 3-veined; lateral sepals 37 x 13.5 mm, obliquely united to the base of column, partly spreading, narrowly ovate-lanceolate, oblique, 5-6-veined. **Petals** 22 x 9 mm, spreading, free, narrowly obovate, apex obtuse, 3-veined, margin entire, spreading. **Lip** 16 x 19 mm, united to the column, 3-lobed, base cuneate, margin entire, spreading; bicallose, the calli laterally compressed, parallel; disc with 3 low, fleshy ribs, the mid-rib reaching the apex of the mid-lobe, the lateral ribs thin, with 4 short cuniculi, one on each side of the lateral ribs; lateral lobes 6 x 8 mm, hemi-elliptic; mid-lobe 7 x 9 mm, sub-quadrate when spread, appearing somewhat triangular in natural position because of the upturned corners, apex truncate. **Column** 13 mm long, thick, straight. **Clinandrium-hood** obsolete, margin entire. **Anther** reniform, 4-celled. **Pollinia** 4, obovoid, laterally compressed; caudicles granulose, slightly longer than the pollinia in two pairs; viscidium semi-liquid, turning brown. **Rostrum** apical, slit. **Lateral lobes of the stigma** small, ¼ the length of the stigmatic cavity. **Nectary** shallow, without penetrating behind the perianth, thin, unornamented. **Capsule** not seen.

OTHER SPECIMENS: None seen.

OTHER RECORDS: None seen.

DISTRIBUTION AND ECOLOGY: Known presently only from Peru, Department of Amazonas, near the border with San Martín, Province of Chachapoyas, from the ridge (Andean tepuy) that runs along the eastern side of the Marañón river, near its northern end, near the Cerro de Campanario, epiphytic on *Polylepis* sp., in relict high Andean forests dominated by Queñas or Queñuales (*Polylepis* spp.) surrounded by extensive Pajonal, at 3450 m altitude. Flowering in January.

RECOGNITION: *Epidendrum tetracuniculatum* appears to be somewhat close to the *Aristisepalum* Group which has a caespitose habit, simple stems, sub-coriaceous leaves, an arching-nutant, racemose inflorescence without spathes, a thickened disc on the 3-lobed lip, and especially lateral sepals which are apically prominently aristate-complanate, 15-37 mm long. The species is recognized by the overall larger plants and flowers, wide leaves, 9-20 x 2.0-2.4 cm, sepals 28-37 mm long, flowers green with petals, column and 3-lobed lip yellow, lateral lobes hemi-elliptic, mid-lobe sub-quadrate when spread. *Epidendrum incahuamanii* Collantes & Hágsater has linear-lanceolate leaves 2.5-15 x 0.3-0.9 cm, the lip deeply 3-lobed, lateral lobes dolabriform-sub-elliptic, oblique, the disc thickened into a semi-circular plate, traversed by a prominent mid-rib extending to the apex of the mid-lobe which is 2.5 x 6 mm, semi-circular, apex usually retuse. *Epidendrum birostratum* has wider leaves, 6.5-13 x 1.3-1.5 cm, the lip with dolabriform-rounded lateral lobes, mid-lobe as long as the lateral lobes, cuneate, sub-quadrate, the apex sinuous-truncate, 3-dentate; disc with the thickened plate sub-quadrate-ovate. *Epidendrum aristisepalum* Hágsater & Dodson from southern Ecuador has similar leaves 6-14.5 x 0.7-1.1 cm, but the ecallose lip has a sub-orbicular mid-lobe with the disc thickened into 3 prominent longitudinal ribs. *Epidendrum jalcaense* Chocce, Dalström, Hágsater & J.Arnaiz has wider, shorter leaves, 4.7-6.6 x 1.0-1.5 cm, bright orange flowers with a wide, 4-lobed, ecallose lip, with 5 thickened ribs on the disc.

CONSERVATION STATUS: DD, Data deficient. Presently known from a single collection.

ETYMOLOGY: From the Latin, *tetradium*, four, and *cuniculatus*, underground gallery, as those made by rabbits, in reference to the short galleries or cuniculi at each side of the base of the lateral ribs of the lip.

ACKNOWLEDGMENT: Collection was made under project "Efecto de la fragmentación de habitats de bosque alto andino en diversidad de Orchidaceae y Bromeliaceae del anexo de Diosan, distrito de Granadas Amazonas", RDG N° 137-2018-SERFOR/DGSPFFS, N° AUT-IFL-2018-025.

REFERENCES: Chocce-Peña, M., S. Dalström, E. Hágsater & J. Arnaiz, 2013, *Epidendrum jalcaense*, in E. Hágsater & L. Sánchez S., (eds.), *The Genus Epidendrum*, Part 10, **Icon. Orchid.** 14: t. 1446. Collantes M., B., & E. Hágsater, 2015, *Epidendrum incahuamanii*, in E. Hágsater & L. Sánchez S., (eds.), *The Genus Epidendrum*, Part 11, **Icon. Orchid.** 15: t. 1527. Hágsater, E., & B. Collantes M., 2015, *Epidendrum birostratum*, in E. Hágsater & L. Sánchez S., (eds.), *The Genus Epidendrum*, Part 11, **Icon. Orchid.** 15: t. 1504. Hágsater, E., & C.H. Dodson, 2001, *Epidendrum aristisepalum*, in E. Hágsater & L. Sánchez S., (eds.), *The Genus Epidendrum*, Part 3, **Icon. Orchid.** 4: t. 412. Schweinfurth, C., 1943, *Epidendrum birostratum*, **Bot. Mus. Leaf.** 11: 83, t. 13. 1943.



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EPIDENDRUM YASGOLGAËNSE Hągsater, Edquén, Salas Guerr. & E.Santiago

Plate 1700

EPIDENDRUM YASGOLGAËNSE Hágsater, Edquén, Salas Guerr. et E.Santiago, *sp. nov.*

Type: PERU: Amazonas: Chachapoyas; Distrito Granada, Comunidad campesina Diosán, 3200 m, 15 January 2018, **José Dilmer Edquén Oblitas 358**, Holotype: HURP!

Similar to *Epidendrum ardens* Kraenzl. but the flowers yellow to orange-yellow (vs. red, reddish brown or rarely yellow), sepals spreading, 5.5-7.9 mm long (vs. 10 mm long), and the lip, orbicular-reniform, base deeply cordate, apex mamillate (vs. lip reniform, deeply cordate, apex somewhat emarginate), margin hyaline and prominently erose (vs. minutely papillose).

Epiphytic, monopodial, branching above, erect to pendent (in larger plants) **herb**, 15-30 cm tall or more. **Roots** 1-3 mm in diameter, basal, from the base of primary stem. **Stems** 5.2-16.5 x 0.2-0.4 cm, cane-like, straight, terete at the base, laterally compressed above, originating from the sub-apical internodes of the previous stem, progressively shorter, from a long primary stem. **Leaves** 3-8 on the branches, distributed along the apical 2/3 of the stems, slightly arched; sheaths slightly infundibuliform, striated and rugose, 8.5-12.5 x 2.4-5.0 mm; blade 2.1-4.0 x 0.3-0.6 cm, lanceolate, acute, sub-coriaceous, with a low dorsal keel, margin minutely crenate. **Spathes** lacking. **Inflorescence** 2.0-2.5 cm long, apical, racemose, arching; peduncle ca. 1.0-1.5 cm long. **Floral bracts** 2-6 mm long, much shorter than the ovary, the basal one large, progressively shorter, triangular, acute to acuminate. **Flowers** 4-12, opening in succession, most open at the same time, yellow to orange-yellow; fragrance during the evening, of rotten mushrooms, disagreeable. **Ovary** 6-10 x 1.5 mm, thin, slightly inflated, forming a small vesicle at the apex, behind the perianth, unornamented. **Sepals** spreading, narrowly obovate, 3-veined, margin entire, spreading; dorsal sepal 6.0-7.5 x 2.5 mm, free, apex sub-acute; lateral sepals 5.5-7.5 x 3.0-3.2 mm, obliquely united to the column, slightly concave, apex sub-acute, minutely apiculate. **Petals** 5.0-6.0 x 0.7-0.8 mm, partly spreading, free, linear to oblanceolate, narrowed at the base, somewhat wider at the apex, rounded, 1-veined, margin entire, spreading. **Lip** 3.2-5.0 x 4.5-6.0 mm, united to the column, entire, orbicular-reniform, base deeply cordate, apex mamillate, margin hyaline, erose; bicallose, the calli obovoid, parallel; disc with a mid-rib that reaches the apical sinus of the lip. **Column** 4-6 mm long, slightly arched at the apical 1/3, thin, constricted in the middle to narrow at the base, widened ventrally towards the apex. **Clinandrium-hood** short, margin entire. **Anther** reniform, 4-celled. **Pollinia** 4, obovoid; caudicles in two pairs, short, granulose. **Rostrum** apical, slit. **Lateral lobes of the stigma** prominent, 1/3 the length of the stigmatic cavity. **Nectary** penetrating 1/3 of the ovary, thin, slightly inflated at the perianth, minutely papillose. Capsule 19 x 11 mm, ellipsoid, pedicel 3 x 1.5 mm, very thin, body 15 x 11 mm, apical neck 1 mm long, column persistent.

OTHER SPECIMENS: ECUADOR: Azuay: Cantón: Nabón; Carretera Cuenca-Loja, ca. km 27.5 entre Cumba y desviación hacia Nabón, bosque montano bajo, húmedo, 3322 m, 24 IV 2018, *Hágsater 15866*, QCNE! Cantón: Sigsig; Parroquia Shaglli; Desviación carretera Cuenca-Loja, camino hacia Jima, bosque montano húmedo, 3200 m, 26 IV 2018, *Hágsater 15881*, MEXU! QCNE! **PERU: Amazonas:** Chachapoyas: Distrito. Granada, Comunidad campesina de Diosán, 7 III 2018, 3200 m, *Edquén 715*, HURP! Ibid. *Edquén 716*, HURP! Ibid, *Edquén 717*, HURP!

OTHER RECORDS: PERU: Amazonas: Leymebamba; Cordillera de Yasgolga, Las Piñas Laguna, 3525 m, V 2015, *Salas 108*, LCDP and photo voucher, AMO! **San Martín:** Límite entre los distritos de Molino Pampa y Granada, en el Bosque de Protección Alto Mayo, 3520 m, 25 VII 2016, *Edquén s.n.*, digital photo, AMO!

DISTRIBUTION AND ECOLOGY: Ecuador and Peru, eastern slope of the Cordillera Oriental in northern Peru, on the Cordillera Yasgolga, which is the summit of the Cordillera Oriental in the Departments of Amazonas and San Martín, District of Leymebamba, in the direction of the Valle de los Chilchos, and in southern Ecuador, Azuay. Epiphytic, locally abundant in wet montane forest at 3200 to 3525 m altitude. Flowering April, October to June.

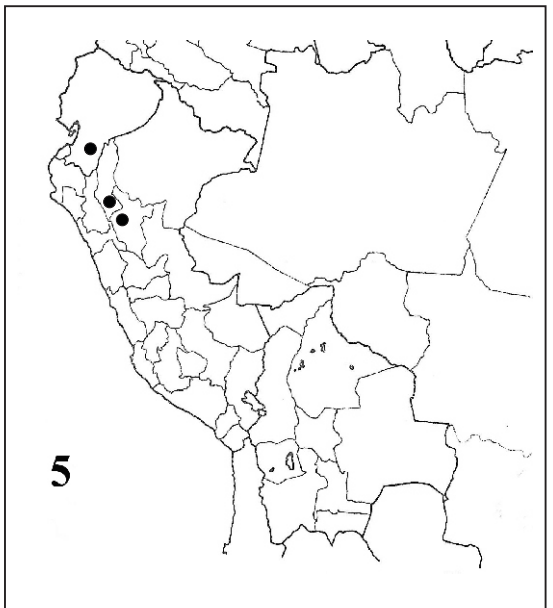
RECOGNITION: *Epidendrum yasgolgaëns* belongs to the Scabrum Group, Soratae Subgroup recognized by the monopodial stem with subapical branching, the infundibuliform leaf-sheaths and the acute leaves. The species is recognized by the yellow to orange-yellow flowers, the spreading sepals and petals, the dorsal sepal 7.5 mm long, the lip entire, orbicular-reniform, base deeply cordate, apex mamillate, margin hyaline, erose. *Epidendrum ardens* Kraenzl. stands out due to the colorful flowers in a compact raceme, in bright tones of scarlet red, orange, or rarely yellow or reddish brown, the somewhat conduplicate, acute leaves, and the partly spreading cupped sepals 10 mm long with the lip reniform, deeply cordate and somewhat emarginate. *Epidendrum soratae* Rchb.f. has greenish yellow flowers, sepals 6-7 mm long, lip 3-lobed, reniform, with a small triangular, emarginate lobe, margin entire.

CONSERVATION STATUS: DD. Data deficient. Locally abundant.

ETYMOLOGY: In reference to the Cordillera Yasgolga, a branch of the Cordillera Oriental of the Andes, in the Department of Amazonas, Peru, Province of Chachapoyas, District of Granada, an important water source for the Province of Chachapoyas during dry seasons, and important for its wet montane tropical forests, cloud forests and *Jalca*.

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

REFERENCES: Santiago, E., & E. Hágsater, 2007, *Epidendrum soratae* in E. Hágsater & L. Sánchez S. (eds.) The Genus *Epidendrum*, Part 6, *Icon. Orchid.* 9: pl. 988. Santiago, E., & E. Hágsater, 2009, *Epidendrum ardens* in E. Hágsater & L. Sánchez S. (eds.) The Genus *Epidendrum*, Part 8, *Icon. Orchid.* 12: pl. 1206.



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