

ICONES ORCHIDACEARUM

Fascicle 12

THE GENUS EPIDENDRUM

Part 8

“Species New & Old in Epidendrum”

Eric Hágsater

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**Herbario
AMO**

ICONES ORCHIDACEARUM

Fascicle 12, plates 1201 to 1300

THE GENUS EPIDENDRUM Part 8

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Reference Map

TROPICAL AMERICA

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



This volume was published on 15 December 2009

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Fascicle 12, plates 1201 to 1300

THE GENUS *EPIDENDRUM* part 8

“Species New* & Old in *Epidendrum*”

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THE GENUS *EPIDENDRUM*
part 8
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Foreword

We herewith present the eighth installment of The Genus *Epidendrum*, 43 new species are described, with a new name proposed in the Appendix 2: New Name, new synonyms and corrections to previous volumes. As in previous issues, lectotypes and neotypes are often proposed, for both the accepted names and synonyms. Publication dates for all previous volumes are given.

Several new species are described from material from the Reichenbach Herbarium in Vienna (W-R) which had been on loan to Herbario AMO for some 20 years, and previous to that a similar length of time to the AMES herbarium at Harvard University. Some of these new species are known only from fragmentary material with little information, but through the years and better knowledge of the genus we are convinced that they represent various different species. In our experience, though many species were originally described from a single collection, once they are recognized, more material is accredited to the species, and its range of distribution better known. The loan from Vienna was returned in August 2009, not without complications due to the CITES convention, although both institutions have long been accredited with the convention authority for many years. Changes in the domicile and a new numbering of institutions were cause of initial confusion on both sides.

A number of new species are again proposed for Peru, thanks to the collaboration of several local botanists and growers who have been actively collecting and sharing photographs through the internet.

Epidendrum corallinum is interesting in that a photograph circulated by Rodrigo Escobar from Medellín some 20 years ago had always posed a question as to what it might be, to which group of *Epidendrum* it may belong, as we only had that photographs with no information regarding the architecture of the plant. Finally, among the *Schmidtchen* specimens at W-R, a flower was finally rehydrated and an illustration prepared, it became apparent that it pertained to the same species, herewith described.

We are also surprised to present three new species from Mesoamerica, all from specimens from the W-R with poor information, and which had remained in the above mentioned W-R loan without identification. After having completed our collaboration in Flora Mesoamericana nearly one year ago, we did not expect to find so many new entities so soon. Though once it is published, we do hope that amateurs and botanists alike will come up with plants they cannot identify precisely. A fourth new species is being published in the current issue of *Lankesteriana*.

We have tried to include in this volume a number of species included in the *Diothonea*, *Andean*, *Difforme*, *Mancum* groups so that together with the species published in previous volumes, readers will have access to most if not all of the species belonging to those groups, which have hitherto been very confusing.

We wish to thank Dr. Jerzy Rzedowski and Dr. Carlyle A. Luer for the translation of the Latin diagnoses.

Eric Hágsater

Mexico City, November 2009.

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APPENDIX 1: Additional information to texts of plates

EPIDENDRUM CHLOROCORYMBOS Schltr.

Plate 1223

OTHER SPECIMENS: MEXICO: San Luis Potosí: Tamazunchale, 250 m, 25 VI 1977, *Croat 39267*, MO! Tamazunchale, 2 VII 1950, *Dressler 1177*, MO! Matlapa, ca. 300 ft., 22 IX 1954, *Johnson 1153-6*, SEL! Tamazunchale, 1000 ft., VIII 1981, *Hágsater 6088*, AMO! Ibid. cult. 23 VIII 1982, AMO! Tamazunchale, 1000 ft., 30 III 1980, *Hágsater 6090*, AMO! Ibid. cult. 23 VIII 1982, AMO! Ibid. cult. 10 VIII 1990, AMO! Ibid. 3 VII 1991, AMO! Ibid. cult. 29 VII 1993, AMO! Tamazunchale, 2 VII 1940, *Hitchcock 6910*, ILL! MO! SEL! UC! US! Ibid. 6911, US! Tamazunchale, 175 m, 1 VII 1937, *Lundell 7114*, MEXU! Tamasopo, 400 m, 7 VIII 1936, *Nagel 5086*, AMES! Tamán, 400 m, 28 VI 1959, *Rzedowski 10990*, ENCB! F! **Veracruz:** Sierra Manuel Díaz, 200 m, 27 IV 1985, *Acosta 526*, XAL! Coatepec, 1950 m, 8 VII 1987, *Aguirre-Olavarrieta 1282*, AMO x3! Ibid. cult. 26 VI 1990, *1286*, AMO! Ibid. cult. 24 VII 1990, AMO x2! Ibid. cult. 5 IX 1990, AMO! Ibid. cult. 18 VI 1991, AMO! Ibid. cult. 24 VI 1991, AMO! 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Punta Palma, 0-1 m, 22 IV 1940, 39803, F! **Jutiapa:** San José Acatempa, ca. 1200 m, 21 XII 1938, *Standley 60605*, F! **Quetzaltenango:** San Juan Patzulín, 1300-1500 m, 6 I 1940, *Steyermark 33668*, F! **Quiche:** Sacabajá, 1300-1500 m, 1 III 1892, *Heyde 3507*, AMES x2! BR! US! **Sacatepéquez:** Alotenango, ca. 1500 m, VIII 1965, *Roe 822*, WIS! **Santa Rosa:** Embaulada, 5500 ft., IX 1889, *Heyde 4808*, BR! **HONDURAS:** El Cayo, Valentin, 1 VI 1936, *Lundell 6424*, AMES! MICH x2! Taulabe, 650 m, 6 VI 1985, *Télez 8708*, XAL! **Atlántida:** Danto, 25 m, 10 VI 1985, *Télez 8859*, XAL! **Colón:** Clauro, IV 1923, *Spinder s.n.*, AMES x3! **Comayagua:** Jardines, 21 VI 1970, *Barkley 40880*, AMES! San Luis, 4400 ft., 16 IX 1931, *Edwards 49*, AMES! Lake Yojoa, 620 m, 13 VII 1971, *Harmon 6396*, ENCB! **Cortes:** Lake Yojoa, 10 VII 1978, *Ackerman 1221*, SEL! Santa Cruz de Yojoa, 2000 ft., 23 VIII 1933, *Edwards 508*, AMES! Lake Yojoa, 14 VI 1976, *Mathews s.n.*, SEL! Lake Yojoa, 2100 ft., 29 VII 1934, *Yuncker 4837*, AMES! MICH! Lake Yojoa, 2100 ft., 29 VII 1934, 4841, MICH! **Santa Bárbara:** Lago Yojoa, 750 m, 29 VI 1970, *Davidse 2217*, NY! **Yoro:** Progreso, 19 III 1923, *Ames s.n.*, AMES! **NICARAGUA:** Mosquito Coast, 1 I 1924, *Schramm s.n.*, US! **Boaco:** Cerro Mombachito, 1059 m, 24 I 1980, *Araquistain 1001*, SEL! Cerro Mombachito, 900-1000 m, 10 V 1980, *Moreno 330*, SEL! Cerro Mombachito, 900-1000 m, 3 x 1979, *Douglas 14628*, SEL! **Chontales:** Rio Mico, 1000 ft., *Heller 10475*, SEL! **Estelí:** Cerro Quiabú, 1500-1600 m, 1 X 1979, *Grijalva 670*, SEL! El Chayote, 1200-1300 m, 1 IV 1983, *Moreno 21219*, SEL! El Tisey, 1400 m, 22 V 1983, *Moreno 21346*, SEL! Cerro Quiabú, 1500 m, 24 XI 1979, *Douglas 16309*, SEL! **Jinotega:** Lago de Apanas, 1000 m, 7 VIII 1977, *Croat 42984*, SEL! Cerro Diablo, 1110 m, *Heller 8224*, SEL x2! Macizos de Peñas Blancas, 1500-1650 m, 14 I 1979, *Douglas*

11738, SEL! Estelí, 1380-1400 m, 16 XI 1979, *Douglas 15765*, SEL! **Madriz**: Cerro Quisuca, 1250 m, 13 XII 1979, *Douglas 16444*, SEL! **Managua**: La Nubes, 800-900 m, 28 VI 1923, *Maxon 7535*, AMES! US! **Matagalpa**: Santa María de Otzumba, 1400 m, 26 VIII 1982, *Martínez 1718*, MEXU! **Zelaya**: 200-500 m, 16 III 1971, *Atwood 4874*, AMES! SEL! El Hormiguero, 6 V 1970, *Neill 1923*, SEL! San José del Hormiguero, ca. 120-150 m, 13 III 1978, *Douglas 7124*, SEL! Bonanza, 160-360 m, 23 IV 1978, *Douglas 7991*, SEL! Bonanza, ca. 140 m, 24 IV 1978, *Douglas 8030*, SEL! Limbaika, 8-10 m, 26 IV 1978, *Douglas 8287*, MEXU! SEL! Boca La Tigra, Río Rama, 15 m, 17 V 1978, *Douglas 8929*, SEL x2! **COSTA RICA**: San Mateo, 27 I 1892, *Biolley 7087*, BR! 1 II 1892, CR! Ibid. 27 V 1892, BR! US! Puerto Jiménez de Osa, 3 m, 8 IV 1930, *Brenes 12233*, CR x2! Puerto Jiménez, 8 IV 1930, *Cufodontes 86*, AMES! W-R! Lago Dabagri, 4 XI 1984, *Gómez 23184*, MO! 14 VII 1978, *Hágsater 5595*, AMO! Palmares, Valle del General, prens. 13 VI 1986, *Hágsater 8265*, AMO x4 AMES! AMO! USJ! (Illustration voucher) Ibid. 23 VI 1986, AMO! Las Concavas, 20 X 1925, *Lankester 1083*, AMES! Mojanca de Nicoya, 200 m, 29 I 1942, *León 962*, CR! 1 III 1893, *Pittier 6802*, US! La Carpintera, 8 X 1968, *Rodríguez 1185*, USJ! Santa Rosa du Copey, 1800 m, 1 IV 1898, *Tonduz 12213*, G! Arenal, 600 m, 21 VIII 1923, *Valerio 93*, US! **Alajuela**: San Pedro de San Ramon, 07 II 1933, *Brenes 17019*, NY! **Cartago**: Río Reventazon, 920-1000 m, 15 X 1929, *Dodge 7911*, AMES! Taos, ca. 1000 m, 10 XI 1984, *Dressler 151*, USJ! Río Turrialba, 500 m, 1 V 1894, *Smith 4956*, US! Atirro, 2000 ft., 1 III 1896, 6800, AMES! BR! US! Pejivalle, ca. 900 m, 7 II 1926, *Standley 47301*, US! Tuis, 750-900 m, 15 XI 1975, *Utley 10037*, CR! SEL! **Guanacaste**: Lago del Arenal, 10 III 1983, *Hágsater 7087*, AMO! Ibid. cult. 24 III 1983, AMO x4! Tilarán, 500-650 m, 10 I 1926, *Standley 44174*, AMES! **Heredia**: La Virgen, Río Sarapiquí, 25 III 1953, *Moore Jr 6596*, AMES! Parque Nac. Braulio Carrillo, 2400 m, 7 VII 1990, *Rivera 403*, USJ! Cerro de las Caricias, 2000-2400 m, 11 III 1926, *Standley 52397*, US! **Limón**: Reserva Biol. Hitoy Cerere Valle de la Estrella, 700 m, 18 IV 1991, *Carballo 381*, USJ! Guápiles, 300-500 m, 12 III 1924, *Standley 37529*, AMES! US! **San José**: El Plomo, 500-700 m, 20 II 1999, *Morales 6970*, INB x2! Aserri, 1600-1900 m, 12 II 1924, *Standley 34094*, US! Laguna de La Chonta, 2000-2100 m, 18 XII 1925, *Standley 42359*, AMES! US! Santa María de Dota, 1500-1800 m, 3 I 1926, *Standley 43190*, US! San Isidro, Palmares, ca. 800 m, 8 III 1988, *Hágsater 8266*, AMO x2! **PANAMA**: Without locality, II 1905, *Cowell 422*, NY! Barro Colorado, 30 IV 1970, *Croat 10106*, UC! MEXU! MO! Barro Colorado, 23 V 1970, *10368*, MO! Barro Colorado, 19 VI 1970, *10937*, MO! Frijoles, *Maxon 4723*, US x2! Savana, 15 I 1911, *Pittier 2409*, US! Frijoles, 0 m, 1 IV 1923, *Powell 3221*, AMES! San Juan, 0 m, 1 III 1923, *Powell 3257*, AMES! Paja, 0 m, 1 IV 1923, *Powell 3292*, AMES! Ibid. 3293, AMES! Ibid. 3294, AMES! **Chiriqui**: Cerro Hornito, 1700 m, 14 XII 1976, *Luer 1321*, SEL! Remedios, 15 m, 25 II 1974, *Nee 10109*, MO! US! **Panama**: Río Corso, ca. 500 m, 9 VI 1967, *Duke 11933*, MO! Serranía de Majé, 50-200 m, 27 IV 1982, *Jacobs 1990*, MO! SEL! Balboa, 4000-5000 ft, *Powell 259*, AMES! **Darien**: Manene, 28 IV 1968, *Kirkbride, 1406*, MO! NY! **COLOMBIA**: Without locality, 1 X 1992, *Hágsater 11641*, AMO x3! **Antioquia**: Ituango, 1740 m, 11 V 1988, *Zarucchi 6445*, MO! SEL! **Norte de Santander**: Los Estoraques, La Playa, 25 IV 1974, *Balick 16*, COL! **Chocó**: Urabá, cerros del Cuchillo, 20-500 m, 19 III 1988, *Cárdenas 1379*, JAUM!

OTHER RECORDS: COLOMBIA: Chocó: Bahía Solano, Guillermo Mísis 41, illustration, (Mísis, 2005).

EPIDENDRUM COLOMBIANUM A.D.Hawkes

Plate 1225

OTHER SPECIMENS: COLOMBIA: Putumayo: carr. a Puerto Asis, 1350 m, 3 V 1994, *Fernández 11452*, COL! MO! Mocoa-Pasto, ca. 2200 m, 27 VI 1971, *Ortiz Valdivieso 497*, HPUJ! Mocoa, 2200 m, VI 1971, *Uribe 6571*, COL! **ECUADOR**: Without locality, *Hirtz 2634*, AMO! **Azuay**: Cola de San Pablo, 1700 m, 20 VII 1985, *Dodson 15933*, MO! Gualaceo-General Plaza, 3000-3150 m, 10 VI 1979, *Løjtntant 14441*, AAU! **Loja**: Vilcabamba, 2450 m, 29 VI 2004, *Croat 92638*, AMO! Loja-Zamora, 2600-2800 m, 13 IV 1974, *Harling 13519*, AMES! GB! Loja-Zamora, 2700 m, 14 II 1985, *Harling 22069*, GB! Yangana, 2500 m, 3 IV 1983, *Harling 23591*, AMES! QCA! Yangana-Valladolid, 2300 m, 23 IV 1997, *Klitgaard 499*, LOJA! QCNE! **Morona Santiago**: Plan de Milagro, 2060 m, 24 XI 1988, *Hágsater 10140*, AMO! San Miguel de Cuyes, 2500 m, VII 1997, *Suin 253*, AMO! Bosque Tambillo, 2800 m, 6 IV 2001, *Suin 959*, AMO! QCNE! **Napo**: Quito-Tena, 2150 m, 17 VI 1983, *Dodson 14038*, SEL! Ibid. 2120-2220 m, 8 III 1984, *Dodson 14867*, MO! QCNE! Baeza-Tena, 2150 m, 30 VI 1985, *Dodson 15914*, MO! QCA! QCNE! Cosanga, 2000 m, 6 II 1980, *Harling 16301*, AMES! GB! **Zamora-Chinchi**: Limón, 2300 m, 4 X 1981, *Besse 767*, SEL! **PERU**: Without locality, *Collantes s.n.*, USM! **Amazonas**: Luya, 2000-2500 m, 20 VI 1991, *Díaz 4427*, MO! US! USM! **Cajamarca**: Cutervo, 2700 m, 17 VI 1997, *Leiva 2057*, AMO! F! **Cusco**: Pillahuata, 2700-2900 m, 24 III 1992, *Cano 5293*, USM! Aguas Calientes, 3000 m, 14 VI 1982, *Peyton 578*, MO! Ibid. 2040 m, 8 I 1946, *Vargas 5551*, AMES! CUZ! **Huánuco**: Carpish, 2650-2700 m, 3 II 1984, *Gentry 44846*, MO! NY! US! Huánuco, 8500 ft, 16 XI 1979, *Jones 9179*, ENCB! F! MO! NY! US! Tingo María, 700 m, 21 III 1982, *King 343*, F! Huánuco-Tingo María, 2230 m, 2 II 1985, *Todzia 2730*, MO! **Junín**: Satipo, 2150-2250 m, 28 X 1984, *Fernández 662*, USM! **Pasco**: Oxapampa, 2700-2800 m, 7 X 1982, *Foster 9057*, NY! SEL! USM! Ibid. 2300-2500 m, 9 X 1982, *Foster 9086*, MO! USM! Oxapampa-Villa Rica, 2450 m, 2 III 1982, *Gentry 35979*, MO! SEL! USM! Oxapampa, 2650-2750 m, 15 IX 1985, *La Torre 1260*, USM! **San Martín**: Mariscal, 2650-2750 m, 16 VIII 1986, *Young 4018*, F! USM! **BOLIVIA: La Paz**: Unduavi, 10000 ft, 1 VII 1950, *Brooke 6585*, F! Ibid. 2800 m, 1 XI 1910, *Buchtien 2622*, US! Ibid. 3000 m, 1 II 1946, *Cárdenas 3623*, AMES! Ibid. 2700 m, 29 I 1980, *Luer 5001*, SEL! Puente Villa to Unduavi, 8400 ft, 24 II 1975, *Plowman 5188*, AMES! U! NE Chuspipata, 3000 m, 24 III 1982, *Solomon 7298*, MO! SEL! Nor Yungas, 2800 m, 11 XI 1987, *Solomon 17332*, MO! (only the specimen on the upper part of the sheet) Ibid. 2900 m, 21 I 1988, *Solomon 17600*, MO! **Cochabamba**: Incachaca, 2700 m, 1 IV 1938, *Cárdenas 649*, AMES! Villa Tunaria, 2000 m, 31 XII 1982, *Fernández s.n.*, MO! Ibid. *Fernández 8004*, MO! NY! Río Lope Mendoza, 2400-2600 m, III 1981, *Luer 5815*, SEL! Cochabamba, 3100 m, 15 XII 1966, *Steinbach 626*, AMES! NY! S! U! US! WIS! Chapare, 2000 m, 16 I 1980, *Vázquez 246*, SEL x2!

OTHER RECORDS: ECUADOR: Loja: Yangana, 7400 ft, 10 IX 1999, *Hágsater 12326*, spirit and digital photo, AMO! **Zamora-Chinchi**: Yangana, 2491 m, *Hágsater 14072*, spirit and digital photo, AMO! Macas-Guamote, 2200 m, 1 III 1999, *Hirtz 7238*, slide color, AMO! **PERU: Huánuco**: Carpish, 2650 m, 20 III 1995, *Bennett Jr. 7087*, USM! **Junín**: Satipo-Huancayo, 2600 m, 15 XII 1988, *Vargas ex Bennett Jr. 3914*, xerox of illustration, AMO! **BOLIVIA: La Paz**: Chuspipata, *Gerlach 215*, digital photo, AMO!

EPIDENDRUM FILAMENTOSUM Kraenzl.

Plate 1242

OTHER SPECIMENS: VENEZUELA: Mérida: La Carbonera, 1850 m, 7 II 1963, *Breteler 3295*, NY! U! US! Azulita, 1600 m, 24 XI 1949, *Renz 6203*, RENZ! **Táchira**: Rubio, 1350 m, 11 X 1953, *Renz 8021*, RENZ x2! San Cristóbal, 1300 m, 2 XI 1959, *Renz 9725*, RENZ! Ibid. 1350 m, 29 XI 1959, *Renz 9742*, RENZ! **COLOMBIA: Cundinamarca**: Quetame, "Monte Redondo", XI 1975, *Ortiz Valdivieso 4325*, HPUJ! **Meta**: Río Yamanito, 600 m, 15 VIII 1939, *Renz 3936*, RENZ! **Valle del Cauca**: Cali, 1400-1800 m, *Lehmann 8340*, K-L! **ECUADOR: Carchí**: Chical, 1200 m, XI 1985, *Luther 946*, SEL! Maldonado, 1600 m, 13 IV 1977, *Madison 3905*, SEL! Ibid. 1650 m, 24 V 1978, *Madison 4413*, SEL! **Morona-Santiago**: San Juan Bosco, 1000 m, *Hirtz 2780*, MO! QCNE! Chiguinda, 1500-1600 m, *Medina sub Hágsater 13885*, AMO! (photo, spirit AMO!) Plan de Milagro, 27 V 2000, *Whitten 1807*, AMO! **Tungurahua**: Mt. Tungurahua, 2000 m, V 1984, *Hirtz 1773*,

MO! Photo, AMO! **Zamora-Chichipe**: River Zamora, 1100 m, 26 VII 1960, *Dodson 153*, SEL! Río Nangaritza, ca. 900 m, 14 II 1994, *van der Werff 12993*, QCNE! **PERU: Huánuco**: Lima-Tingo María road, 1400 m, 6 VI 1981, *Young 862*, MO! **Pasco**: Chequivato, 1200 m, 9 IV 1984, *Smith 6854*, MO! **Junin**: San Ramón-Tarma, 25 V 1984, *Fernández 334*, USM!

OTHER RECORDS: COLOMBIA: Without locality data, *Escobar 697*, note (Escobar, 1970). **Meta**: Cubarral, 800, m VII 1990, Colomborquídeas, *Escobar 5086*, photo (Escobar 1994), (spirit, Illustration voucher, AMO!) **VENEZUELA: Barinas**: Calderas, 1500 m, photo, *Baumbach*, published in *Die Orchidee*, 2002. **Mérida**: Los chorros de Milla, *Aristeguieta 5251*, note (Foldats 1970). **ECUADOR: Tungurahua**: Mt. Tungurahua, 2000 m, V 1984, *Hirtz 1773*, published illustration (Dodson, 2001).

EPIDENDRUM LEUCOCHILUM Link, Klotzsch & Otto

Plate 1260

OTHER SPECIMENS: COLOMBIA: *Hartweg*, K-L! *Moritz*, G! K-L! L! W-R! **Antioquia**: *Escobar 4022*, AMO! *Guarín 2695*, AMES! **Cauca**: *Guraín 104*, COL! *Hágsater 7455*, AMO! *López 94*, MO! *Luer 8458*, SEL! *Sneidern 375*, S! **Cesar**: *Plowman 3641*, AMES! F! SEL! **Cundinamarca**: *Ortiz 147*, *Ortiz 4373*, HPUJ! *Renz 8395*, RENZ! *Schiefer 1015*, AMES! COL! *Schultze 127*, US! *Schneider 131*, COL! *Uribe 3388-A*, COL! *Uribe 5447*, COL! NY! **Huila**: *Renz 3099*, RENZ! *Renz 3099A*, RENZ! **Nariño**: *Fosberg 21135*, US! *Luer 4523*, SEL! **Tolima**: *Sneidern 3044*, S! **Norte de Santander**: *Wallis*, W-R! **Valle del Cauca**: *Dryander 2030*, US! **ECUADOR: Carchi**: *Hágsater 11295*, AMO! *Hágsater 11321*, AMO! *Luther 931*, SEL! *Molau 2599*, GB! **Chimborazo**: *Wiggins 11102*, AMES! CAS! **Cotopaxi**: *Dodson 16262*, MO! SEL! *Hágsater 7578*, AMO! *Hágsater 7579*, AMO! *Hágsater 7707*, AMO! *Holm-Nielsen 3112*, AAU! **Pichincha**: *Besse 1334*, SEL! *Dodson 5378*, QCA! SEL! *Dodson 9265*, SEL! *Dodson 16196*, AAU! MO! *Hágsater 6075*, AMO! *Hágsater 7562*, AMO! *Hágsater 7563*, AMO! *Hágsater 7565*, AMO! (Illustration, AMO!) *Hágsater 7568*, AMO! *Hágsater 7569*, AMO! *Holm-Nielsen 18456*, AAU! *Holm-Nielsen 18457*, AAU! *Jameson*, W-R! *Jaramillo 31*, QCA! *Lehmann 8180*, K-L! *Luer 4414*, SEL! *Maas 2884*, U! *Sauleda 3891*, AMES! SEL! *Synge 42*, K-L! *Thurston 3197*, AMO! **VENEZUELA: Kalbreyer 369**, W-R! **Aragua**: *Moritz 1066*, K-L! W-R! **Caracas**: *Lansberg*, W-R! **Lara**: *Renz 9806*, RENZ! *Wagener 29*, W-R! **Mérida**: *Bernardi 458*, NY! *Ferrari 871*, NY! *Fyuck 1179*, BR! W-R! *Jahn 979*, AMES! G! US! *Renz 8107*, RENZ! **Táchira**: *Renz 6871*, RENZ! **Trujillo**: *Aymard 2401*, NY! *Renz 4598*, RENZ! *4637*, *Renz!* *5150*, RENZ! **Zuliá**: *Steyermark 105550*, AMES!

EPIDENDRUM PICHINCHAE Schltr.

Plate 1274

OTHER SPECIMENS: ECUADOR: Without locality data, *Sodiño s.n.*, QPLS x6! **Bolivar**: Hda. Talahua, 2500 m, III 1939, *Pendland 649*, AMES x2! QCNE! **Carchi**: Tulcán-Tufiño-Maldonado, 3100 m, 2 VII 2000, *Alvarez 2630*, NY! QCNE! road Tulcán-Santa Bárbara, 3500 m, 21 VI 1983, *Bohlin 593*, GB! road to Maldonado, 2300 m, 15 VI 1979, *Fallen 775*, MO! SEL! Tulcán-Maldonado, 3165 m, 29 IV 1993, *Hágsater 11260*, AMO! Tulcán-Maldonado, 2900-3100 m, 2 III 1974, *Harling 12417*, AMES! GB! Playón de San Francisco-El Carmelo, ca. 3000 m, 14 IV 1979, *Løjtnant 12529*, AAU! GB! Maldonado, ca. 1700-2000 m, 21 II 1978, *Luer 2653*, SEL! Tufiño-Maldonado, 3300-3400 m, *Molau 2583*, GB! QCA! **Cotopaxi**: Latacunga-Pujili-La Maná, 3100-3400 m, 10 VII 2000, *Alvarez 2644*, MO! NY! QCNE! SEL! Pílaló, 2640-2800 m, 20 III 1992, *Croat 73199*, MEXU! MO! QCNE! SEL! 95-100 Quevedo to Latacunga, 2800-3200 m, 14 II 1963, *Dodson 2251*, AAU! F! MO! Macuchi, ca. 2000 m, 17 III 1974, *Dodson 5504*, QCA! SEL! Pílaló, 3110 m, 9 V 1981, *Dodson 10676*, SEL! Pílaló, 2800 m, 18 II 1985, *Dodson 15577*, MO! QCA! Quevedo-Latacunga, 2900 m, 5 V 1985, *Dodson 15841*, MO! Latacunga-Quevedo, 2850 m, 27 II 1986, *Embree 59*, QCA! QCNE! MO! Pílaló, 2500-3000 m, 3 V 1959, *Harling 4921*, S! *Ibid.* ca. 2800 m, 3 V 1968, *Harling 9015*, AMES! GB! *Ibid.* ca. 2900 m, *Harling 9025*, AMES! GB! *Ibid.* 2800 m, *Harling 9027*, GB! Latacunga, San Juan, 3000 m, X 1983, *Hirtz 1330*, AMO x2! *Facundo Vela*, 3000 m, III 1984, *Hirtz 1565*, AMO x2! Pílaló, 2200-2350 m, 8 IV 1973, *Holm-Nielsen 3200*, AAU! AMES! K-L! MO! S! SEL! Pílaló, ca. 2850 m, 8 IV 1973, *Holm Nielsen 3233*, AAU! **Imbabura**: Otavalo-Selva Alegre, 2400-2700 m, 5 II 1986, *Dodson 16317*, MO! QCNE! SEL! Cerro Muenala, above Río Asabi, 8500 ft, 12 III 1943, *Drew E-57*, AMES! Las Monjas, 2400 m, 23 IV 1980, *Holm-Nielsen 23121*, AAU! Cayambe peak, 3250 ft, 21 VII 1944, *Wiggins 10438*, AMES! CAS! MO! UC! US! **Pichincha**: San Juan-Chiriboga, ca. 3200 m, 29 IV 1955, *Asplund 16109*, AMES! G! K-L! NY! US! Z! Allurquin-Aloag, 2500 m, I 1979, *Besse 1338*, SEL! Aloag, 2400-2800 m, 14 III 1963, *Dodson 2376*, QCA! SEL! Chiriboga, 1600 m, 25 VII 1967, *Dodson 3813*, SEL! Chiriboga, 2400 m, 15 V 1981, *Dodson 10886*, MO! QCA! SEL! US! Quito-Sto. Domingo, 3150 m, 1 II 1985, *Dodson 15515*, MOx2! Chillogallo, 2980 m, 3 V 1985, *Dodson 15823*, MO! Nono, ca. 2700 m, 6 III 1972, *Harling 11134*, GB! (Illustration voucher) San Juan, 2800 m, 27 I 1982, *Harling 19907*, GB! Cerro Corazón, 3200-3300 m, 13 V 1979, *Holm-Nielsen 18048*, AAU! Mt. Pichincha, *Jameson s.n.*, K-L! Calacalí, 3000 m, 26 II 1880, *Lehmann 170*, G x2! W-R! Quito-Santo Domingo, ca. 3000 m, 13 III 1976, *Luer 841*, SEL! Calacalí, ca. 2500 m, 15 II 1978, *Luer 2584*, SEL! **COLOMBIA: Nariño**: Túquerres-Samaniego, 1800-3200 m, *Mora 360*, COL x2!

OTHER RECORDS: Without locality data, *Jameson s.n.*, illustration, W-R 38709! **ECUADOR: Pichincha**: Without locality data, *Hágsater 9001*, spirit and slide, AMO!

EPIDENDRUM RENICONFUSUM Hágsater & E.Santiago

Plate 1282

OTHER SPECIMENS: ECUADOR: Without locality, *Sodiño s.n.*, QPLS x2! **Imbabura**: Apuela, ca. 2400 m, 5 XII 1976, *Davis 324*, AMES! S! Otavalo-Apuela, 1300 m, 8 II 1979, *Luer 3922*, SEL! Intag Valley, 2200-2400 m, 22 I 1988, *Molau 2659*, AAU! GB! QCA! QCNE! **Pichincha**: Chiriboga, ca. 2900 m, 26 IV 1955, *Asplund 16050*, S! Quito-Sto. Domingo, 12 I 1977, *Boeke 759*, NY! QCA! SEL! Chiriboga, 2400-2800 m, *Dodson 2371*, SEL! Quito-Santo Domingo, 2900 m, 5 III 1974, *Dodson 5409*, SEL! Tandapi, 2200 m, 2 II 1984, *Dodson 15560*, MO! QCNE! La Iberia, Volcán Pululahua, 2800 m, 4 IV 1985, *Dodson 15756*, AMES! MO! NY! QCA! QCNE! Calacalí-Hacienda El Cisne, 31 III 1979, *Jaramillo 909*, AAU! QCA! QCNE x2! Nono, ca. 2600 m, 6 III 1972, *Harling 11133*, GB! Quito-Santo Domingo, 2300 m, 5 IV 1942, *Haught 3225*, US! Quito-Santo Domingo, 2800-2950 m, 20 III 1979, *Løjtnant 11242*, AAU! GB! Aloag, ca. 3150 m, 29 V 1979, *Løjtnant 13951*, AAU! GB! QCA! Calacalí, ca. 2500 m, 15 II 1978, *Luer 2586*, SEL! Chiriboga, ca. 2500 m, 28 I 1977, *Eliasson 14901*, GB! Aloag, ca. 3000 m, 7 II 1985, *Molau 1166*, GB! Calacalí, 2600-2700 m, 15 II 1988, *Molau 3060*, GB! Aloag, 2000 m, 11 II 1967, *Sparre 14330*, S! Guarumos, 2400 m, 16 III 2000, *Suin 560*, QCNE! San Jose de Nieblin, 2450 m, 1 V 1985, *Stein 2659*, MO! QCNE! Nanegalito, 1700 m, 26 VI 1996, *Webster 31924*, QCNE! Quito-Sto. Domingo, 1800-2200 m, 16 VIII 1986, *Zak 1137*, MO! **Chimborazo**: Pallatanga, IX 1891, *Sodiño 44b*, QPLS! **Cotopaxi**: San Francisco, 1990-2200 m, VI 1997, *Nowicki 1464*, QCA!

OTHER SPECIMENS: COLOMBIA: Without locality, *Triana s.n.*, W-R 49950! **Antioquia:** Without locality, *Schmidtchen s.n.*, W-R 14063! Cerro del Padre Amaya, 2600 m, II 1984, *Agudelo 55*, MO! NY! Alto del Gallinazo, ca. 2500 m, 17 III 1986, *Albert de Escobar 6472*, COL! Caldas, 2850 m, 31 I 1987, *Albert de Escobar 7367*, MO! Jardín, 2850 m, 31 I 1987, *Albert de Escobar 7380*, MO! Caldas, 2500 m, VI 1988, *Albert de Escobar 8426*, QCA! Medellín, 3150 m, 15 IX 1984, *Dodson 15292*, MO! Vereda San Félix, 3000 m, 17 X 1986, *Echeverri 14*, MO! Cerro San Félix, 3000-3100 m, 22 V 1991, *Fonnegra 3725*, MO! Ibid. *Fonnegra 3742*, MO! vereda San Felix, 2400 m, VIII 1980, *Galeño 229*, COL! San José de Cuerquía, 31 VII 1958, *Garganta 2165*, US! Entre Ríos y San Pedro, 2500-2800 m, 28 IX 1884, *Lehmann 159*, G x2! Ibid. *Lehmann 8183*, K x2! El Carmen, 2520 m, 29 I 1978, *Luer 2880*, SEL! Heliconia, ca. 2500 m, XII 1971, *Ortíz Valdivieso 4186*, HPUJ! Medellín, *Ospina 16*, JAUM! Cerro del Padre Amaya, 4 VIII 1974, *Palacio 52*, COL! Medellín, *Roelz s.n.*, W-R 49947! Medellín-Santa Fé de Antioquia, 2700 m, 18 III 1987, *Zarucchi 4791*, MO! SEL! Sonsón-Nariño, 2750 m, 1 IV 1987, *Zarucchi 5206*, NY! MO! SEL! Nariño, 2780 m, 1 IV 1987, *Zarucchi 5245*, MO! NY! SEL! Vereda San Félix, 3050 m, 7 V 1988, *Zarucchi 6316*, MO! Ibid. 3020 m, 23 V 1988, *Zarucchi 6856*, MO! SEL! Ibid. 2920 m, 25 X 1988, *Zarucchi 6899*, COL! MO! **Boyacá:** Ventaquemada, 2920 m, II 1973, *Ortíz Valdivieso 4223*, HPUJ! Ibid. 2800 m, 10 XI 1973, *Uribe 6781*, COL! **Caldas:** Páramo San Felix, 3100 m, 10 X 1987, *Cardona 4*, JAUM! **Chocó:** Urrao, 2400-2700 m, *Galeano 823*, COL! Macizo del Tamáná, 2800 m, 19 II 1983, *Torres 2050*, COL! **Cundinamarca:** San Bernardo, 2400-2500 m, 22 VII 1981, *Díaz 3064*, COL! Santandercito, ca. 2000 m, *Fernández 5606*, COL! Chipaque, 2470-3100 m, 20 IX 1954, *García-Barriga 15298*, AMES! COL! Fosca-Une, 3000-3200 m, 14 VI 1974, *García Barriga 20517*, AMES! COL! US! Macizo de Bogotá, 2750-2900 m, 8 V 1942, *Gutiérrez 267*, AMES! Represa del Sissa, 2750 m, 17 III 1996, *Hágsater 11519*, AMO x2! Gutiérrez, 2800 m, *Hatheway 1137*, COL! Fusagasugá, 28 XII 1853, *Holton s.n.*, NY! Sibaté, 2650 m, *Huertas 4395*, COL! Pacho, 2900 m, *Huertas 5182*, COL! San Miguel-Aguabonita, 2600 m, *Jaramillo 3419*, COL! San Miguel-La Aguadita, 2690 m, 30 IV 1944, *Killip 38101*, COL! US! Facativá, 2900 m, IX 1964, *Larsson s.n.*, S! Choachí, *Lozano 674-A*, COL! Reserva Carpata, ca. 2500-3300 m, 27 IV 1988, *Luteyn 12232*, COL! NY! Quetame, ca. 2500 m, IX 1975, *Ortíz Valdivieso s.n.*, HPUJ! Santandercito, ca. 2000 m, 30 III 1968, *Ortíz Valdivieso 68*, HPUJ! San Miguel, 2700-2800 m, 16 II 1941, *Renz 3134*, RENZ! Bogotá, 2800 m, 31 V 1941, *Renz 3167*, RENZ! Pueblo Viejo, 2800 m, 8 VII 1955, *Renz 8448*, RENZ! Bogotá, 2700-2800 m, 30 IV 1945, *Schneider 135*, COL! Santandercito, 2000 m, 16 II 1959, *Uribe 3234*, COL! NY! **Huila:** Gabinete, 2300-2450 m, 21 III 1940, *Cuatrecasas 8446*, COL! Santa Leticia, 2100-2300 m, 6 IX 1961, *Fernández 5886*, COL! **Quindío:** Salento, 2600-2900 m, *González 2074*, COL! **Santander:** Galán, ca. 8500 ft, 8 IX 1944, *Fassett 25731*, US! **Tolima:** Cajamarca-summit, 3000-3100 m, 27 III 1939, *Killip 34649*, AMES! COL! US! (Illustration voucher).

OTHER RECORDS: COLOMBIA: Antioquia: Páramo de Sonsón, *Garay 1061*, (Garay, 1970). Ibid. *Escobar 659*, slide, AMO!

EPIDENDRUM ZIPAQUIRANUM Schltr.

Plate 1300

OTHER SPECIMENS: COLOMBIA: Without data, COL 37513! Ibid. W-R 49938! Ibid. *Karl 274*, W-R 49940! Novae-Granatae (1783-1808) *Mutis 168h-B*, MA x3! Ibid. *Mutis 1716*, MA! **Arauca:** Sierra Nevada del Cocuy, 3520 m, 9 VI 1973, *Cleef 10115*, U! Ibid. 3530 m, 13 III 1973, *Fernández 9106*, COL! SEL! Ibid. 3520 m, 9 VI 1973, *Fernández 10115*, COL! **Boyacá:** Santuario Iguaque, 2900-3350 m, 29 III 1993, *Betancur 4105*, MO! Páramo de La Rusia, 3575 m, 7 XII 1972, *Cleef 6805*, SEL! U! Duitama, 3240 m, 11 XII 1972, *Cleef 7039*, COL! SEL! Páramo de La Rusia, 3385 m, 13 XII 1972, *Cleef 7181*, U! Duitama, 3485 m, 13 XII 1972, *Cleef 7187*, SEL! Peña de Arnica, 3600 m, 6 IV 1973, *Cleef 9429*, SEL! Nevado del Cocuy, 3750 m, 10 IX 1938, *Cuatrecasas 1366*, COL! F x2! Páramo de La Rusia, 3240 m, 28 I 1983, *Folsom 10711*, AMO x2! Sierra Nevada del Cocuy, 3250 m, 11 IX 1957, *Grubb 818*, COL! K-L! Arcabuco, 2738 m, 16 III 1970, *Guarín 1306*, COL! Duitama, 3050 m, *Ortíz Valdivieso 4312*, HPUJ! Arcabuco, ca. 2500 m, *Ospina 771*, JAUM! Santa Rosa, 3200 m, 11 II 1965, *Uribe 5093*, COL! Carretera a Aguazul, km 78, 2300 m, 11 XII 1969, *Uribe 6319*, COL! **Cundinamarca:** Without locality, 2900 m, *Lehmann 2472*, G x2! Laguna de Guatavita, 13 X 1980, *Aguirre 212*, BOG! Bogotá, ca. 11000 ft, 11 VII 1943, *Allen 3014*, MO! US! Bogotá, 20 X 1814, *Barnard s.n.*, K-L! (specimen mounted on the left, together with lectotype of *E. chioneum*) La Calera, 2650-3000 m, 27 XI 1947, *Barkley 17C793*, S! El Chicó, XII 1946, *Black 46-689*, AMES! F! NY! Zipaquirá, 12 XII 1948, *Castañeda 1297*, COL! Páramo de Guasca, 3150 m, 29 XII 1971, *Cleef 373*, SEL! Ibid. 3300 m, 29 XII 1971, *Cleef 463*, U! Páramo de Cruz Verde, 3460 m, 12 IV 1972, *Cleef 2805*, U! Páramo de Sumapaz, 3445 m, 29 I 1973, *Cleef 8425*, COL! SEL! Represa del Neusa, 3150 m, 19 XI 1972, *Cleef 6661*, AAU! SEL! Páramo de Cruz Verde, 3150 m, 7 X 1938, *Cuatrecasas 414*, COL! F! US! Quebrada de Chicó, 2750-2890 m, 8 VI 1939, *Cuatrecasas 5402*, AMES! Quebrada de las Delicias, 2800-3000 m, 25 VI 1939, *Cuatrecasas 5613*, COL! Bogotá, 2700-3200 m, 7 VIII 1916, *Dawe 172*, K-L! Subachoque, 2600 m, *Dumont 179*, G! Bogotá, 2800 m, 10 V 1946, *Duque 3492*, COL! NY! La Calera, 2980 m, 29 IV 1990, *Elsa 24*, BOG! Cerro de Montserrat, 10500 ft, 8 X 1944, *Fassett 25874*, US x2! Páramo de Monserrate, 3250 m, 8 II 1986, *Fernández 5116*, COL! Páramo de Cruz Verde, 3250 m, 19 II 1936, *Fernández 5468*, COL! Páramo de Cruz Verde, 3460 m, 7 V 1972, *Fernández-Pérez 1973*, COL x5! Guasca, 3500-3600 m, 19 III 1944, *Fosberg 21689*, US! El Chicó, 10000 ft, 11 XI 1946, *Foster 1849*, AMES! Parque Natural Nacional de Chingaza, 3400 m, 7 II 1981, *Franco 7*, COL! Laguna de Guatavita, 2900 m, 8 XI 1987, *Fuertes 476*, COL! Páramo de Guasca, 2800-3300 m, 17 II 1951, *García-Barriga 13519*, AMES! Fusagasugá, 2300 m, 6 X 1958, *García-Barriga 16109*, AMES! GH! El Sissa, 2700-2800 m, 21 II 1962, *García-Barriga 17414*, AMES! NY! Fonseca a Une, 2100-2430 m, 14 VII 1962, *García Barriga 17471*, AMES! COL! US! La Calera, 2650-3000 m, 27 XI 1947, *García-Barriga 17C780*, COL! US! La Calera, 2800 m, 30 X 1968, *García-Barriga 19410*, COL! US! Bogotá-Choachí, 3320 m, 7 I 1974, *Gentry 8906*, MO! NY! Ibid. *Gentry 8944*, MO x3! Páramo de la Cruz Verde, 2840 m, 21 IV 1942, *Gutiérrez 252*, AMES! Chicó, 2900 m, 19 I 1963, *Hatheway 1087*, COL! Guadalupe Hill, ca. 3000 m, *Haught 5594*, P! UC! US! Zipaquirá-Pacho, 3000 m, 17 VII 1947, *Haught 5963*, US! Bogotá, *Holton 175*, AMES x2! G! K-L! NY! Páramo Pantano Redondo, 2900-3000 m, 14 X 1961, *Huertas 5236*, COL! Sibaté, 3000-3200 m, 23 II 1962, *Huertas 5416*, COL! Laguna de "Uche", 3600 m, 19 III 1962, *Huertas 5436*, COL! Páramo de Chingaza, 3000-3200 m, 10 I 1965, *Huertas 6019*, COL! Páramo de Sibaté, 3600-3750 m, 29 III 1981, *Iglesias 162*, COL! Monserrate, 3000-3300 m, 16 IV 1944, *Killip 38069*, COL! US! Boquerón de Chipaque, 8 VII 1897, *Lehmann 492*, K-L! Monserrate, 8160 ft, *Linden 1268*, W-R 49935! K-L! (mounted with the Holotype of *E. torquatum*). El Chicó, 2660 m, 24 IV 1982, *Luer 7524*, SEL! Ure-Gutiérrez, 2200 m, 15 V 1984, *Luer 10363*, MO! Bogotá, VII 1868, *Meir s.n.*, K-L! Soacha, 2850 m, 19 IX 1961, *Murillo 446*, COL! Bogotá, 3310 m, 10 XI 1967, *Ortíz Valdivieso 6*, HPUJ! Cerro Majuy, 3090 m, 30 XII 1967, *Ortíz Valdivieso 29*, HPUJ! Bogotá, 2600 m, 12 X 1957, *Ospina 202*, AMES! COL! Páramo de Guasca, *Ospina 745*, JAUM x3! Ubaqué, 3000-3200 m, 8 IX 1917, *Pennell 1903*, NY! Chapinero, 3000-3100 m, 18 IX 1917, *Pennell 2014*, AMES! F! MO! NY! US! Bogotá, VII 1931, *Pérez 1069*, COL! Guasca, IV 1932, *Pérez 7540*, COL! Bogotá, V 1923, *Pring 149*, MO! La Calera, 2980 m, 29 IV 1990, *Pupiales 24*, BOG! Páramo de Guasca, 3100 m, 9 III 1955, *Renz 8339*, RENZ! Zipaquirá, 3500-3600 m, *Sánchez 26*, COL! Bogotá, 11000 ft, II 1948, *Sandeman 5811*, AMES! K-L! P! Páramo de Guasca, 3300-3400 m, 12 I 1974, *Sarmiento 140*, BOG! Páramo de Guasca, 3200-3350 m, 19 I 1974, *Sarmiento 182*, BOG! Páramo de Guasca, 3200 m, 4 I 1980, *Sarmiento 1673*, BOG! Guasca, 11500 ft, 19 III 1944, *Saint-John s.n.*, COL! Bogotá, *Schiefer 506*, AMES! US! Bogotá, 2640-3300 m, 30 X 1943, *Schneider 1*, AMES x3! COL! Páramo de Guasca, 2850-3340 m, 22 I 1942, *Schultes 3148*, K-L! S! Ibid. *Schultes 3178*, AMES!

K-L! El Retiro, 2600-2700 m, V 1946, *Schultes 7022A*, AMES! Chicó, 2700-2750 m, 3 V 1946, *Schultes 7100*, AMES! Páramo de Guasca, 14 II 1951, *Schultes 11522*, AMES x3! Páramo del Palacio, ca. 10200-10800 ft, 25 II 1953, *Schultes 18743*, AMES x2! U! US! Usme, 3400 m, 15 VI 1950, *Smith 1046*, UC! Ibid. 3400 m, 15 VI 1950, *Smith 1103*, UC! Bogotá, *Triana 1371*, W-R 49939! Páramo de Sumapaz, 3300 m, 4 II 1964, *Uribe 4643*, COL! MO! NY! Páramo de Guasca, 2800-2900 m, 4 X 1948, *Uribe 1804*, COL! Fuquene, 2600 m, 15 V 1967, *Uribe 5822*, COL! Monserrate, 3150 m, 7 II 1980, *Vargas 59*, COL! **Distrito Capital**: Usaquén, 2780 m, 13 II 1982, *Camargo 8092*, COL! Usaquén, 2700 m, 25 VI 1961, *Carvajalino 114*, HPUJ! **Norte de Santander**: Cerro de Oroque, 3700-3960 m, 19 V 1969, *García-Barriga 19790*, AMES! Ibid. 3700-3960 m, 19 V 1969, *García-Barriga 19796*, AMES! Abrego, 3150 m, *Folsom 10729*, AMO! Abrego, 3200 m, 19 XII 1943, *Hermann 10911*, AMES! Mutiscua-Pamplona, 3400 m, 23 II 1927, *Killip 19701*, AMES! NY x2! US! Pamplona, *Purdie s.n.*, K-L! **Meta**: Páramo de Sumapaz, 3300 m, 1 II 1972, *Cleef 1507*, COL! U! **Putumayo**: Laguna La Cocha -Páramo de Tábano, 2800-3000 m, 1 VI 1946, *Schultes 7834C*, AMES! Ibid. *Schultes 7834D*, AMES! **Santander**: Bucaramanga, ca. 2500 m, 27 VIII 1948, *Araque 185108*, NY! MO! Ibid. 2500 m, 27 VIII 1948, *Barkley 185108*, G! US! Vetas, 3100-3250 m, 16 I 1927, *Killip 17322*, AMES! NY! US! Ibid. 3500 m, 21 I 1927, *Killip 17929*, AMES! Páramo de las Coloradas, 3900 m, 27 I 1927, *Killip 18480*, AMES! US! Páramo de Romeral, 3200 m, 29 I 1927, *Killip 18504*, AMES! NY! US! La Baja, 3300 m, 14 I 1927, *Killip 18720*, AMES! Bucaramanga, 3050 m, 3 XI 1981, *Luer 6587*, SEL! **VENEZUELA**:* **Apure**: Alquitrana, 3000-3200 m, 19 I 1968, *Steyermark 101113*, AMES x3! K-L! **Mérida**: Mérida, *Linden 675*, G! **Táchira**: Páramo de Tamá, 2500-3000 m, 12 XI 1976, *Charpin 13188*, AMO x3! Las Cruces, 3200 m, 15 V 1951, *Renz 6987*, RENZ! Páramo de Tamá, 3045-3475 m, 15 VII 1944, *Steyermark 57405*, AMES

OTHER RECORDS: **COLOMBIA**: Without locality data, *Ortíz Valdivieso 7*, illustration, HPUJ! **Boyacá**: Chinavita, Mamapacha, 3300 m, 1 V 2002, *Farfán 109*, photo, AMO! **Cundinamarca**: Guatativa y Páramo de Guasca, *Ortíz Valdivieso s.n.*, photo in CD of Gallery of Colombian Orchids, 2007. **VENEZUELA**: **Apure**: Río Talco (Oirá), *Dunsterville 1035*, illustration published in *Orchids of Venezuela*, p. 208. **Táchira**: Alto de Tierra Negra, Las Copas, *Steyermark s.n.*, note published in *Venezuelan Orchids Illustrated*, Vol. 5: 80. 1972.

APPENDIX 2: New Name, new synonyms, and corrections to previous volumes

Eric Hágsater

New name:

EPIDENDRUM TETRAGONIOIDES Hágsater et Dodson, *nom. nov.* Basionym: *Epidendrum tetragonum* Hágsater & Dodson, *nom. illeg.*, *Icon. Orchid. (Mexico) 7*: pl. 794. 2004. Type: ECUADOR: Carchi: Road El Angel to Tulcán, 3300-3650 m, 6 April 1985. **Alex & X. Hirtz, Carlyle & J. Luer 2430**. Holotype: MO! *non Epidendrum tetragonum* Thouars, *Hist. Orchid.*, t. 33, t. 34 [= *Phaius tetragonus* (Thou.) Rchb.f.]

New Synonyms:

Epidendrum schneideri Hágsater, *Icon. Orchid. (Mexico) 4*: 484. 2001. is a synonym of *Epidendrum trimeroglossum* Schltr., *Repert. Spec. Nov. Regni Veg. Beih.* 7: 153. 1920, which is in turn a synonym of *Epidendrum physopus* Rchb.f. See plate 1273 in this issue.

Epidendrum gnomoides Hágsater, *Icon. Orchid. (Mexico) 7*: 739. 2004. is a synonym of *Epidendrum vargasii* Christenson & Nauray, *Icon. Orchid. Peruv.* pl. 658. 2001.

Corrections:

Epidendrum palaciosii Hágsater & Dodson, *Icon. Orchid. (Mexico) 2*: pl. 171. 2003: the type is **Dodson et al. 14848**; the name of the collector was omitted.

Epidendrum sumacoense Hágsater & Dodson, *Icon. Orchid. (Mexico) 2*: pl. 188. 2003: the illustration voucher is the isotype at AAU.

Epidendrum magnificum, Schltr., *Icon. Orchid. (Mexico) 5-6*: pl. 575. 2002. The Isolectotype at F indicates specimen number 154040, should read 1540404. In the Synonym: *Epidendrum sylvettei* Hágsater the collector number indicates *Hágsater 2535* and should be 2435.

Epidendrum lutheri Hágsater, *Icon. Orchid. (Mexico) 2*: pl. 154. 2003; the date of collection of the type **Luther 1059** is indicated as 1989 and should be 1986.

Epidendrum ellemanniae Hágsater & Dodson is the correct spelling for *Epidendrum ellemannii* Hágsater & Dodson, *Icon. Orchid. (Mexico) 4*: pl. 436. 2001; Lis Ellemann is a woman.

Epidendrum lignosum La Llave & Lex. *Icon. Orchid. (Mexico) 11*: pl. 1138. 2008: the text was published with numerous typographical errors in the following paragraphs which are reproduced in full:

Type: "Habitat, florestque simul cum ipso in montibus Vallisoletanis [Valladolid, today Morelia, Michoacán], supra arbores" **J. M.**

Lexarza [lost]. Neotype (here designated): MICHOACÁN: Zinapécuaro: km 197 carretera (autopista) Atlacomulco-Morelia, 2300 m, 28 May 1996, pressed 28 April 1997, **Luis Sánchez 348**, AMO 18590! Isoneotypes: AMES (ex AMO 19045)! UAMIZ! Clononeotype: pressed cult. 22 May 1997, AMO 18412!

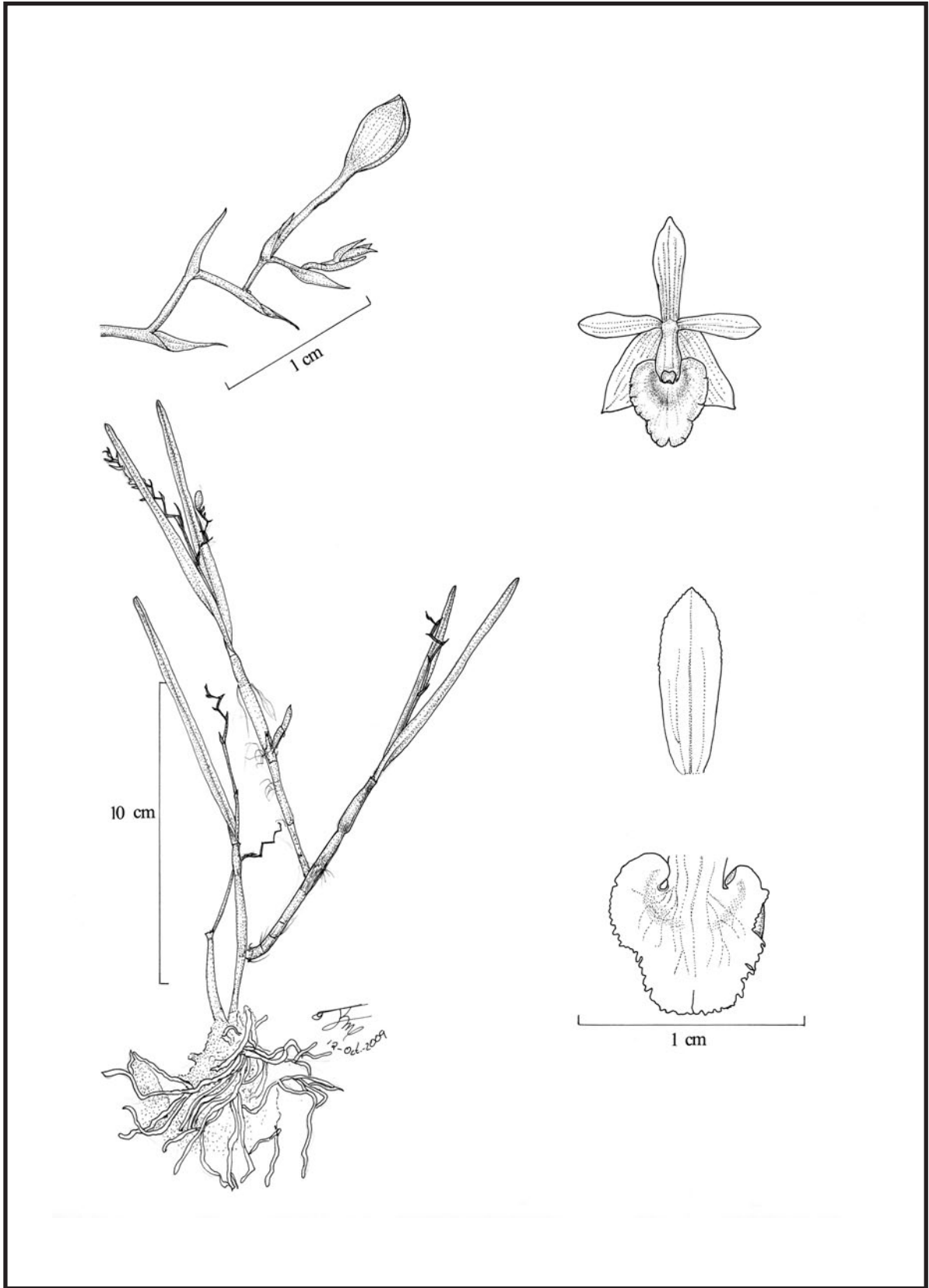
Synonyms: *Epidendrum ledifolium* A. Rich. & Galeotti, *Ann. Sci. Nat. sér. 3*. 3: 21. 1845; *Compt. Rend. Hebd. Séances Acad. Sci.* 18: 512. 1844, *nomen*. Type: not indicated. Lectotype (designated by Hágsater, 1980a) México: Sierra de Oaxaca: Cuesta de San Juan, sur les chênes du terre froide, 7500 ft, May 1840, **H. Galeotti 5072**, P! Isolectotypes: BR x4! G! K! [sketch of herb. Lindley 257, W R 5857!] W-R 49970! Specimen, with watercolor illustration (arborescens, Cuesta de S. Juan y Sierra prope Oaxaca), by H Galeotti t. 77, W-R 17134! Sketch of flower, probably by A. Richard, W-R 19623!

REFERENCES: Ames, O., F.T. Hubbard and C. Schweinfurth. 1936. **The Genus Epidendrum in the United States and Middle America**: 115; Hágsater, E. 1980. *Epidendrum liparidoglossum* sinónimo con *E. ledifolium*. **Orquídea (Mexico City) 7**(4): 385; Matuda, E. 1969. **Orquídeas Nuevas de México Central**, *Cactáceas* 14(3): 54-57, fig. 26; Hágsater, E. 1980. El Complejo *Epidendrum propinquum*, **Orquídea (Mexico City) 7**(4): 313-343; Salazar, G. A. 2006. **Orquídeas y otras plantas nativas de la Cañada. (Orchidaceae)**: 100. Instituto de Biología, UNAM, México City.

Publication dates:

Volume 1 was published on 26 February 1990
Volume 2 was published on 11 October 1993
Volume 3 was published on 25 March 1999
Volume 4 was published on 8 August 2001
Volume 5-6 was published on 9 June 2003

Volume 7 was published on 13 January 2005
Volume 8 was published on 1 June 2006
Volume 9 was published on 18 May 2007
Volume 10 was published on 11 June 2008
Volume 11 was published on 3 December 2008



EPIDENDRUM ALBOMARGINATUM Rchb.f.

EPIDENDRUM ALBOMARGINATUM Rchb.f., Linnaea 41: 113. 1877.

Type: [PERU: Piura: Huancabamba?] Guacabamba, *Wallis* [364]. Holotype: W-R 52198! copy of illustration W-R 34770!

Synonym: *Epidendrum nitidum* L.O.Williams, Bot. Mus. Leaflet. 9: 8, 1940. Type: ECUADOR: Loja; above Loja, 2600 m, 8 July 1939, C. William Penland & Robert H. Summers 1141. Holotype: AMES 55404! (Illustration voucher, plant directly from specimen, lip and sepal from sketch on specimen, not from Dillon's published illustration).

Hierba epífita, monopodial, de crecimiento escandente vertical, de 20-40 cm de alto. **Raíces** producidas solamente en la base del tallo inicial, delgadas, sencillas, 1-2 mm de grosor. **Tallos** delgados, tipo caña en la mitad basal y ligeramente engrosados a partir de la mitad apical, 4.5-7 x 0.2-0.3 cm, la parte engrosada fusiforme, 3.5-4.5 x 0.4-0.5 cm, cubiertos por 5-7 vainas tubulares, no foliares, algo teñidas de púrpúreo, fibrosas con el tiempo, 0.5-1.5 cm de largo; cada tallo nuevo producido de un entrenudo debajo de la mitad apical del tallo anterior, formando una cadena en zigzag. **Hojas** 2, apicales, articuladas, vainas tubulares; lámina linear a linear lanceoladas, conduplicadas en la base, el ápice obtuso, apiculado, coriáceas, 3-9 x 0.15-0.4 cm; 6 mm de largo. **Bráctea espatácea** ausente. **Inflorescencia** apical, del tallo maduro, racemosa a incipientemente paniculada, pauciflora, laxa, de floración asincrónica, 4.5-8 cm de largo; pedúnculo largo, terete, delgado, 30-35 mm de largo; raquis fuertemente fractiflexo. **Bráctea floral** de la mitad del largo del ovario, angostamente triangulares, acuminadas, abrazadoras, caedizas en inflorescencias viejas, hasta 3-5 mm de largo. **Ovario** terete, delgado, ligeramente dilatado hacia el ápice, no ornamentado, 7 mm de largo. **Flores** 7-22, sucesivas, (aunque pueden estar hasta 4 abiertas de manera simultánea) resupinadas, sépalos y pétalos color plomo con márgenes blancos, labelo verde al centro, márgenes transparentes a rosáceos, columna verde en la base, ápice blanco a violáceo; sin datos de fragancia. **Sépalos** obtusos, 5-nervados, margen entero; el **dorsal** libre, extendido, oblancoulado, 6-8 x 2-3.5 mm; los **laterales** adnados de manera oblicua a la mitad basal de la columna, entreabiertos, ovado lanceolados, ligeramente oblicuos, 6.5-8 x 3-4.5 mm, con una quilla dorsal diminuta en el ápice. **Pétalos** libres, extendidos, oblancoulados, obtusos, 3-nervados, margen entero en la mitad basal y crenulado en la mitad apical, 6-7.5 x 1.8-2.5 mm. **Labelo** unido a la columna, incipientemente trilobado, base ligeramente cordada, el centro cóncavo en posición natural, algo convexo hacia el margen, margen sublacerado crenado, 3.7 x 3.5 mm; disco escalooso; lóbulos laterales semielípticos, 1.6 x 2.3 mm; lóbulo medio trapezoide, con la base más amplia que el ápice, truncado, emarginado, formando un par de lóbulos redondeados pequeños, 1.1 x 2.1 mm. **Columna** recta, 5 mm de largo. **Clinandrio** reducido, margen entero. **Rostelo** subapical, hendido. **Antera** reniforme, 4-locular. **Polinios, Nectario y Cápsula** no vistos.

Epiphytic, monopodial, vertical, scandent **herb.** **Roots** produced only from the base of the main stem, thin, simple. **Stems** thin, the basal half cane-like, somewhat thickened above the middle to form a fusiform pseudobulb, covered by 5-7 tubular, non-foliar, somewhat purplish sheaths, becoming fibrous with time; each new stem produced from an internode somewhat below the middle of the previous stem, forming a zigzag chain. **Leaves** 2, apical, articulate, coriaceous, linear to linear-lanceolate, base conduplicate, apex obtuse, apiculate; sheaths tubular, short. **Inflorescence** apical, from the mature stem, racemose or paniculate, lax-, few-flowered, asynchronous; peduncle long, terete, thin; rachis strongly zigzag. **Floral bracts** half as long as the ovary, narrowly triangular, acuminate, amplexicaul, deciduous on old inflorescences. **Ovary** terete, thin, slightly dilated towards the apex, smooth. **Flowers** 7-22, successive, (up to 4 can be open at one time), resupinate, sepals and petals lead-colored with white margins, lip dull green within, margins transparent to pinkish, column green at base, apex white to lilaceous. **Sepals** obtuse, 5-veined, margin entire; dorsal sepal free, spreading, oblancoolate; lateral sepals obliquely adnate to the basal half of the column, partly spreading, ovate-lanceolate, slightly oblique, with a minute dorsal, apical keel. **Petals** free, spreading, oblancoolate, obtuse, 3-veined, basal margin entire, the apical half crenulate. **Lip** united to the column, slightly 3-lobed, base slightly cordate, center concave in natural position, convex towards the margins, margin sub-lacerate-crenate; disc escalloose; lateral lobes semi-elliptic; midlobe trapezoid, the base wider than the apex, truncate, emarginate, forming a pair of small rounded lobes. **Column** straight. **Clinandrium-hood** reduced, margin entire. **Rostellum** sub-apical, slit. **Anther** reniform, 4-celled.

OTHER SPECIMENS: ECUADOR: Loja: W slopes of the E Andes near Loja, 2300-2400 m, X 1892, *Lehmann* 8175, K-L!

DISTRIBUTION AND ECOLOGY: Known from southern Ecuador, near Loja, and northern Peru, epiphytic at 2300-2600 m altitude. Flowering from July to October.

RECOGNITION: *Epidendrum albomarginatum* belongs to the Albomarginatum Group which is characterized by the monopodial, vertical, scandent, zigzag habit, stems cane-like below, somewhat thickened along the apical middle-half or third to form a fusiform pseudobulb, the new stem originating just below the thickened part of the previous stem, apically bifoliate; leaves linear-lanceolate to linear-oblong, racemose to paniculate inflorescence, the rachis zigzag, successive pale, translucent flowers with the lateral sepals obliquely united to the base of the column. The species is recognized by the racemose to paniculate inflorescences, the peduncle 3-3.5

cm long, rachis strongly zigzag, leaves linear to linear-lanceolate, 3-9 cm long, flowers lead-colored the center of the lip and base of the column green, the margins and apex of the column white to lilaceous; the lip is slightly 3-lobed, ecallose with the margin sub-lacerate-crenate. *Epidendrum francisci* Chocce, Hágsater & Acuña has a paniculate inflorescence with the peduncle up to 2 cm long, rachis slightly zigzag, leaves linear oblong, 5.5-6 cm long, flowers pale lilac, the basal half of the column green, the apex dark lilac, the lip entire, bicallose, with the margin entire. *Epidendrum subliberum* C.Schweinf. is vegetatively similar, but the racemose inflorescence has a straight rachis, small, simultaneous flowers (sepals 3-4 mm long), and the lip is not united to the column.

NOTE: The illustration prepared by G. W. Dillon and published by L. O. Williams as *E. nitidum*, shows a thickening of the lip surrounding the disc. We believe that the thickening is an exaggeration of an otherwise translucent lip, and that the illustration mounted on the type itself, is a much better image of this species. The thickness of the stems in Dillon's illustration also appear to be exaggerated. The illustration here published was prepared directly from the type of *E. nitidum*. In the sketches of *Wallis* 364 the new stems are produced in some cases from the middle of the fusiform thickening, which is not what we see from the dried specimens.

CONSERVATION STATUS: DD. Data deficient. The forests west of Loja have been heavily deforested and we have no record of any recent collection.

ETYMOLOGY: From the Latin: *albus*, white, and *margo*, margin, in reference to the pale, translucent margins of the tepals.



Authors: E. Santiago & E. Hágsater

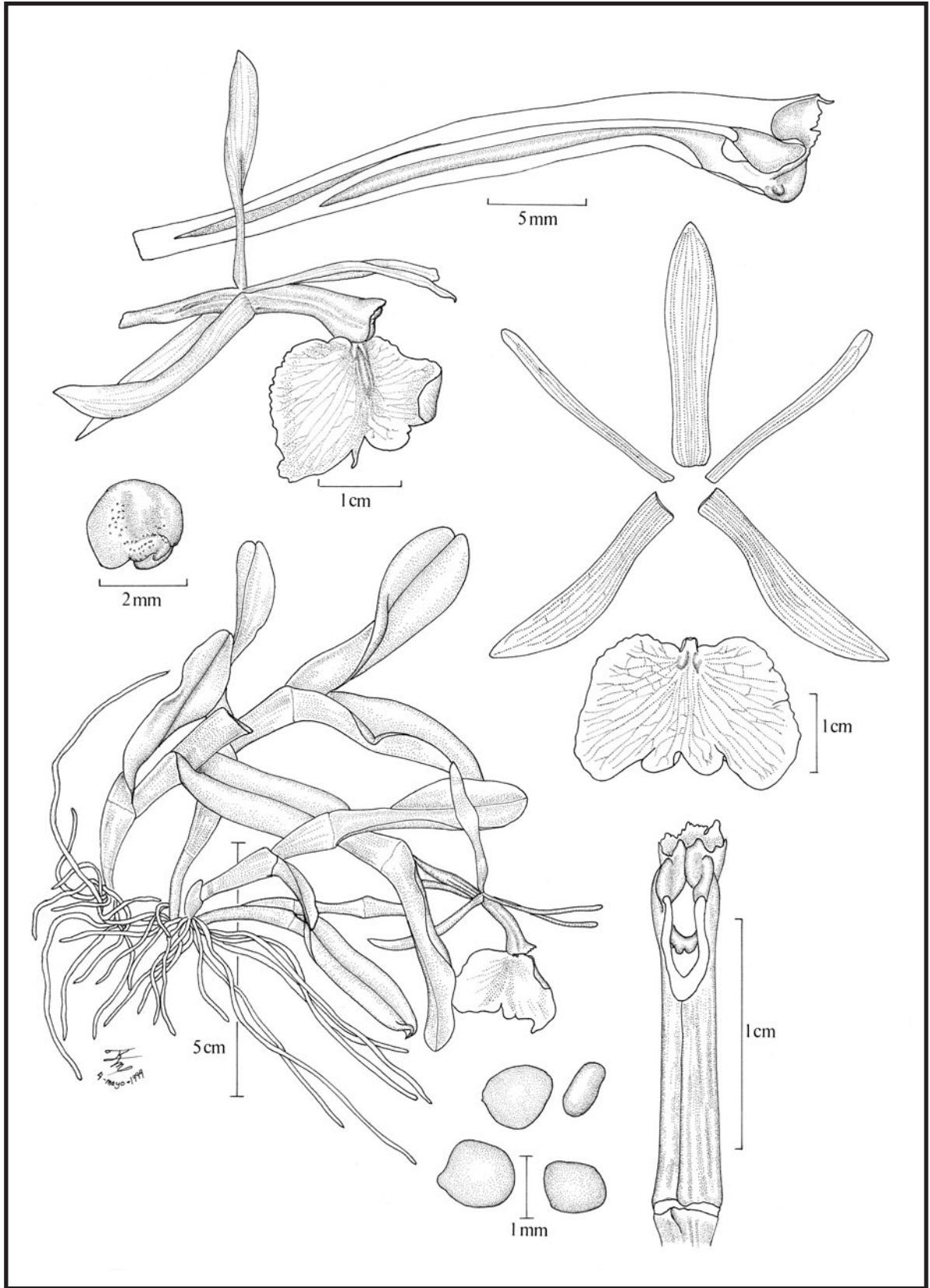
Illustrator: R. Jiménez M.

Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009. Plate 1201



EPIDENDRUM ALTHAUSENII A.D.Hawkes

EPIDENDRUM ALTHAUSENII A.D.Hawkes, Orquídea 18(5):168. 1956.

Basionym: *Epidendrum uniflorum* Barb. Rodr., Gen. et Sp. Orch. Nov. 1:61, 1877. Type: BRAZIL: Près de la cachoeira (cascade) de la rivière Tarumá, au-dessus de Manáos, Amazonas, **Joao Barbosa Rodrigues s.n.** [Neither specimen nor illustration found.] Neotype: [here designed]: Brazil: Amazonas: Manaos, 6 August 1908, **Tresling 297**. MG! (Illustration voucher). non *Epidendrum uniflorum* Vell. 1827, [Maxillaria?]; nec *Epidendrum uniflorum* Lindl. 1839. = *Prosthechea pygmaea* (Hook.) W.E. Higgins.

Hierba epífita, cespitosa, 7-18 cm de alto. **Raíces** basales, carnosas delgadas, 0.4-1 mm de grosor. **Tallos** sencillos, tipo caña, ancipitosos, ligeramente flexuosos, 2-12 x 0.2-0.8 cm. **Hojas** 3-6, equidistantes a lo largo del tallo; vaina foliar lisa, no ornamentada, lateralmente comprimida, 1-2 cm de largo; lámina foliar elíptica a ovada, ápice retuso, lisa, no ornamentada, subcoriácea, verde, margen entero, 3-7 x 1-2.5 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical en el tallo maduro, sésil. **Flores** 1-2(3), resupinadas, simultáneas, verdes. **Brácteas florales** mucho más pequeñas que el ovario. **Ovario** largo, no ornamentado, terete, inflado hacia el perianto, 35-40 x 1.8-2.5 mm. **Sépalos** subcoriáceos, glabros, libres, lanceolados, extendidos, lanceolados, agudos, 5-nervados, margen ligeramente revuelto, 23-42 x 3.5-4 mm; los **laterales** oblicuos. **Pétalos** lineares, agudos, 3-nervados, margen entero, extendido, 21.5-36 x 1.0-1.5 mm. **Labelo** unido a la columna, subcuadrado cuando extendido, membranáceo, trilobado, 17-22 x 25.5-32.3 mm; bicalloso, los callos pequeños, carina central muy baja; lóbulos laterales semiovalados, margen sinuado; lóbulo medio corto, ápice emarginado. **Columna** recta a algo arqueada, 14-19 x 2-3 mm. **Clinandrio** prominente, entero, margen eroso dentado, 1.5-2 mm de largo. **Antera** 4-locular. **Polinios** 4, subiguales, obovoides, lateralmente comprimidos; caudículas suaves y granuladas, semejantes al largo de los polinios; viscidio viscoso, translúcido. **Rostelo** hendido. **Lóbulos laterales del estigma** de 1/2 del largo de la cavidad estigmática. **Nectario** penetrando la mitad del ovario, liso. **Cápsula** elipsoide, 3 x 1.3 cm, cuello corto.

Epiphytic, caespitose **herb.** **Stems** simple, ancipitose, somewhat flexuose. **Leaves** 3-6, elliptic to ovate, retuse, sub-coriaceous, unornamented, green. **Spathaceous bract** absent. **Inflorescence** apical, sessile. **Flowers** 1-2 rarely 3, resupinate, simultaneous, green. **Floral bracts** smaller than the ovary. **Ovary** unornamented, terete, inflated toward the perianth. **Sepals** sub-coriaceous, glabrous, free, spreading, lanceolate, acute, 5-veined, margin revolute; the lateral sepals oblique. **Petals** linear acute, 3-veined, margin entire, spreading. **Lip** united to the column, subquadrate when extended, membranaceous, 3-lobed; bicallose, the calli small, central keel low; lateral lobes of the lip semi-ovate, margin sinuate; midlobe short, emarginate. **Column** straight to somewhat arching. **Clinandrium-hood** prominent, erose-dentate. **Anther** 4-celled. **Nectary** penetrating half of ovary, smooth. **Capsule** ellipsoid, neck short.

OTHER SPECIMENS: SURINAME: Lucie river, 2-5 km below confluence of Oost River, 225 m, 8 IX 1963, *Irwin 55471*, CAS! Ca. 2 Km below affluence of Oost River, 225 m, 11 VII 1963, *Maguire 54154*, U! Litanie, in oeverbos bij Panapi, 8 VIII 1937, *Romboust 794*, AMES! U! Ad flum, Paloemeu et Tapanahony confl., 16 IV 1972, *Wessels-Boer 1324*, U! Apetina, Tapanahony river, 1 VIII 1973, *Willemse 23*, U! **FRENCH GUYANA:** Récolté á Antecume Pata (Haut Maroni, confluent de Litany et du Marouini), 23 VI 1978, *Cremers 5270*, CAY! Savane Gabrielle, sur la Crique Gabrielle, env. 7 km SE de Stoupan, 3 III 1976, *Raynal 18394*, P! **BRAZIL:** Without locality, *Glaziov 5487*, P! Hort. Main Botanical Garden, Moscow, Russia, *Vasiljev s.n.*, AMO! **ECUADOR:** Pastaza: around the Village Montalvo on the Río Bomboiza, 250 m, 21 V 1979, *Lójtant 13596*, AAU! **PERU:** Loreto: Vicinity of Iquitos, 100 m, 1 XII 1926, *Klug 10037*, AMES, US! *Ibid.* 1 I 1937, *Klug 10078*, AMES! Loreto & San Martín, *Moore 3060*, AMES! **BOLIVIA:** La Paz: Tumupasa, 1000-1500 m, 12 X 1921, *White 1106*, AMES!

OTHER RECORDS: VENEZUELA: Description and illustration as *Neolehmannia barbeyana* (Kraenzl.) Garay & Dunsterv., Venez. Orch. III. 6: 38, 1976. Terr. Amazonas: Upper Orinoco, between Esmeralda y Ocampo (Dunsterville, 1986). **PERU:** Cajamarca: San Ignacio, District of San Ignacio, *M. Cavero B. ex Bennett 6993*, USM (illustration by M. Alcantara A. in *Icones Plantarum Peruvianum* 5: pl. 446). **Huanuco:** Leoncio Prado, near La Alcantarilla, 740 m, *Bennett 3788*, USM (illustration by M. Pastorelli C. in *Icones Plantarum Peruvianum*, pl. 49).

DISTRIBUTION AND ECOLOGY: Known from the Amazon basin in Venezuela, Surinam, French Guyana, Brazil, Colombia (probably), Ecuador, Peru and Bolivia. Growing epiphytically, from 100 to 1500 m altitude. Flowering from March to August.



RECOGNITION: *Epidendrum althausenii* belongs to the Difforme Group which is characterized by the caespitose, sympodial plants, fleshy, pale green to glaucous, leaves, apical inflorescence, sessile, rarely with a short peduncle, one-flowered to corymbose, without spathaceous bracts, fleshy, green to yellowish-green rarely white flowers. The species has short plants with ancipitose stems, 1-2 rarely 3, green flowers, lip sub-quadrate when spread, 3-lobed, midlobe shorter than the lateral lobes, emarginate, column straight to somewhat arching with a prominent, erose-fimbriate clinandrium-hood. *Epidendrum althausenii* has been confused with *Epidendrum latilabrum* Lindl., a Brazilian species which has taller plants, laterally compressed stems, 2-4 successive flowers, rarely 1, its lip is four times broader than long. *Epidendrum garciae* Pabst, also from Brazil, has only one, fragrant, flower with laterally compressed stems, sepals and petals greenish white, the lip white. *Epidendrum bennettii* Dodson from Peru has taller plants, laterally compressed stems, sepals with the margin truncate and mucronate, petals acute, lateral lobes of the lip surpassing the midlobe, which is oblong, bilobed, truncate. *Epidendrum cremersii* Hágsater & L.Sánchez has laterally compressed stems, sub-quadrate lip, semi-ovate lateral lobes, without deep sinus, and an emarginate midlobe.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In honor of Mr. Hemult Althausen of Sao Paulo, Brazil, a student of orchids in the first half of the 20th century.

REFERENCE: Dunsterville, G. C. K. & L. A. Garay. 1979. **Orchids of Venezuela. An Illustrated Field Guide.** 581. Dunsterville, G. C. K. 1986. Descriptions of Orchids not included in Venezuelan Orchids Illustrated, *Lindleyana* 1 (4): 282-283. Bennett Jr., E. D., & E. A. Christenson. 1993. **Icon. Orchid. Peruv.** pl. 49. Bennett Jr., E. D., & E. A. Christenson. 1998. **Icon. Orchid. Peruv.** pl. 446.

Authors: L. Sánchez S. & E. Hágsater

Illustrator: R. Jiménez M.

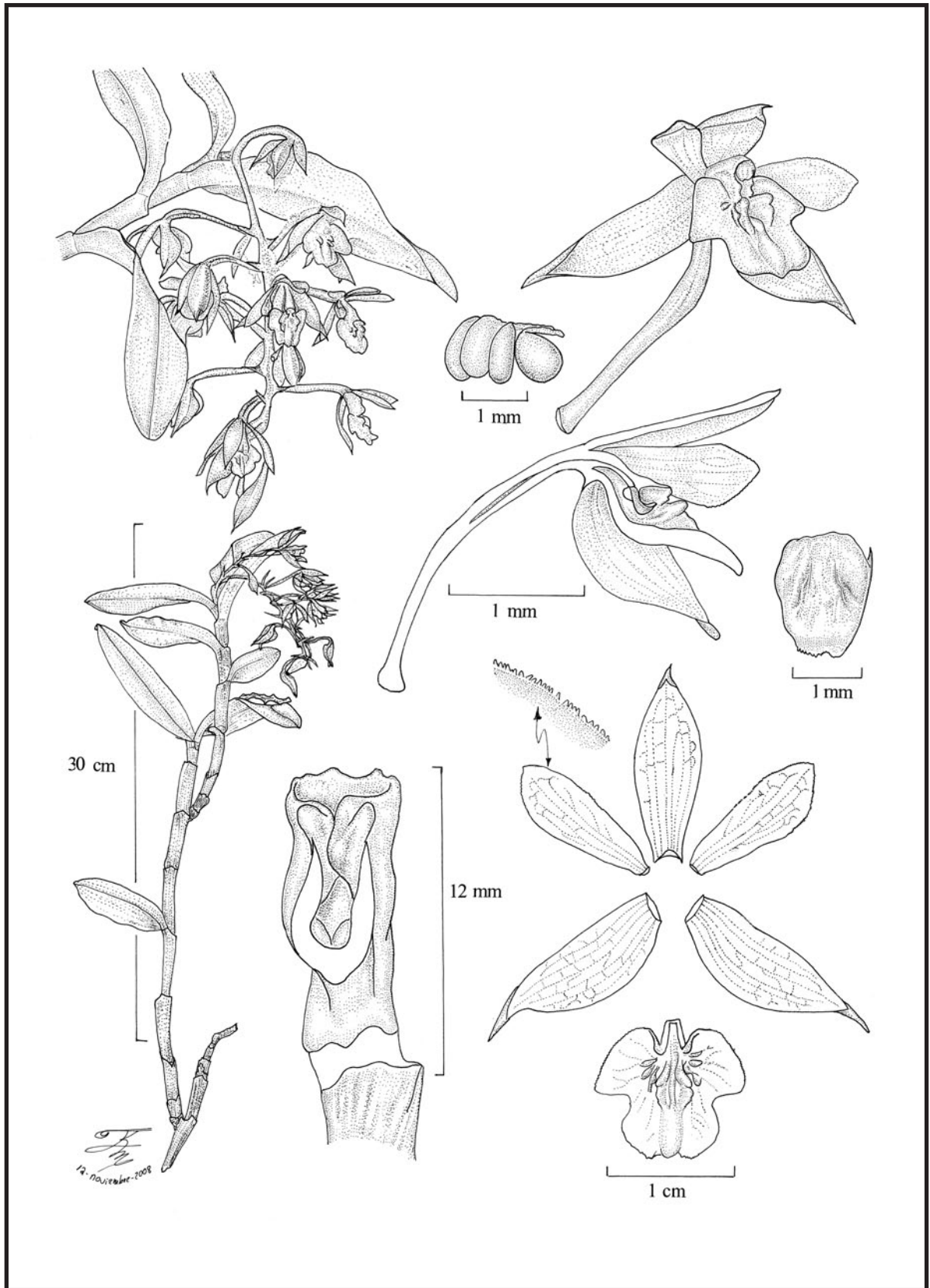
Editors: E. Hágsater & L. Sánchez S.

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ICONES ORCHIDACEARUM 12. 2009.

Plate 1202



EPIDENDRUM AMBLYANTHERUM Hágsater & E.Santiago

Plate 1203

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

Type: ECUADOR: Pichincha: Chilligallo-Sto. Domingo de los Colorados a 6.7 km al W de Paso San Juan, 2950 m, 8 December 1986, *E. Hágsater & C. H. Dodson 9002*. Holotype: QCNE ex AMO 8413! (Illustration voucher). Isotype: AMO 8412!

Epidendro pallatangae Schltr. simile sed labello manifeste trilobato et anthera ovoidea apice truncato, recedit.

Hierba terrestre, monopodial, ramificada subapicalmente, de más de 60 cm de alto. **Raíces** probablemente basales en el tallo principal, escasas en algunas ramificaciones, carnosas, gruesas, blancas, 2.5-3 mm de grosor. **Tallos** tipo caña, ramificados cerca del ápice, erectos, rectos, teretes en la base y lateralmente aplanados hacia el ápice; el principal de más de 55 x 0.7-1.0 cm; las ramificaciones 12.5-20 x 0.3-0.7 cm; totalmente cubiertos en la base por vainas tubulares no foliares, 5-15 mm de largo. **Hojas** 12 o más en el tallo principal; 5-6 en las ramificaciones, distribuidas en la mitad apical de cada rama, erecto extendidas, desiguales en tamaño (las basales generalmente más pequeñas); vainas tubulares, finamente estriadas, rugosas, 10-60 mm de largo; lámina oblongo elíptica, ápice subobtusado, margen entero, extendido, 2-12 x 1.4-3.3 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa a paniculada (ocasionalmente produciendo una rama corta en la base del pedúnculo), arqueada, pluriflora, laxa, 6-14 cm de largo; pedúnculo corto, terete, delgado, 20 mm de largo; provisto (en la parte media) de una bráctea triangular, acuminada, abrazadora, 7-8 mm de largo. **Brácteas florales** más cortas que el ovario, triangular lanceoladas, acuminadas, abrazadoras, 5-11 mm de largo. **Ovario** terete, delgado, no inflado, no ornamentado, 22-35 mm de largo. **Flores** 14-26, simultáneas (aunque algunos botones apicales aún sin abrir), resupinadas, carnosas, amarillas a ocre amarillentas, sin datos de fragancia. **Sépalos** entreabiertos, libres, elípticos, agudos, con una arista prominente, 5-6-nervados, la superficie dorsal escasamente pubescente, margen entero, extendido, 15-22 x 5-6 mm; los **laterales** oblicuos. **Pétalos** entreabiertos, libres, angostamente obovado-oblancoeados, subobtusos, 3-nervados, margen diminutamente papiloso, extendido, 12-15 x 4-5 mm. **Labello** unido a la columna, trilobado, ligeramente cordado en la base, margen diminutamente eroso en el ápice de los lóbulos, extendido, 10-11 x 11-12 mm; lóbulos laterales dolabriformes, 5-6 x 5.5-6 mm; lóbulo medio transversalmente rectangular, anchamente apiculado, 5-6 x 7-8 mm; bicalloso, callos prominentes, laminares, divergentes, rodeados de 3 pares de quillas laminares cortas; disco unicarinado, la carina intercallosa, prominente y engrosada, alargada hasta el ápice de la lámina. **Columna** recta, engrosada y arqueada hacia arriba a la mitad, 12 mm de largo. **Clinandrio** prominente (aunque sin sobrepasar el cuerpo de la columna), en forma de embudo, margen eroso. **Antera** ovoide, con el ápice truncado con el margen denticulado. **Polinios** 4, obovoides, subiguales. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** prominentes de 1/2 del largo de la cavidad estigmática. **Nectario** corto, sin penetrar el ovario, no inflado, no ornamentado. **Cápsula** no vista.

Terrestrial, monopodial, subapically branching **herb**. **Roots** basal from the main stem, scarce on some branches, fleshy, thick, white. **Stems** cane-like, branching near the apex, erect, straight, terete at the base, laterally compressed towards the apex, the main stem taller than the branches; base totally covered by tubular, non-foliar sheaths. **Leaves** 12 or more on the main stem, 5-6 on the branches, distributed throughout the apical half of the stems, erect-spreading, unequal in size (the basal ones generally smaller); sheaths tubular, minutely striated, rugose; blade oblong-elliptic, apex subobtusate, margin entire, spreading. **Inflorescence** apical, racemose to paniculate (occasionally producing a short branch at the base of the peduncle); arching, lax, many-flowered; peduncle short, terete, thin, provided in the middle with a triangular, acuminate, amplexicaul bract. **Floral bracts** much shorter than the ovary, triangular lanceolate, acuminate, amplexicaul. **Ovary** terete, thin, not inflated, smooth. **Flowers** 14-26, simultaneous (though some apical buds are still closed when most flowers open), resupinate, fleshy, yellow to yellowish ochre. **Sepals** partly spreading, free, elliptic, acute, with a prominent awn, 5-6-veined, dorsal surface scarcely pubescent, margin entire, spreading; lateral sepals oblique. **Petals** partly spreading, free, narrowly obovate-oblancoeolate, subobtusate, 3-veined, margin minutely papillose, spreading. **Lip** united to the column, base slightly cordate, apical margin of the lobes minutely erose, spreading; lateral lobes dolabriform; midlobe transversely rectangular, widely apiculate; bicallose, calli prominent, laminar, divergent, surrounded by 3 pairs of short laminar keels; disc with a prominent, thickened, single keeled which reaches the apicule. **Column** straight, thick, arched upwards in the middle. **Clinandrium-hood** prominent (though not surpassing the body of the column), funnel-shaped, margin erose. **Anther** ovoid, the apex truncate with the margin denticulate. **Pollinia** 4, obovoid, subequal. **Rostellum** subapical, slit. **Nectary** short, without penetrating the ovary, not inflated, smooth.

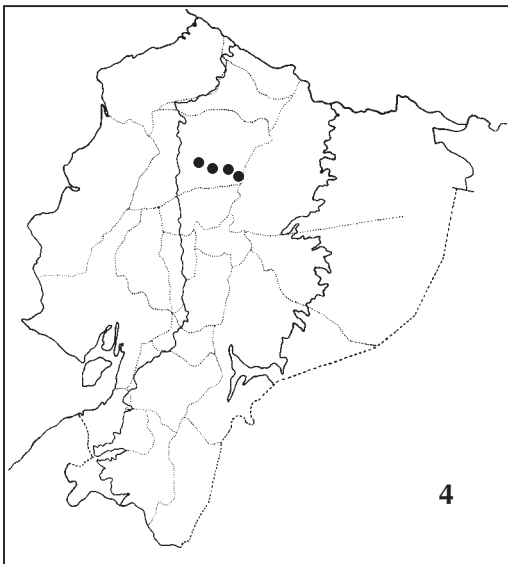
OTHER SPECIMENS: ECUADOR: Pichincha: below San Juan towards Chiriboga, 3000 m, 28 X 1955, *Asplund 18228*, S! 1-2 km NE-E of Hacienda Pinatura, ca. 5 km E of Pintag, 3200-3300 m, 1 VII 1979, *Løjtnant 15427*, AAU! GB! **Napo/Pichincha:** SW of Volcán Antisana, 3290 m, 6 XII 1982, *Barfod 41290*, AAU! MO!

DISTRIBUTION AND ECOLOGY: Known only from central Ecuador, from the province of Pichincha, terrestrial at 3000-3300 m altitude. Flowering from July to December.

RECOGNITION: *Epidendrum amblyantherum* belongs to the Andean Group, Cernuum Subgroup, characterized by the monopodial habit, cane-like stems with subapical branches which are considerably shorter than the main stem, coriaceous to subcoriaceous leaves, apex bilobed, and fleshy flowers, the lip 3-lobed. The species is recognized by the yellow to yellowish ochre flowers, unequal sepals and petals in size, and the clearly 3-lobed lip, with dolabriform lateral lobes, the calli surrounded by 3 pairs of short keels, and the truncate, ovoid anther. *Epidendrum pallatangae* has the ovary and sepals dorsally strongly pubescent, an entire to slightly 3-lobed lip, the nectary penetrating the ovary, and the ovoid anther apically elongate and acute. *Epidendrum cuicochaense* Hágsater & Dodson has short inflorescences with successive, apple-green flowers, the lip slightly 3-lobed with subtriangular lateral lobes, and a subrectangular-oblong midlobe, minutely apiculate. *Epidendrum megaloclinium* Hágsater & Dodson has the sepals dorsally pubescent, and a the slightly 3-lobed lip, bicallose, with 3 thin keels running down the length of the lip.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek ἀμβλυσ, blunt, dulled, and ἀνθηρα, anther in reference to the blunt, rounded anther cap that distinguishes this species from others which have an acute anther.



Authors: E. Hágsater & E. Santiago

Illustrator: R. Jiménez M.

Editors: E. Hágsater & L. Sánchez S.

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México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009.

Plate 1203

EPIDENDRUM ANCISTRONUM Hágsater et Dodson sp. nov.

Type: ECUADOR: Napo: Km 11, Baeza to Tena, 1800 m, 30 Jun 1985, **C. H. Dodson & A. Hirtz 15896**. Holotype: MO! (Illustration voucher). Isotypes: AMES! QCA! QCNE 92!

Epidendrum pseudomanci Hágsater & L.Sánchez simile sed foliis minus latoribus, petalis obovatis et labello trilobato, differens.

Hierba simpodial, rastrera, epífita, 18-43 cm de alto incluyendo la inflorescencia. **Raíces** de la base de cada tallo, gruesas, carnosas, 2-3 mm de grosor. **Tallo** tipo caña, erecto, recto, terete en la base, lateralmente comprimido hacia el ápice, producido de los nudos inferiores del tallo anterior, a 1-2 cm arriba de la base; 9-23 x 0.25-0.5 cm; cubierto en la base por 2 vainas no foliosas, escariosas, iguales a las foliares. **Hojas** 1-2 (3-4) por tallo, distribuidas en el tercio apical del tallo, vainas foliares estriadas y finamente rugosas en seco 23-50 x 3-5 mm; lámina ovado elíptica, ápice desigualmente bilobado, aristado, margen entero, 5-11 x 2.5-3.5 cm. **Bráctea espátácea** 1-2, ancipitosa, oblonga, aguda, 3-7 x 1.7-2.0 cm. **Inflorescencia** apical, racemosa, alargada, generalmente compacta, 17-22 cm de largo; el pedúnculo erecto, 3-10 cm de largo, cubierto entre 1/2 a 3/4 por las brácteas espátáceas, el raquis recto, 7-12 cm de largo. **Flores** 15-27, simultáneas, no resupinadas, sépalos y pétalos verdes marcados y moteados de rojo pardo, labelo y columna crema con puntos rojos, fragancia no registrada. **Brácteas florales** mucho más cortas que el ovario, triangulares, agudas, las apicales más cortas, 0.8-1.0 mm de largo. **Ovario** corto, no inflado, liso, 8-11 mm de largo. **Sépalos** extendidos, ovado elípticos, agudos, 5-nervados, 3 principales que se prolongan hasta cerca del ápice, las 2 laterales hasta la mitad, margen entero, 6.0-10.0 x 4.0-8.0 mm; los **laterales**, oblicuos, con una quilla dorsal apical. **Pétalos** extendidos, obovados, obtusos, 3-nervados, la principal se prolonga hasta cerca del ápice, las 2 laterales hasta 1/3 de la longitud, margen entero a ligeramente ondulado hacia el ápice, 6.0-10.0 x 2.7-5.7 mm. **Labelo** unido a la columna, trilobado, base truncada, 3.1-3.5 x 2.6-3.0 mm; bicalloso, los callos prominentes, carnosos, separados por una quilla, ligeramente más larga que los callos; lóbulos laterales en ocasiones muy reducidos, generalmente evidentes, subtriangulares, falcados, enteros, redondeados a agudos; el lóbulo medio trapezoide a subcuadrado, margen apical ondulado, con un apículo redondeado. **Columna** corta, gruesa, con un par de alas laterales carnosas, redondeadas a agudas en el ápice, 4.7-7.0 mm de largo. **Clinandrio** reducido, entero. **Antera** cordiforme. **Polinios** 4, obovoides, lateralmente comprimidos. **Lóbulos laterales del estigma** ocupando de 1/3 a 1/2 de la cavidad estigmática. **Nectario** no inflado, redondeado, ligeramente traspasando el perianto, no ornamentado. **Cápsula** no vista.

Sympodial, creeping, epiphytic **herb**. **Roots** from the base of each stem, thick, fleshy, thick. **Stem** cane-like, erect, straight, terete towards the base, laterally compressed towards the apex, produced from the lower internodes of the previous stem, the base covered by 2 non-foliar, scarios sheaths, equal to the foliar sheaths. **Leaves** 1-2 (3-4) per stem, distributed along the apical 1/3 of the stem, foliar sheaths striated and minutely rugose when dry; blade ovate-elliptic, apex unequally bilobed, aristate, margin entire. **Spathaceous bracts** 1-2, ancipitose, oblong, acute. **Inflorescence** apical, racemose, elongate, generally compact; peduncle erect, about 1/2 to 3/4 covered by the spathaceous bracts, rachis straight. **Flowers** 15-27, simultaneous, non-resupinate, sepals and petals green, marked and mottled with red-brown, lip and column cream-colored with red dots. **Floral bracts** much shorter than the ovary, triangular, acute, the apical ones shorter. **Ovary** short, not inflated, smooth. **Sepals** spreading, ovate-elliptic, acute, margin entire, 5-veined, the 2 lateral veins shorter than the 3 central veins; lateral sepals oblique, with an apical dorsal keel. **Petals** spreading, obovate, obtuse, margin entire to slightly undulate towards the apex, 3-veined, the lateral veins about 1/3 the length. **Lip** united to the column, 3-lobed, base truncate; bicallose, the calli prominent, fleshy, separated by the central keel which is slightly longer; lateral lobes sometimes much reduced, generally evident, sub-triangular, falcate, entire, rounded to acute, the midlobe trapezoid to sub-quadrate, apical margin undulate, with a rounded apicule. **Column** short, thick, with a pair of lateral fleshy, rounded to acute wings. **Clinandrium-hood** reduced, entire. **Anther** cordiform. **Pollinia** 4, obovoid, laterally compressed. **Nectary** barely surpassing the perianth, not inflated, narrow, rounded, smooth.

DISTRIBUTION AND ECOLOGY: Endemic to central Ecuador, on the eastern side of the Andes, epiphytic at 1800-2500 m altitude. Flowering from February to August.

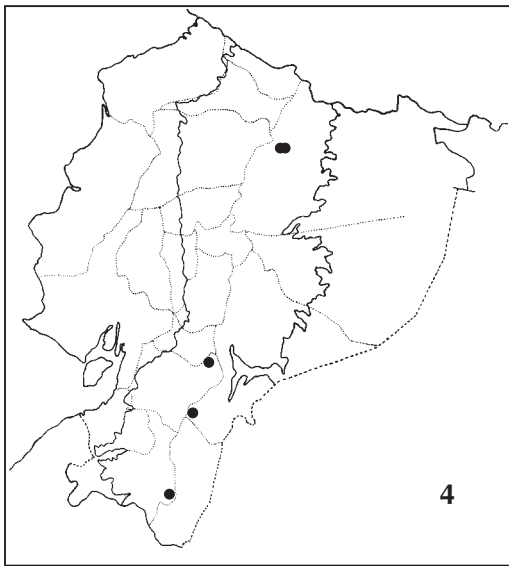
OTHER SPECIMENS: ECUADOR: Loja: Cachaco, km 24 Yangana to Valladolid, 2450 m, 24 VII 1985, *Dodson 16032*, QCNE! **Morona-Santiago:** Gualaquiza, Bosque Protector Tambillo, Parr. San Miguel de Cuyes, 2500 m, VIII 1997, *Suin 262*, QCNE! Baeza, km 99 on road from Quito to Baeza, 1840 m, 30 VI 1986, *Dodson 16541*, MO! Tena, Baeza, Cosanga, 2000 m, II 1984, *Hirtz 1531*, AMO! (flowers in spirit). Cosanga, Baeza-Tena, 2000 m, *Hirtz 1876*, AMO! Mox2!

OTHER RECORDS: ECUADOR: Baeza, km 99 or road from Quito to Baeza, 1840 m, 30 VI 1986, *Dodson 16541*, Illustration AMO! **Morona-Santiago:** Baeza-Tena, 2000 m, *Hirtz 1876*, Illustration AMO!

RECOGNITION: *Epidendrum ancistrum* belongs to the Mancum Group and Subgroup, which is characterized by the sympodial growth, narrow spathaceous bracts with parallel sides, erect raceme with non-resupinate flowers and a generally reduced, fleshy lip. The species has relatively wide, ovate-elliptic leaves, 5-11 x 2.5-3.5 cm, the lip bicallose, with the lateral lobes sub-triangular, falcate, and the midlobe trapezoid to subquadrate. It is very similar to *Epidendrum pseudomancum* Hágsater & L.Sánchez, from Colombia and Ecuador, which has a similar plant habit but wider leaves, 3.0-4.8 cm, suborbicular-spatulate petals and an entire, trowel-shaped lip. *Epidendrum mancum* Lindl. is also endemic to Ecuador, has smaller plants, to 15-25 cm tall, with similar leaves, but shorter and narrower, 2-6 x 1.3-2.7 cm, and an entire, minute lip. *Epidendrum microtum* (Lindl.) Hágsater & L.Sánchez, found in both Colombia and Ecuador, has larger, narrower, lanceolate-oblong leaves, 6-16 x 1.8-2.5 cm, oblanceolate petals, and a 3-lobed lip, the lateral lobes elliptic to subrectangular.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek, ἀγκίστρον, hook, in reference to the lateral lobes of the lip which are hook-shaped.



Authors: E. Hágsater & C. H. Dodson

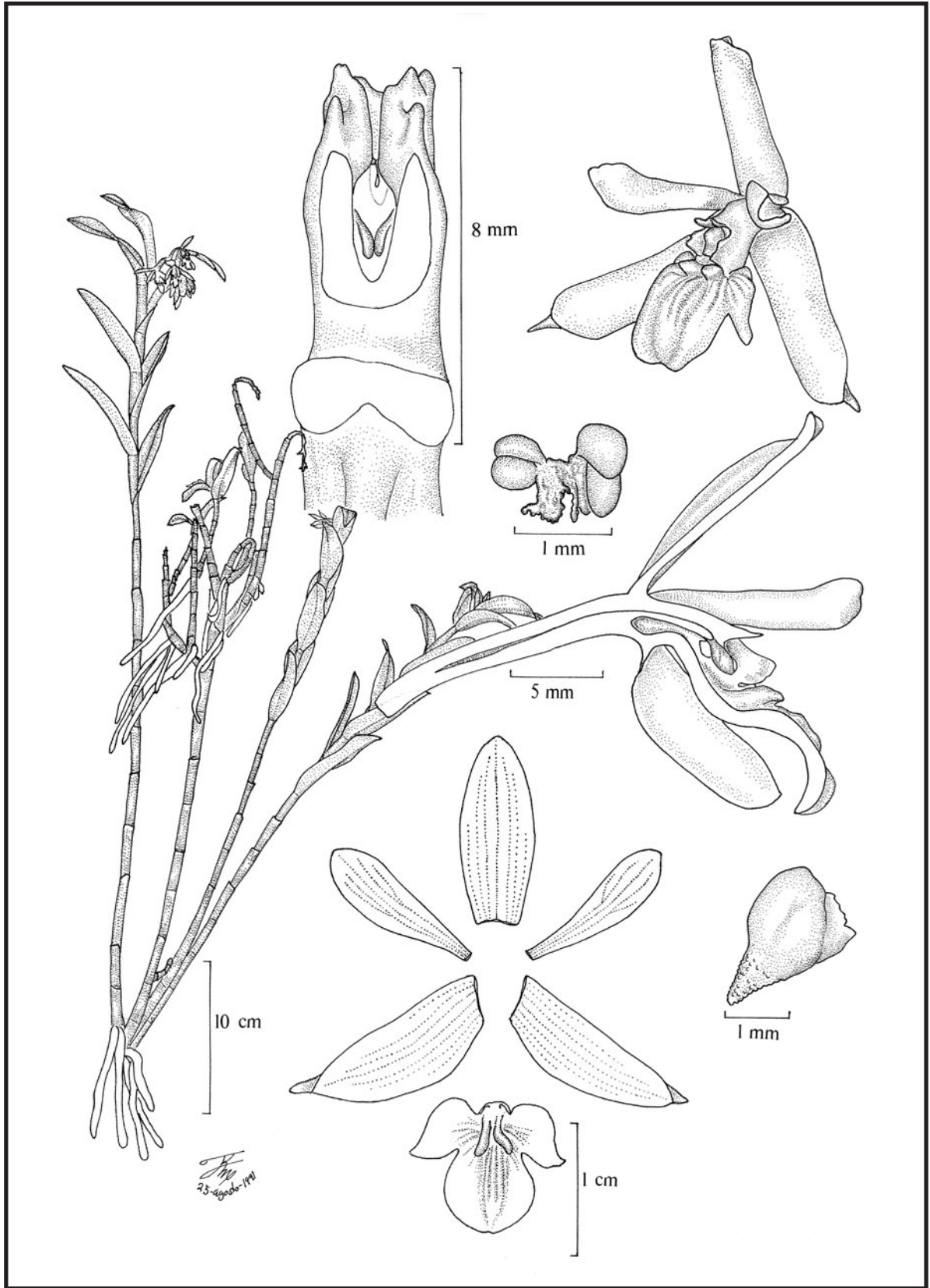
Illustrator: R. Jiménez M.

Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009. Plate 1204



EPIDENDRUM ANGELOGLOSSUM Hágsater & Dodson

Plate 1205

EPIDENDRUM ANGELOGLOSSUM Hágsater et Dodson, sp. nov.

Type: ECUADOR: Imbabura; pasando Lago Cuicocha, abajo de páramo, 3190 m, 8 September 1993, **E. Hágsater & C. H. Dodson 11348**. Holotype: AMO! (Illustration voucher).

Epidendro cuicochaënsis Hágsater & Dodson simile sed petalis obovato-spathulatis rotundatis, labello lobulis lateralibus oblique ovatis et lobulo medio orbiculari, distinguibile.

Hierba terrestre, cespitosa, ramificada arriba, de 55 cm de alto. **Raíces** basales, tanto en el tallo principal como en las ramificaciones, carnosas, gruesas. **Tallos** ramificados cuando maduros, tipo caña, teretes, erectos, rectos; el tallo principal de 50 x 0.8 cm; las ramificaciones más cortas, 10-15 x 0.6 cm; cubiertos en la base por vainas tubulares, no foliares, finamente estriadas y rugosas, hasta 33 mm de largo. **Hojas** 12 en el tallo principal, distribuidas en la mitad apical del mismo; 3 en la mitad apical de las ramificaciones; articuladas, erecto extendidas, subcoriáceas; vaina tubular, finamente rugosa, estriada, 8-30 mm de largo; lámina oblongo lanceolada, subobtusada, con una quilla dorsal baja, margen entero, extendido, 7-8.5 x 1.8 cm. **Inflorescencia** apical, florece una sola vez, racemosa, arqueada nutante, pauciflora, laxa, corta, 5 cm de largo; pedúnculo corto, terete, delgado, 25 mm de largo; provisto de una bráctea, anchamente triangular, 3 mm de largo; raquis recto. **Flores** 13, sucesivas, carnosas, resupinadas, verde manzana con los sépalos amarillos; sin fragancia. **Brácteas florales** pequeñas, de la mitad del largo del ovario, triangular lanceoladas, acuminadas, abrazadoras, 5-6 mm de largo. **Ovario** terete, delgado, no inflado, no ornamentado, 11 mm de largo. **Sépalos** entreabiertos, libres, 7-nervados, glabros, margen entero, ligeramente revoluto, 14-16.5 x 5-6 mm; el **dorsal** elíptico con el ápice subredondeado, diminutamente apiculado; los **laterales** oblongo obtusos, aristados, ligeramente oblicuos. **Pétalos** entreabiertos, libres, oblanceolado-espátulados, ápice subobtusado, 3-nervados, las nervaduras laterales cortamente ramificadas, margen entero, ligeramente revoluto, 13 x 4 mm. **Labelo** unido a la columna, trilobado, base ligeramente cordada, margen entero, convexo en posición natural, 10 x 12 mm; bicalloso, los callos delgados, sublaminares, alargados hasta la base del lóbulo medio; disco provisto de múltiples quillas evidentes, las centrales alargadas hasta el ápice de la lámina, las laterales más cortas y radiantes en la base de los lóbulos laterales; lóbulos laterales ovados, agudos, ligeramente oblicuos, 5 x 5 mm; lóbulo medio orbicular, ápice redondeado, 6.5 x 7 mm. **Columna** delgada, ligeramente arqueada, apicalmente trilobada, las alas de la columna oblicuamente triangulares, ápice angostamente redondeado, 8 mm de largo. **Clinandrio** prominente, margen dentado. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** pequeños, de un tercio del largo de la cavidad estigmática. **Nectario** poco profundo, sin traspasar el perianto, no inflado, no ornamentado. **Antera** ovoide, ápice agudo y papiloso, 4-locular. **Polinios** 4, subobovoides, desiguales; caudículas suaves y granuladas casi del mismo largo que los polinios. **Cápsula** no vista.

Terrestrial, **herb**, branching above. **Roots** basal, from the main stem as well as the branches, thick, fleshy. **Stems** cane-like, terete, erect, straight, branching above in mature plants, the main stem much taller than the branches; the base covered by tubular, non-foliar, minutely striated, rugose sheaths. **Leaves** 12 on the main stem, distributed along the apical half, 3 on the branches; distichous, articulate, erect-spreading, sub-coriaceous; sheath tubular, minutely rugose, striated; blade oblong-lanceolate, sub-obtuse, with a low dorsal keel, margin entire, spreading. **Inflorescence** apical, flowering only once, racemose, arching-nutnant, lax, few-flowered, short; peduncle short, terete, thin, provided with a widely triangular bract; rachis straight. **Flowers** 13, successive, fleshy, resupinate, apple green, the sepals tinged purple; without fragrance. **Floral bracts** small, half as long as the ovary, triangular-lanceolate, acuminate, amplexicaul. **Ovary** terete, thin, not inflated, smooth, short. **Sepals** partly spreading, free, 7-veined, glabrous, margin entire, slightly revolute; dorsal sepals elliptic, apically sub-rounded, minutely apiculate, lateral sepals oblong, obtuse, aristate, slightly oblique. **Petals** partly spreading, free, oblanceolate-spatulate, apex sub-obtuse, 3-veined, the lateral veins short branched, margin entire, slightly revolute. **Lip** united to the column, 3-lobed, base slightly cordate, margin entire, convex in natural position; bicallose, the calli thin, sub-laminar, elongate to the base of the midlobe; disc provided with multiple evident thickened keels, the central keels reaching the apex of the lip, the lateral keels shorter, radiating at the base of the lateral lobes; lateral lobes ovate, acute, somewhat oblique; midlobe orbicular, apex rounded, somewhat larger than the lateral lobes. **Column** slightly arched, apically 3-lobed, the wings of the column oblique triangular, apex narrowly rounded. **Clinandrium-hood** prominent, margin dentate. **Nectary** shallow, without penetrating the ovary, not inflated, smooth. **Anther** ovoid, apex acute, papillose, 4-celled. **Pollinia** 4, sub-obovoid, unequal, caudicles soft and granulate, nearly as long as the pollinia.

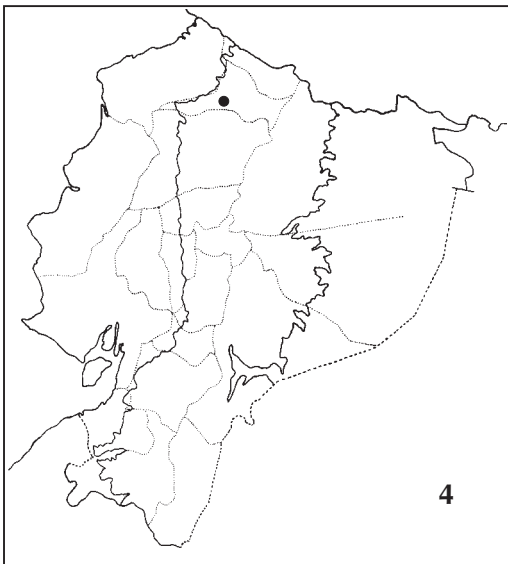
OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: Known only from the type locality, near Lake Cuicocha, Imbabura, Ecuador, terrestrial at 3190 m altitude. This species is sympatric with *E. pichinchaë* Schltr., *E. mojanadae* Schltr., *E. pallatangae* Schltr., *E. cuicochaënsis* Hágsater & Dodson and *E. cotacachiense* Hágsater & Dodson, and there may be hybrids between one or the other. Flowering in September.

RECOGNITION: *Epidendrum angeloglossum* belongs to the Andean Group, Cernuum Subgroup, characterized by the cane-like, sub-apically branched stems, the branches much shorter than the main stem, coriaceous to sub-coriaceous leaves and fleshy flowers. The species is recognized by the oblong-lanceolate leaves, short, few-flowered inflorescence, apple-green flowers, the petals oblanceolate-spatulate, the lip with multiple keels, lateral lobes obliquely ovate, and the midlobe orbicular. *Epidendrum cuicochaënsis* Hágsater & Dodson grows sympatric in the same locality has linear-oblanceolate, subacute leaves, the lip has small, triangular lateral lobes, and the midlobe is sub-rectangular-oblong, the apex truncate. *Epidendrum pallatangae* Schltr. has taller plants, to 3 m, leaves up to 17 cm long, a generally paniculate inflorescence, flexuose rachis, narrowly obovate petals, and the lip slightly 3-lobed or entire. *Epidendrum megaloclinium* Hágsater & Dodson has a densely flowered inflorescence, simultaneous flowers, an elongate ovary (17-40 mm long), sepals dorsally pubescent, and the lip slightly 3-lobed, ornamented with only 3 parallel keels. *Epidendrum cuyujense* Hágsater & Dodson is florally very similar, but the inflorescence is longer and the flowers creamy white, the clinandrium-hood entire, and the anther is reniform. *Epidendrum zipaquiranum* Schltr. has lanceolate, acute leaves, a dense inflorescence of yellow to green flowers, sepals 6-11 mm long, and an entire clinandrium-hood with the margin crenulate.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek *αγγελος*, angel, and *γλωσσα*, tongue, in reference to the lip which, when spread, is reminiscent of an angel with outstretched wings.



Authors: E. Hágsater & E. Santiago

Illustrator: R. Jiménez M.

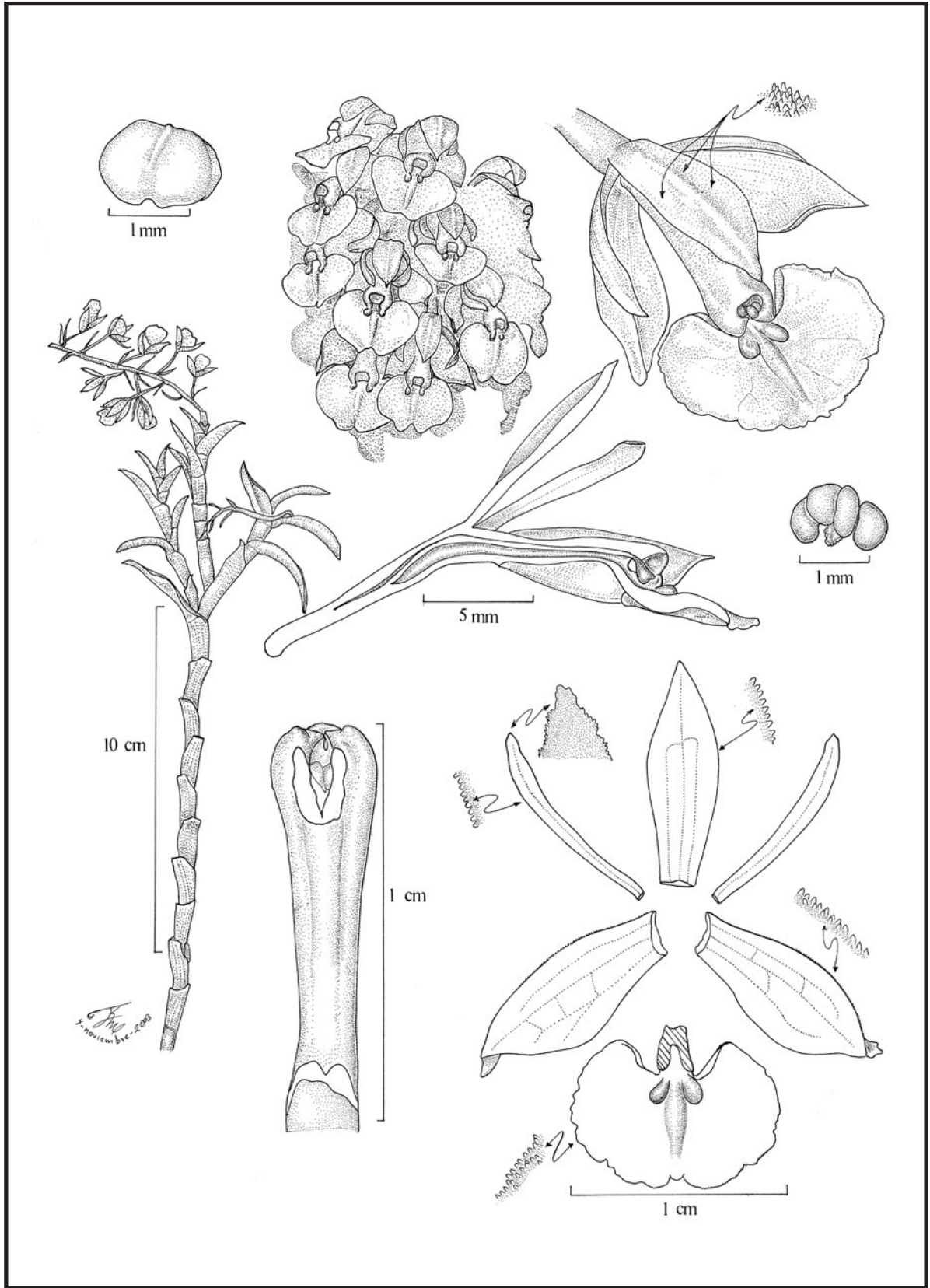
Editors: E. Hágsater & L. Sánchez S.

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ICONES ORCHIDACEARUM 12. 2009.

Plate 1205



EPIDENDRUM ARDENS Kraenzl.

EPIDENDRUM ARDENS Kraenzl., Bot. Jahrb. Syst. 37: 526. 1906.

Type: PERU: Cuzco: Unterhalb Yanamanche, Weg von Cuzco nach Santa Anna, Gebüsche am Bache, aus hartlaubigen und weichlaubigen Formen gemischt, in 3300-3400 m, **Weberbauer 4978**. Holotype B, destroyed. Photo AMES! F! NY! SEL! Lectotype: HBG, here designated. Photo at AMO! NY! (Christenson, 1994, wrongly indicated that the HBG specimen was the holotype).

Herba epífita y litófito, cespitosa, erecta, 50-100 cm de alto. **Raíces** basales y de la base de las ramas, delgadas, escasas, blancas, 1-2 mm de grosor. **Tallo** ramificado hacia la zona apical, tipo caña, terete, grueso, ligeramente sinuoso, ca. 20-45 x 0.54-0.6 cm. **Hojas** numerosas, distribuidas a lo largo de todo el tallo, alternas, abrazadoras, conduplicadas, recurvadas, articuladas; vainas infundibuliformes, estriadas, rugosas, amoratadas, 6-14 x 3.3-5.7 mm; lámina lanceolada, ápice agudo, coriácea, margen entero, verde oscuro teñido de morado, 1.8-2.8[3.4] x 0.6-1.2 cm. **Bráctea espátacea** ausente. **Inflorescencia** apical, racemosa, erecta a arqueado nutante, pluriflora, densa, 5-7.5 cm de largo; pedúnculo corto, terete, delgado, 1-2 cm de largo; desprovisto de brácteas; raquis delgado, terete, recto. **Brácteas florales** ligeramente mas largas a mas cortas que el ovario, angostamente lanceoladas, largamente acuminadas, abrazadoras, 6-14 mm de largo. **Ovario** terete, delgado, liso, no inflado, 8-10 mm de largo. **Flores** 11-24, simultáneas, resupinadas, de color brillante rojo escarlata, anaranjado o raramente amarillo o pardo rojizo; sin datos de fragancia. **Sépalos** entreabiertos, libres, oblanceolados, cortamente acuminados, 3-nervados, margen cortamente papiloso ciliado, carnosos, dorsalmente papilosos, 10.0-10.8 x 3.2-3.9 mm; los **laterales** ligeramente oblicuos, aristados, con una quilla dorsal prominente y levemente erosa. **Pétalos** entreabiertos, libres, lineares, ligeramente arqueados, subagudos, 1-nervados, margen eroso dentado, 9.3 x 1 mm. **Labelo** unido a la columna, entero, reniforme, profundamente cordado en la base, ligeramente emarginado, margen papiloso; bicalloso, con una quilla central ancha y roma que llega al seno apical formando un mucrón ancho; 6.5-7.0 x 9.5-10.2 mm. **Columna** larga, recta, delgada, obcónica en el ápice, 9-10 mm de largo. **Clinandrio** corto, margen entero. **Antera** reniforme, 4-locular. **Polinios** 4, ovoides, algo lateralmente comprimidos, caudículas en dos pares, viscidium semifluido. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** de 1/3 del largo de la cavidad estigmática. **Nectario** penetrando un poco menos de la mitad del ovario, delgado, liso. **Cápsula** no vista.

Epiphytic and lithophytic, erect, caespitose **herb**. **Roots** basal, and from the base of the branches, thin. **Stems** branching towards the apex, cane-like, terete, thick, somewhat sinuous. **Leaves** numerous, distributed throughout the stems, amplexicaul, conduplicate, recurved, articulate, deciduous; sheaths infundibuliform, striated, rugose, purplish; blade lanceolate, apex acute, coriaceous, margin entire, dark green suffused with purple. **Inflorescence** apical, racemose, erect to arching-nutant, densely many-flowered; peduncle short, terete, thin, bare. **Floral bracts** somewhat longer to shorter than the ovary, narrowly lanceolate, long-acuminate, amplexicaul. **Ovary** terete, thin, smooth. **Flowers** 11-24, simultaneous, resupinate, ivory-colored, scarlet, orange or rarely yellow or reddish brown. **Sepals** partly spreading, free, oblanceolate, short-acuminate, 3-veined, margin minutely papillose-ciliate, dorsally papillose; the laterals slightly oblique, aristate, with the dorsal keel prominent and somewhat erose. **Petals** partly spreading, free, linear, slightly arching, subacute, 1-veined, margin erose-dentate. **Lip** united to the column, entire, reniform, base deeply cordate, slightly emarginate, margin minutely papillose; bicallose, with a thickened, rounded keel reaching the apical sinus and forming a wide mucron. **Column** long, straight, thin, widened towards the apex. **Clinandrium-hood** short, margin entire. **Anther** reniform, 4-celled. **Pollinia** 4, obovate, laterally compressed, caudicles in two pairs, viscidium semi-liquid. **Nectary** penetrating less than half of the ovary, thin, smooth.

OTHER SPECIMENS: PERU: Cuzco: La Convención: Paucartambo, Tres Cruces, 3700 m, 30 VII 1941, *Vargas 2054*, AMES! CUZ! Canchayoc, 2950-3600 m, 8 XI 1967, *Vargas 19989*, CUZ! **Urubamba:** Valle de Santa Ana, alturas de Chaico, IX 1928, *Bues (sub Herrera) 2113*, US! Ibid. *Bues (sub Herrera) 2124*, US! (Illustration voucher, except for the raceme). Sayamarca, 3290 m, 1 VIII 1941, *Dreyfus 12688*, UC! Machu Picchu, Sayamarca, 3500 m, 10 IX 2000, *León s.n.* CUZ! Machu Picchu, Quebrada Pacaimayo, 3870 m, 10 IX 2000, *León 4016*, CUZ! Herb. Bennettianum. Wenner Gren ruins, 3400-3600 m, 5 VIII 1944, *Metcalf 30748*, AMES! UC! Ibid. *Metcalf 30751*, AMES! MO! UC! Machu Picchu, 2060-4150 m, 14-22 X 1987, *Núñez 8289*, MO! Hydroelectric station at Aguas Calientes, 2000 m, 28 XI 1987, *Núñez 8698*, MO! Puyupatamarca area, Machu Picchu, 3500-3600 m, 7 VIII 1942, *Vargas 2951*, CUZ!

OTHER RECORDS: Machu Picchu, Quebrada Pacaimayo, 3870 m, 10 IX 2000, *León 4016*, CUZ, Herb. Bennettianum, Illustration, in *Icones Orch. Peruv.* pl. 633, 2001. Camino Inca, 2800-3500 m, *Rolando s.n.*, Orchids of Perú No. 1, CD (Illustration voucher, the raceme). *E. Christenson*, 2003. Manual de las Orquídeas del Santuario Histórico de Machu Picchu. PROFONANPE (photo, page 28). Without locality, Hajek, Frank. In Carlos Hajek, web site, flowers unusually reddish brown.

DISTRIBUTION AND ECOLOGY: Endemic to Southeastern Peru, along the edge of the Cordillera Oriental of the Andes in the province of Cuzco at 2950-3870 m altitude. Growing epiphytic and lithophytic in thickets of sclerophyllous and thin-leaved vegetation, in moss covered elfin forest or on rocky ledges in cloud forest. Flowering from July to November.

RECOGNITION: *Epidendrum ardens* belongs to the Scabrum Group, Soratae Subgroup recognized by the monopodial stem with sub-apical branching, the infundibuliform leaf-sheaths and the acute leaves. The species 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 cupped sepals 10 mm long with the lip reniform, deeply cordate and somewhat emarginate. *Epidendrum soratae* Rchb.f. has greenish yellow flowers, a reniform, apically somewhat 3-lobed, bicallose lip, and 6-7 mm long sepals. *Epidendrum obliquum* Schltr. has a reniform, emarginate lip 4 x 8 mm in size and a straight column.



Epidendrum cardenasii Hágsater has larger flowers, 12-13 mm long sepals, the lip bilobed, widely emarginate and about as long as it is wide, the base short cordate and the calli laminar and divaricate. *Epidendrum bolivianum* Schltr. has larger flowers, sepals 13 mm long, apically bilobed, wider leaves, 7-12 mm wide, the 3 lobes of the lip about equal in size. *Epidendrum cartilaginiflorum* Rchb.f. has a cordiform, somewhat 3-lobed-lip, apex obtuse, rounded, and the sepals are 16 mm long. *Epidendrum fruticulatum* Schltr. has tall, branching plants, the leaves of the branches short, oblong, rounded, a short, suberect inflorescence, a deeply 3-lobed lip, the midlobe rectangular, widened and rounded at the apex which is somewhat emarginate, linear-oblanceolate petals and 6-8 mm long sepals.

CONSERVATION STATUS: DD. Data deficient.

POLLINATION: van der Pijl and Dodson (1969) suggest that *E. ardens* mimics *Gaultheria* sp. to attract hummingbirds as their pollinators. The species they refer to, from the ridge east of Loja is *Epidendrum pseudoglobiflorum* Hágsater & Dodson. (Vouchers: *Dodson 756, 1479, 10520, 16090*). The assumption may also be true of the Peruvian plants of the former.

ETYMOLOGY: From the Latin *ardens*, on fire, in reference to the fire-red color of the flowers.

REFERENCES: Bennett, Jr., D. E., & E. A. Christenson. 2001. *Epidendrum ardens* Kraenzl., *Icones Orchid. Peruv.* pl. 633. Christenson, Eric A. 1994. Significant collections of Orchidaceae conserved in Herbarium Hamburgense (HGB). *Brittonia* 46(4): 344-354. Christenson, E. A. 2003. *Epidendrum ardens* Kraenzl, *Manual de las Orquídeas del Santuario Histórico de Machu Picchu*, PROFONANPE 2003. van der Pijl, L., and C. H. Dodson, 1969, *Orchid Flowers- Their Pollination and Evolution*, Univ. of Miami Press; pgs. 96, 99, 100.

EPIDENDRUM ARISTATUM Ackerman & Montalvo, Selbyana 9(1): 126. 1986.

Type: ECUADOR: Pichincha: west of Mindo toward Puerto Quito, 1600 m, 13 March 1982, C. Luer, A. Hirtz & S. Dalström 7329. Holotype: SEL!

Hierba epífita, subcaespitosa, erecta, de 50-110 cm de alto. **Raíces** basales, carnosas, delgadas, blancas, 1-2 mm de grosor. **Tallos** sencillos, tipo caña, teretes en la base y lateralmente aplanados en el ápice, rectos, 35-90 x 0.3-0.7 cm; la base con vainas tubulares no foliosas, escariosas y fibrosas con el tiempo, 2.5-5.5 cm de largo. **Hojas** 8-15, distribuidas en la mitad apical del tallo, articuladas, alternas, suberectas; vainas tubulares, estriadas, 1.7-6 x 0.3-0.5 cm; lámina angostamente elíptica, acuminada, con una quilla dorsal, margen entero, 7-17 x 1.5-4.5 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical y laterales, pluriracemosa, erecta, 15 cm de largo; pedúnculo de la inflorescencia apical ancipitoso, 6.5-11 cm de largo, con una bráctea cerca del ápice semejante a las florales pero más grande, conduplicada, aguda, 20-30 mm de largo; las inflorescencias laterales con pedúnculo corto, de 2-3 cm de largo; raquis flexuoso. **Brácteas florales** más cortas que el ovario, oblicuamente ovadas, conduplicadas, aristadas, no imbricadas, con el margen dorsal apical serrulado, 7-17 x 3-5 mm. **Ovario** terete, ligeramente ensanchado detrás del perianto, no ornamentado, 13-15 mm de largo. **Flores** 5-25 por racimo, resupinadas, sucesivas, desarrollándose una a la vez, sépalos y pétalos amarillo verdosos, el labelo amarillento; sin datos de fragancia. **Sépalos** libres, oblongo lanceolados, aristados, 5-nervados, margen entero, [10]14-16 x 3-4.5 mm; el **dorsal** extendido, el ápice incurvado hacia la parte dorsal de la columna; los **laterales** entreabiertos, con una quilla dorsal, el ápice recurvado. **Pétalos** entreabiertos, arqueados hacia adelante, libres, filiformes, agudos, 1-nervados, margen entero, [9]13 x 0.5 mm. **Labelo** unido a la columna, entero, revoluto en posición natural, reniforme, el ápice anchamente mucronado, margen entero, [5]13 x 7-8 mm; bicalloso, los callos prominentes, laminares, aplanados, altos, formando un arco dentro del clinandrio y apenas sobresaliendo ligeramente; disco unicarinado, la carina intercallosa, carnosa, ancha, prominente, alargada hasta el ápice de la lamina. **Columna** recta, 5-7 mm de largo (incluyendo el clinandrio). **Clinandrio** prominente, recto, proyectándose más allá del cuerpo de la columna, margen eroso crenulado, ocultando parcialmente a los callos. **Antera** subreniforme, 4-locular. **Polinios** 4, obovoides; caudículas suaves y granulosas, ligeramente más largas que los polinios. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** prominentes, de más de ½ del largo de la cavidad estigmática. **Nectario** muy corto, apenas penetrando detrás del perianto, ligeramente inflado, no ornamentado. **Cápsula** elipsoide, con el perianto persistente, cuerpo 3-3.5 x 1.7 cm; pedicelo 1-14 cm de largo; cuello apical muy corto.

Epiphytic, subcaespitose, erect **herb.** **Roots** produced along the basal internodes of the stem, fleshy, thin. **Stems** simple, cane-like, terete at the base, laterally compressed above, erect, straight. **Leaves** 8-15, distributed along the apical half of the stem, articulate, alternate, suberect; sheath tubular, striated; blade narrowly elliptic, acuminate, margin entire. **Inflorescence** apical and lateral, flowering several times from the same peduncle and then pluriracemose, many-flowered; the apical inflorescence erect, the peduncle elongate, the lateral inflorescences sessile; peduncle erect, straight, ancipitose, two-winged; rachis flexuous. **Floral bracts** shorter than the ovary, ovate, conduplicate, oblique, apical margin minutely toothed. **Ovary** terete, smooth. **Flowers** 5-25, successive, one open per raceme at a time, resupinate, yellow greenish. **Sepals** free, oblong lanceolate, aristate, 5-veined, margin entire; the dorsal spreading, the apex arches over column; the laterals partly spreading, with a dorsal keel, the apex recurved. **Petals** partly spreading, free, filiform, acute, 1-veined, margin entire. **Lip** united to the column, entire, reflexed, reniform, apex mucronate, margin entire; bicallose, the calli laminar, arching toward one another in front of clinandrium-hood which extends the floral tube. **Column** straight. **Clinandrium-hood** surpassing the body of the column, margin slightly erose crenulate. **Pollinia** 4. **Rostellum** apical, slit. **Capsule** narrowly ellipsoid, perianth persistent, pedicel terete, thin, about half as long as the body, apical neck short.

OTHER SPECIMENS: COLOMBIA Nariño: Ricaurte, La Planada-EL Pialapi, 1500-2000 m, 13 XI 1967, *Mora 4020*, COL! **ECUADOR: Carchi:** Río Verde, Cerro Golondrinas, 2070-2430 m, 4 XII 1987, *Hoover 2327*, MO! QCNE! **Esmeraldas:** Lita-San Lorenzo, 230 m, 11 VII 1990, *Dodson 18715*, MO! Lita-San Lorenzo, 800 m, 27 VI 1991, *Dodson 18730*, MO! (Illustration voucher) **Imbabura:** Los Cedros Reserve, 1650-1750 m, *Dalström 1754*, SEL! Ibarra to Lita, Guallupe, 600-1300 m, 1 XI 1988, *Hirtz 3910*, MO! **Pichincha:** Chiriboga, km 84-88, 1200-1350 m, 8 VII 1979, *Dodson 7788*, AAU! MO! SEL! Mulaite, 1600 m, 12 III 1990, *Hirtz 4688*, MO! QCNE! SW of Chiriboga, 1350-1400 m, 8 VII 1979, *Lajtnant 15700*, AAU! GB!

DISTRIBUTION AND ECOLOGY: Known only from the type in northwestern Ecuador, and neighboring Colombia, in the Pacific lowland montane pluvial forest at 230-1750 m altitude, epiphytic. Flowering November to July.

RECOGNITION: *Epidendrum aristatum* belongs to the Allenii subgroup of the Albertii group, distinguished by the caespitose habit, ancipitous stems, apical inflorescence, the apical peduncle ancipitous to the degree of being two-winged, the raceme subtended by a conduplicate bract at the apex of the peduncle, the floral bracts imbricate, flowers successive, one at a time, with a frequently prominent clinandrium-hood. The species is recognized by the awned sepals and floral bracts, filiform petals, the reniform lip and the prominent, straight clinandrium-hood embracing the large, flat, long and high calli which form an arch within and are barely visible beyond. It has been collected in the same locality as *Epidendrum transversovatum* Hágsater & Dodson which has a transversely ovate lip, narrowly elliptic, 3-veined petals and the prominent swollen vesicle at the apical half of the ovary; the ovary is short. *Epidendrum dactyloclinium* Hágsater & Dodson has a prominent three-lobed clinandrium-hood, with the dorsal lobe deeply dentate, the lateral lobes oblong, acute, the lip triangular, the corners rounded, and the petals linear-oblancoolate. *Epidendrum nematopetalum* Hágsater & Dodson has filiform petals, a cordiform lip and a prominent clinandrium-hood somewhat arched with the margin minutely dentate. *Epidendrum tropidioides* Garay has large flowers, the sepals 23 mm long, the petals rhombic and the lip cuneate, with the apex widely rounded, and two very long laminar keels, the margin of the clinandrium-hood is minutely dentate.

CONSERVATIONS STATUS: DD. Data deficient.

ETYMOLOGY: From the Latin, *arista*, a small awn or spike, in reference to the awned floral bracts and sepals characteristic of this species.



Authors: E. Santiago & E. Hágsater

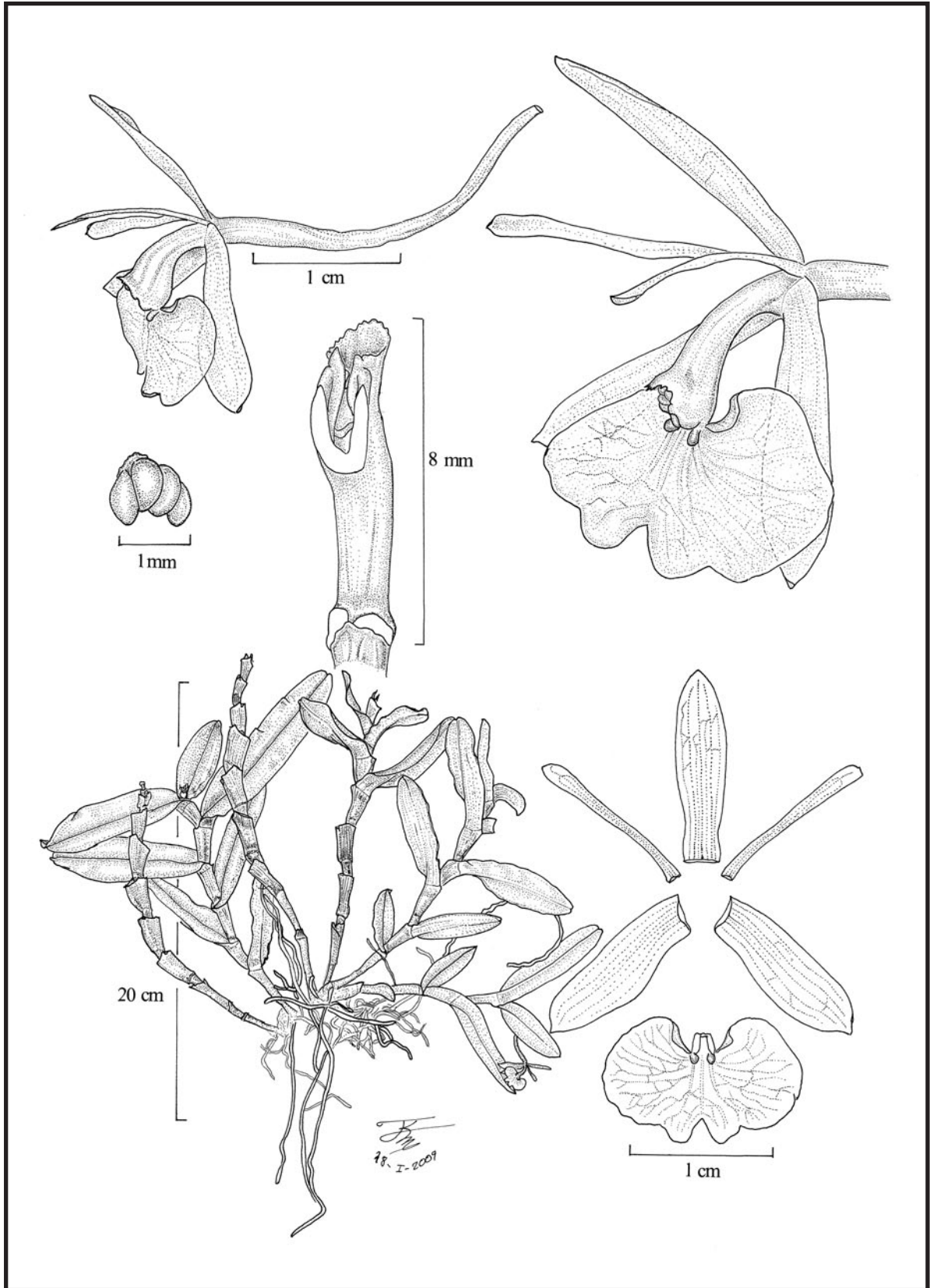
Illustrator: M. López Rosas

Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009. Plate 1207



EPIDENDRUM BERBICENSE Hágsater & L.Sánchez

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

Type: GUYANA: Region U. Demerara-Berbice. Berbice river, from Kuruduni Creek to Shirakura Landing, 50 m, riverine forest and sandy uplands with intermittent creeks, 4° 65'N 58° 13'W, 29 April 1995, **P. Mutchnick 1204, P. K. Harmon**. Holotype: AMO 19923! (Illustration voucher).

Epidendrum oldemanii Christenson simile sed floribus cremeis, labello trilobato, lobulis lateralibus semiorbicularibus, lobulo medio cum sinu apicali duos lobulos semiorbiculares facienti, differt.

Hierba epífita, simpodial, caespitosa, 10-15 cm de alto incluyendo la inflorescencia. **Raíces** basales, carnosas, delgadas, 0.5-1.0 mm de grosor. **Tallos** sencillos, tipo caña, lateralmente comprimidos hacia el ápice, ligeramente flexuosos, 8-13 x 0.35-0.75 cm. **Hojas** 4-7, distribuidas a lo largo del tallo, vaina foliar lateralmente aplanada, lisa, 0.5-2.0 cm de largo; lámina elíptica lanceolada, coriácea, lisa, verde glauco, ápice retuso a asimétricamente bilobado, diminutamente aristado, margen entero, extendido, 2.5-9.5 x 0.7-2.3 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, del tallo maduro, subumbelada, pedúnculo corto, inconspicuo. **Bráctea floral** mucho más pequeña que el ovario, triangular, aguda, 2.3 x 1.4 mm. **Flores** 1-2, simultáneas, resupinadas, concoloras, color crema; fragancia no registrada. **Ovario** terete, no inflado, no ornamentado, 23-25 x 1.0-1.2 mm. **Sépalos** extendidos, libres, elípticos, ápice obtuso, glabros, coriáceos, 5-nervados, margen entero, revolutos, 16-19 x 3.8-4.3 mm; los **laterales** ligeramente oblicuos. **Pétalos** extendidos, lineal elípticos, agudos, membranáceos, 3-nervados, margen entero, extendido, 14-18 x 1.8-2.0 mm. **Labelo** unido a la columna, trilobado, base cordada, margen entero, 7.0-7.7 x 11.5-12.3 mm; bicalloso, los callos pequeños, subglobosos; lóbulos laterales semiorbiculares, 5-6 x 5.5-6.0 mm; lóbulo medio emarginado, con un seno profundo formando dos lóbulos pequeños, semiovalados, 2.0-2.2 x 4.8-5.0 mm. **Columna** arqueada, delgada, 6.2-7.7 x 1.0-1.2 mm. **Clinandrio** prominente, margen eroso. **Antera** subsférica, 4-locular. **Polinios** 4, obovoides, subiguales, lateralmente comprimidos; caudículas no vistas; viscidio no visto. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** no vistos. **Nectario** no visto. **Cápsula** no vista.

Epiphytic, sympodial, caespitose **herb**. **Roots** basal, fleshy, thin. **Stems** simple, cane-like, laterally compressed towards the apex, slightly flexuose. **Leaves** 4-7, distributed throughout the stem, sheath laterally compressed, smooth, blade lanceolate-elliptic, coriaceous, smooth, glaucous green, apex retuse, to unequally bilobed, minutely aristate, margin entire, spreading. **Inflorescence** apical, from the mature stem, sub-umbellate, peduncle short, inconspicuous. **Floral bracts** much shorter than the ovary, triangular, acute. **Flowers** 1-2, simultaneous, resupinate, concolor, cream-colored. **Ovary** terete, not inflated, smooth. **Sepals** spreading, free, elliptic, apex obtuse, glabrous, coriaceous, 5-veined, margin entire, revolute. **Petals** spreading, linear-elliptic, acute, membranaceous, 3-veined, margin entire, spreading. **Lip** united to the column, 3-lobed, base cordate, margin entire; bicallose, the calli small, sub-globose; lateral lobes semi-orbicular; midlobe emarginate, with a deep sinus, forming a pair of semi-ovate lobes, **Column** arching, thin. **Clinandrium-hood** prominent, margin erose. **Anther** sub-spherical, 4-celled. **Pollinia** 4, obovoid, sub-equal, laterally compressed. **Rostellum** apical, slit.

OTHER SPECIMENS: None Seen.

DISTRIBUTION AND ECOLOGY: Known only from eastern Guyana, epiphytic at 50 m altitude. Flowering in April.

RECOGNITION: *Epidendrum berbicense* belongs to the Difforme Group which is characterized by the caespitose, sympodial plants, fleshy, pale green to glaucous leaves, apical inflorescence, sessile, rarely with a short peduncle, one-flowered to corymbose, without spathaceous bracts, fleshy, green to yellowish green rarely white flowers. The species is recognized by the laterally compressed stems with 1-2, cream-colored flowers, the 3-lobed lip, the lateral lobes semi-orbicular, the midlobe with a deep sinus and forming a pair of small, rounded lobes, calli small, sub-globose. It is similar to *Epidendrum oldemanii* Christenson, which is known only from central French Guyana, at 200-350 m altitude, has 2, yellowish green flowers, and the lip reniform, bilobed, with a sinuous margin. *Epidendrum sertorum* Garay & Dunst. is known from Colombia and Venezuela, at 170-500 m altitude, 3-7, has brilliant yellowish green flowers, the column cream-colored, lip entire, cordiform, apex acute, the disc with strongly thickened veins. *Epidendrum amapense* Hágsater & L.Sánchez is found in the French Guyana and neighboring Brazil, the lateral lobes of the lip are semi-ovate, the midlobe shorter than the lateral lobes, transversely oblong, slightly emarginate, with a mucro in the sinus.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In reference to the Berbice River in eastern Guyana.

REFERENCES: Hágsater, E. & L. Sánchez. 1993. *Epidendrum amapense* Hágsater & L.Sánchez. in Hágsater, E. & G. A. Salazar. **Icon. Orchid. (México)** 2: pl. 105. Christenson, E. A. 1994. A new orchid from Saül, French Guiana: *Epidendrum oldemanii*. **Brittonia** 46(1): 54-56.



6

Authors: E. Hágsater & L. Sánchez S.

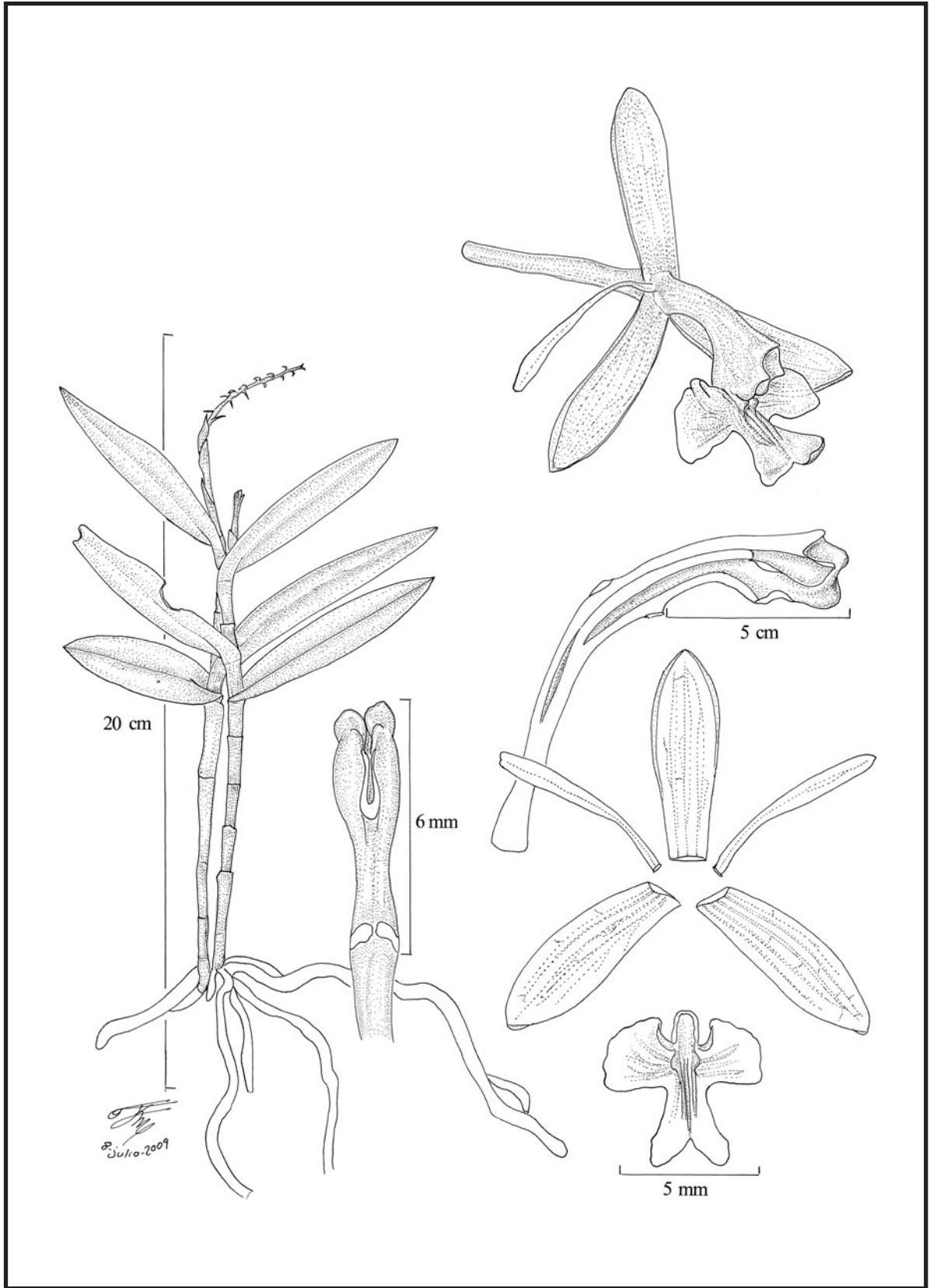
Illustrator: R. Jiménez M.

Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009. Plate 1208



EPIDENDRUM BERNOULLII Rchb.f. ex Hágsater & L.Sánchez

Plate 1209

EPIDENDRUM BERNOULLII Rchb.f. ex Hágsater et L.Sánchez, *sp. nov.*

Type: GUATEMALA: Without locality. Epiphyte. Jan. 1866, **Gustav Bernoulli 270**. Holotype: W-R 17990! (Illustration voucher).

Epidendro chloropsis Schltr. simile sed floribus majoribus, petalis uninervatis et columna arcuata, discedens.

Hierba epífita, simpodial, cespitosa, erecta, 18.5 cm de alto ó más, incluyendo la inflorescencia. **Raíces** basales, carnosas, gruesas, 1.8-3.3 mm de grosor. **Tallos** sencillos, tipo caña, teretes en la base, lateralmente comprimidos hacia el ápice, rectos, 10.5-11.5 x 0.38-0.43 cm. **Hojas** 7-9, dísticas, distribuidas en los dos tercios apicales del tallo; vaina foliar tubular, finamente estriada, 0.5-1.3 cm de largo; lámina angostamente elíptico lanceolada, mucronada, subcoriácea, margen entero, extendido, 3.3-7.5 x 0.6-1.4 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, 6.5 cm de largo; pedúnculo lateralmente aplanado, ancipitoso, recto, 3 cm de largo, provisto de 3 brácteas imbricadas, oblongo triangulares, la inferior redondeada, apiculada, las dos superiores acuminadas, 0.9-2.0 cm de largo; raquis terete, liso, 3.5 cm de largo. **Brácteas florales** más cortas que el ovario, progresivamente más cortas hacia el ápice, angostamente triangulares, agudas, 1.3-4.5 mm de largo. **Ovario** terete, delgado, no ornamentado, 6.0-6.3 mm de largo. **Flores** 20, resupinadas, sin datos de color ni fragancia. **Sépalos** extendidos, libres, glabros, elíptico obovados, obtusos, 3-nervados, margen entero, extendido, 6.3-6.8 x 1.3-1.5 mm; los **laterales** oblicuos, con nervaduras laterales ramificadas dando la apariencia de ser 5-nervados. **Pétalos** entreabiertos, libres, glabros, linear oblanceolados, obtusos, 1-nervados, margen entero, extendido, 5.8-6.0 x 0.3-0.5 mm. **Labelo** unido a la columna, trilobado, base redondeada a subcuadrada, 5.7 x 4.6 mm; bicalloso, los callos laminares, prominentes, carnosos, los cuales se van desvaneciendo y se prolongan en dos quillas delgadas hasta la mitad de la lámina; el disco con una carina central prominente, carnosa, la cual se prolonga hasta el seno del lóbulo medio; lóbulos laterales reniformes, margen ondulado, con venas radiales engrosadas las cuales se van desvaneciendo hacia el margen sin llegar a éste, 2.1 x 2.6 mm; lóbulo medio obdeltado, gradualmente más amplio hacia el ápice que tiene un seno profundo, formando dos lóbulos redondeados, enteros, margen entero, extendido, 3 x 2.5 mm. **Columna** delgada, con el ápice bidentado, arqueada, 4.6-5.0 mm de largo. **Clinandrio** reducido, margen entero. **Antera** no vista. **Polinios** no vistos. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** de 1/3 de la cavidad estigmática. **Nectario** corto, penetrando 1/3 del ovario, liso. **Cápsula** no vista.

Epiphytic, sympodial, caespitose, erect **herb. Roots** basal, fleshy, thick. **Stems** simple, cane-like, terete at the base, laterally compressed towards the apex, straight. **Leaves** 7-9, distichous, distributed throughout the apical 2/3 of the stem; foliar sheath tubular, minutely striated; blade, narrowly elliptic-lanceolate, mucronate, sub-coriaceous, margin entire, spreading. **Inflorescence** apical, racemose; peduncle laterally compressed, ancipitose, straight, provided with 3 imbricating, oblong-triangular, sheaths, the lower one rounded and apiculate, the upper two acuminate; rachis terete, smooth. **Floral bracts** shorter than the ovary, progressively shorter towards the apex, narrowly triangular, acute. **Ovary** terete, thin, smooth. **Flowers** 20, resupinate. **Sepals** spreading, free, glabrous, elliptic-obovate, obtuse, 3-veined, margin entire, spreading; the lateral sepals oblique, the lateral veins branching so as to appear 5-veined. **Petals** partly spreading, free, glabrous, linear-oblanceolate, obtuse, 1-veined, margin entire, spreading. **Lip** united to the column, 3-lobed, base rounded to sub-quadrate; bicallose, the calli laminar, prominent, fleshy, disappearing into a pair of thin keels that reach the middle of the lip; disc with a prominent central, fleshy keel that ends at the apical sinus; lateral lobes reniform, margin undulate, with radiating thickened keels that disappear before reaching the margin; midlobe ob-deltate, gradually widened towards the apex which is deeply emarginate and thus forming a pair of rounded lobules, margin entire, spreading. **Column** arched, thin, the apex bidentate. **Clinandrio-hood** reduced, margin entire. **Rostellum** apical, slit. **Nectary** short, penetrating 1/3 of the ovary, smooth.

OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: Known only from the type, from Guatemala, epiphytic. Flowering in January.

RECOGNITION: *Epidendrum bernoullii* belongs to the Anceps Group, which is recognized by the simple stems, generally elongate, compound racemose inflorescence producing new successive racemes with time, fleshy flowers, filiform to narrowly spatulate petals, and the Polyanthum Subgroup which has elongate, not sub-corymbose racemes. The species is recognized by the stems laterally compressed towards the apex, sepals 6.3-6.8 mm long, 3-veined, petals 1-veined, 3-lobed, bicallose lip, disc with a prominent central keel, lateral lobes reniform, with radiating thickened keels, margin undulate; midlobe ob-deltate, apex deeply emarginate and thus forming a pair of rounded entire lobules, the column arched. It is reminiscent of *Epidendrum chlorops* Schltr. which is endemic to southern-western Mexico, from Oaxaca to Sinaloa, has larger flowers (sepals 10-15.5 mm long), 3-veined petals and a straight column. *Epidendrum clowesii* Bateman ex Lindl. is found in southern Mexico (Oaxaca and Chiapas), Guatemala and El Salvador, has larger flowers, sepals 8-9 mm long, 5-veined, lateral lobes of the lip without thickened veins, column straight. *Epidendrum motozintlensis* Hágsater & L.Sánchez is known only from Chiapas, Mexico, bordering with Guatemala, has slightly larger flowers, sepals 6.8-7.8 mm long, filiform petals, lateral lobes of the lip without radiating thickened veins, midlobe short, transversely rectangular, and a straight column.

CONSERVATION STATUS: DD: Data deficient.

ETYMOLOGY: In honor of Karl Gustav Bernoulli (Basel, 1834-San Francisco, 1878) Swiss physician, pharmacist, botanist and archaeologist who moved to Guatemala in 1858.



Authors: E. Hágsater & L. Sánchez S.

Illustrator: R. Jiménez M.

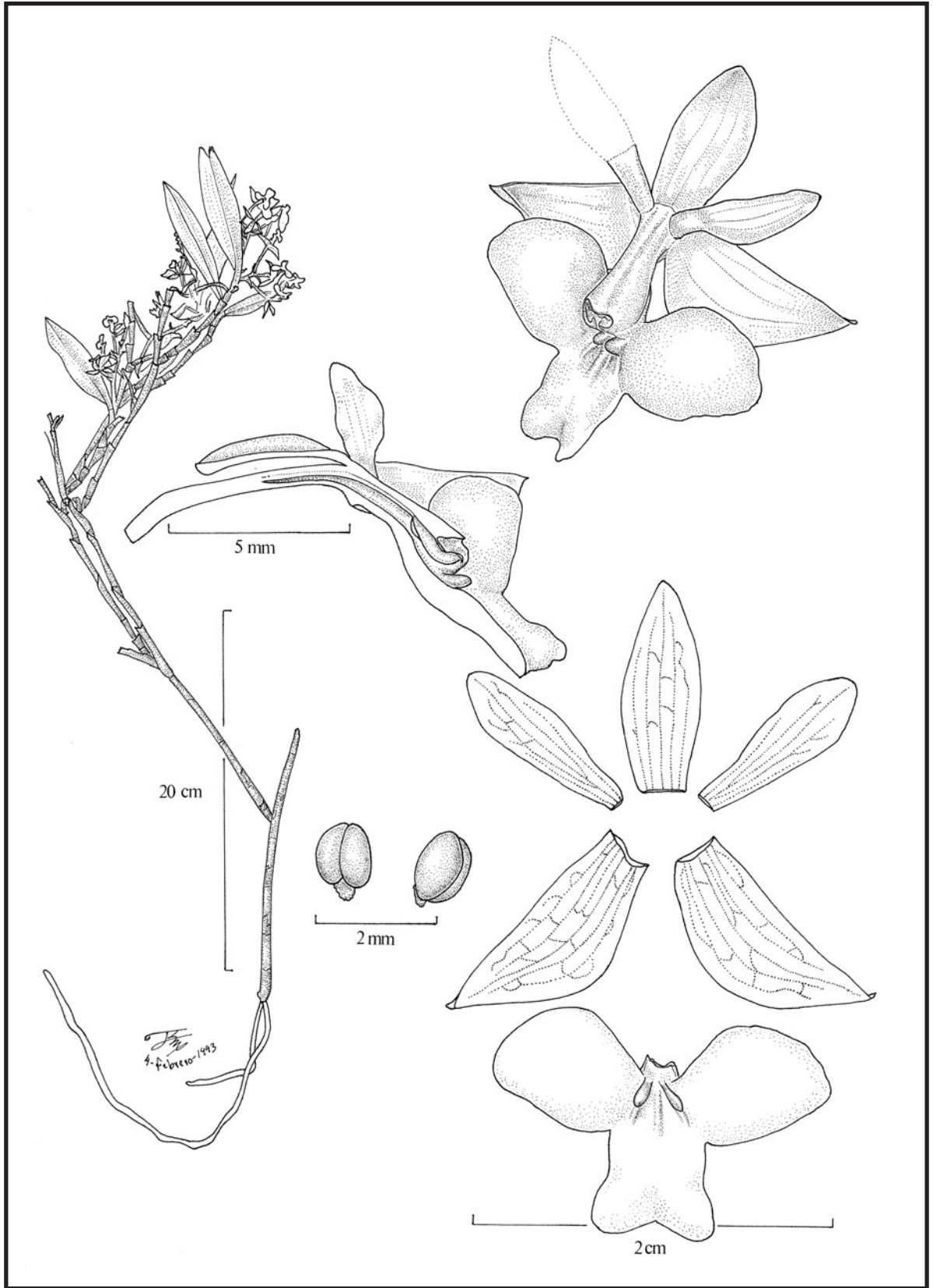
Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009.

Plate 1209



EPIDENDRUM BOEKEI Hágsater

Plate 1210

EPIDENDRUM BOEKEI Hágsater, *sp. nov.*

Type: PERU: Cusco: Urubamba: Base of Huayna Picchu, **Jef D. Boeke 1529**. Holotype: NY! (Illustration voucher).
Isotype: SEL!

Epidendro homoionis Hágsater & Dodson simile sed labello minore et proportionibus differentibus, lobuli medii lobulorum lateralium amplitudine similare, sepalis angustioribus et acutis, petalis angustioribus oblanceolatis, distinctum.

Hierba epífita, de simpodio erecto donde cada tallo nuevo se origina de un entrenudo intermedio del tallo anterior, hasta más de 60 cm de alto. **Raíces** de la base de la planta y ocasionalmente 1-2 de la base de los tallos superiores, carnosas, gruesas, 3-4 mm de grosor. **Tallos** sencillos, tipo caña, teretes, rectos, 5-15 x 0.3-0.4 cm. **Hojas** 2-3, agrupadas hacia el ápice de cada tallo; vaina tubular, hasta 3 cm de largo; lámina angostamente elíptica, aguda, margen entero, membranácea, lisa, verde claro, 4-9 x 1-2 cm. **Inflorescencia** apical, del tallo maduro, florece una sola vez, racemosa, arqueada, 5-6 cm de largo; pedúnculo lateralmente comprimido, arqueado, no ornamentado, sin espata. **Flores** 5-7, simultáneas, resupinadas, verde pálido a amarillo verdoso; fragancia no registrada. **Bráctea floral** mucho más corta que el ovario, triangular, aguda, 3-7 mm de largo. **Ovario** no inflado, terete, no ornamentado, 14-19 mm de largo. **Sépalos** extendidos, libres, con quilla dorsal inconspicua, glabros, membranáceos; el **dorsal** elíptico, agudo, 5-nervado, margen extendidos, 12 x 4.6 mm; los **laterales** elípticos, agudos, oblicuos, 6-nervados, márgenes extendidos, los nervios laterales bifurcados desde la base, 12 x 5.5 mm. **Pétalos** extendidos, angostamente oblanceolados, redondeados, 3-nervados, el nervio medio ramificado desde cerca de la base, 11.5 x 3-6 mm. **Labelo** unido a la columna, trilobado, bicalloso, carnoso, márgenes enteros, base cordada, 11-14 x 14-18 mm; lóbulos laterales obovados, algo oblicuos; lóbulo medio algo más pequeño que los laterales, subcuadrado, ligeramente emarginado. **Columna** recta, gruesa, 7 mm de largo. **Clinandrio** reducido, margen entero. **Antera** ovoide, con una quilla roma al frente, 4-locular. **Polinios** 4, obovoides, lateralmente comprimidos, los exteriores ligeramente más grandes; caudículas suaves y granulosas, ligeramente más largas que los polinios; viscidio semilíquido, transparente. **Rostelo** subapical, rajado. **Lóbulos laterales del estigma** pequeños, de 1/4 del largo de la cavidad estigmática. **Nectario** profundo, penetrando 1/3 del ovario, liso interiormente. **Cápsula** no vista.

Epiphytic **herb**, where the new stem is produced from a middle internode of the previous stem. **Roots** fleshy, from the base of the plant or occasionally from the base of the upper stems. **Leaves** 2-3, narrowly elliptic, herbaceous. **Inflorescence** apical, from the mature stem, arcuate, racemose. **Flowers** 5-7, simultaneous, resupinate, light green to greenish yellow. **Sepals** acute, 5-veined, the lateral veins bifurcate from the bottom; dorsal elliptic; laterals obliquely elliptic. **Petals** narrowly oblanceolate, rounded, 3-veined, the mid-vein branched near the base. **Lip** united to the column, 3-lobed, bicallose, base cordate; lateral lobes obovate, somewhat oblique; midlobe subquadrate, somewhat emarginate. **Column** straight. **Clinandrium-hood** reduced, entire. **Nectary** penetrating 1/3 of the ovary, unornamented. **Anther** ovoid, with a low keel in front, 4-celled. **Pollinia** 4, obovoid, laterally compressed, caudicles soft and granular, viscidium semiliquid.

OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: Known only from the type locality, in southern Peru, at about 2500 m altitude, flowering in April.

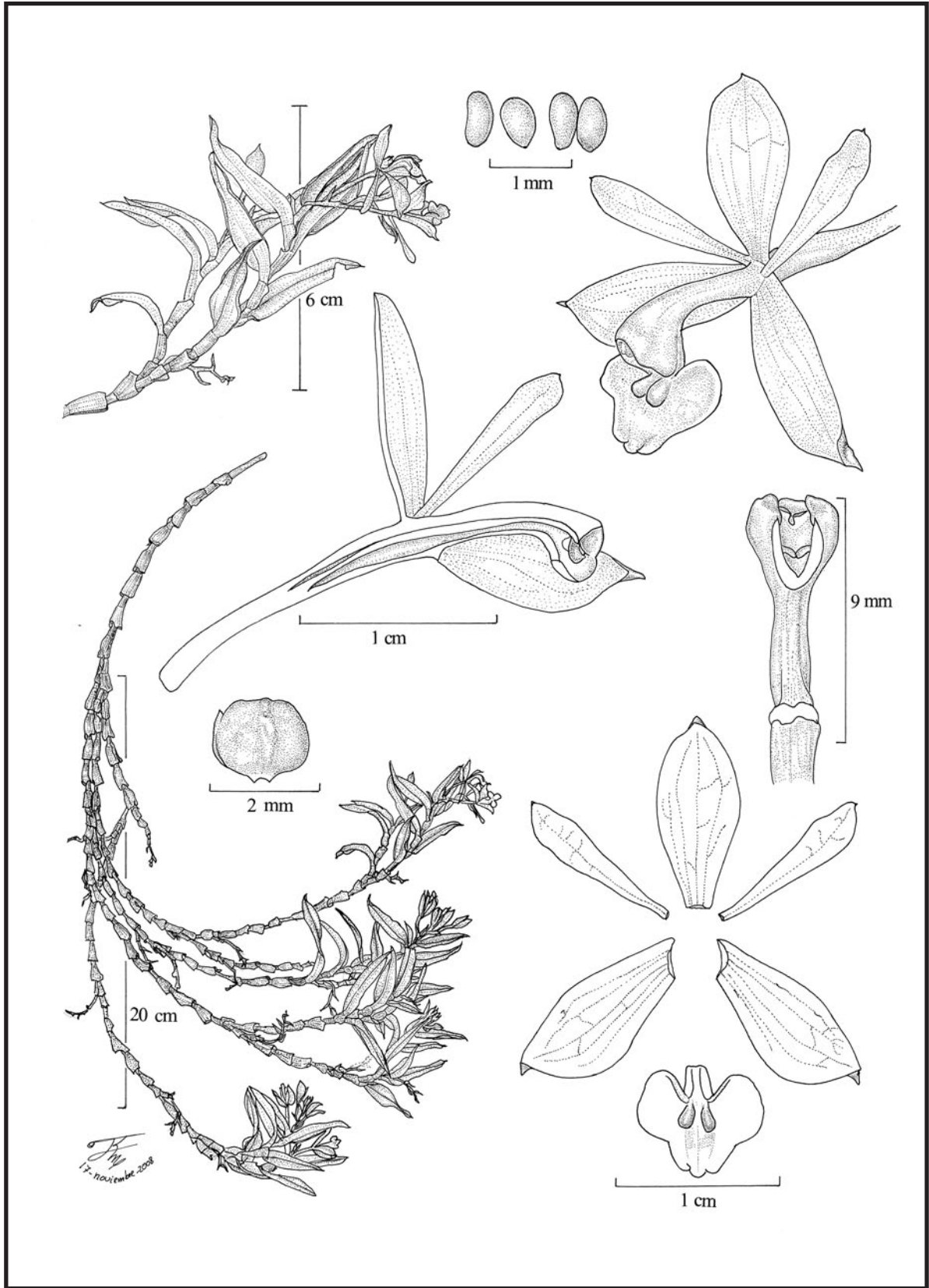
RECOGNITION: *Epidendrum boekei* belongs to the Arbuscula Group, Incomptum Subgroup, which is characterized by the successive lateral growths, few leaves aggregate towards the apex of the stems, arching, apical inflorescence with fleshy green to black flowers, the lip bicallose entire to 3-lobed. The species is recognized by the stems produced from the

middle of the previous stem, with few leaves aggregate near the apex, the racemose inflorescence and the fleshy, pale green to greenish yellow flowers with oblanceolate, 3-veined petals, the 3-lobed lip with the lobes subequal in size, the laterals somewhat obliquely obovate, the midlobe subquadrate, shallow-emarginate. It is very similar to *E. homoion* which is larger overall, the sepals are wider and obtuse, the petals obtrullate, the lip 14-16 x 26-28 mm has proportionately larger semi-orbicular lateral lobes, and a smaller emarginate midlobe. *Epidendrum tamaense* Foldats has larger flowers (sepals 15-21 mm long), obtrullate petals (7 mm wide), the lateral lobes of the lip suborbicular and the midlobe widened towards the apex. *Epidendrum curtisii* A. D. Hawkes has 3-lobed, bicallose lip, sub-orbicular lateral lobes, the midlobe somewhat wider than long, sepals 8-10.5 mm long, and the oblanceolate, 3-veined petals.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In honor of Jef D. Boeke who collected plants in Ecuador, Peru and Bolivia between 1976 and 1980.





EPIDENDRUM BOLIVIANUM Schltr.

Plate 1211

EPIDENDRUM BOLIVIANUM Schltr., Repert. Spec. Nov. Regni Veg. 10: 456. 1912.

Type: BOLIVIA: [La Paz:] Bei Unduavi, c. 3200 m, November 1910, **O. Buchtien s.n.** Holotype: B, destroyed. Sketch of flower in Repert. Spec. Nov. Regni Veg. Beih. 57: Tafel 41, Nr. 161. 1930-1934. Neotype [here designated]: BOLIVIA: La Paz: 4.7 km SE of Unduavi bridge (below) on old road, 16° 18' S 67° 53' W, 2900 m, 7 November 1982, **James C. Solomon 8743**. MO! (Illustration voucher).

Hierba epífita, ramificada, ca. 25 a 40 cm de alto. **Raíces** no vistas. **Tallos** tipo caña, producidos de los entrenudos subapicales del tallo anterior, teretes, delgados, 4.5-14 x 0.1-0.3 cm; cubiertos en la base por 1 vaina infundibuliforme, no foliar, papirácea, 7 x 3 mm. **Hojas** 5-6, distribuidas a lo largo de cada tallo, dísticas, articuladas, erecto extendidas; vaina tubular, estriada, finamente rugosa; lámina oblongo lanceolada a lanceolada, ápice agudo, margen extendido, 3-4 x 0.6-1.2 cm. **Inflorescencia** apical, racemosa, subdensa; pedúnculo corto, 4 mm de largo. **Bráctea espatácea** ausente. **Brácteas florales** mucho más pequeñas que el ovario, triangular lanceoladas, acuminadas, abrazadoras, 3-5 mm de largo. **Flores** 4-6, simultáneas, resupinadas, glabras, de color pardo purpúreo. **Ovario** terete, delgado, no inflado, no ornamentado, 11-13 mm de largo. **Sépalos** libres, extendidos, obovado-espatulados, obtusos, apiculados, 5-nervados, margen extendido, entero, 13 x 3-4.5 mm; los **laterales** ligeramente convexos, oblicuos. **Pétalos** libres, ligeramente reflexos, angostamente linear espatulados, ápice obtuso, diminutamente apiculado, oblicuos, 1-nervados, margen entero, extendido, 12 x 2 mm. **Labelo** unido a la columna, ligeramente convexo, trilobado, base profundamente cordada, margen entero, 5 x 7 mm; bicalloso, los callos globosos; disco provisto de 2 quillas, paralelas, alargadas cerca del ápice del labelo; lóbulos laterales oblicuamente ovados, obtusos, casi tan largos como el lóbulo medio, 1.3 x 3 mm; lóbulo medio trapezoide, el ápice ligeramente apiculado, 2 x 3 mm. **Columna** delgada, ligeramente arqueada, 8 mm de largo. **Clinandrio** corto, margen entero. **Antera** reniforme, con un par de dientes diminutos en el ápice. **Polinios** 4, obovados, algo lateralmente comprimidos. **Nectario** poco profundo, penetrando menos de la mitad del ovario, no inflado, no ornamentado. **Rostelo** apical hendido. **Lóbulos laterales del estigma** pequeños, ocupando 1/3 de la cavidad estigmática. **Cápsula** no vista.

Epiphytic, branching **herb**. **Stems** cane-like, produced from the sub-apical internodes of the previous stem, terete, thin; the base covered by a single infundibuliform, non-foliar sheath. **Leaves** 5-6, distributed throughout the stems, distichous, articulate, erect-spreading; sheath tubular, striated, minutely rugose; blade oblong-lanceolate to lanceolate, apex acute, margin spreading. **Inflorescence** apical, racemose, sub-dense; peduncle short. **Floral bracts** much smaller than the ovary, triangular-lanceolate, acuminate, amplexicaul. **Flowers** 4-6, simultaneous, resupinate, glabrous, purple-brown. **Ovary** terete, thin, not inflated, smooth. **Sepals** free, spreading, obovate-spatulate, obtuse, apiculate, 5-veined, margin spreading, entire; the lateral sepals slightly convex, oblique. **Petals** free, slightly reflexed, narrowly linear-spatulate, apex obtuse, minutely apiculate, oblique, 1-veined, margin entire, spreading. **Lip** united to the column, slightly convex, 3-lobed, base deeply cordate, margin entire; bicallose, the calli globose, disc provided with 2 parallel keels, elongate to near the apex of the lip; lateral lobes obliquely ovate, obtuse, nearly as long as the trapezoid midlobe, its apex slightly apiculate. **Column** thin, slightly arching. **Clinandrium-hood** short, margin entire. **Anther** reniform. **Pollinia** 4, obovoid, laterally compressed. **Rostellum** apical, slit. **Nectary** penetrating nearly one-half of the pedicel.

OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: Known only from Unduavi, near La Paz, Bolivia, epiphytic, at 2900-3200 m altitude. Flowering in November.

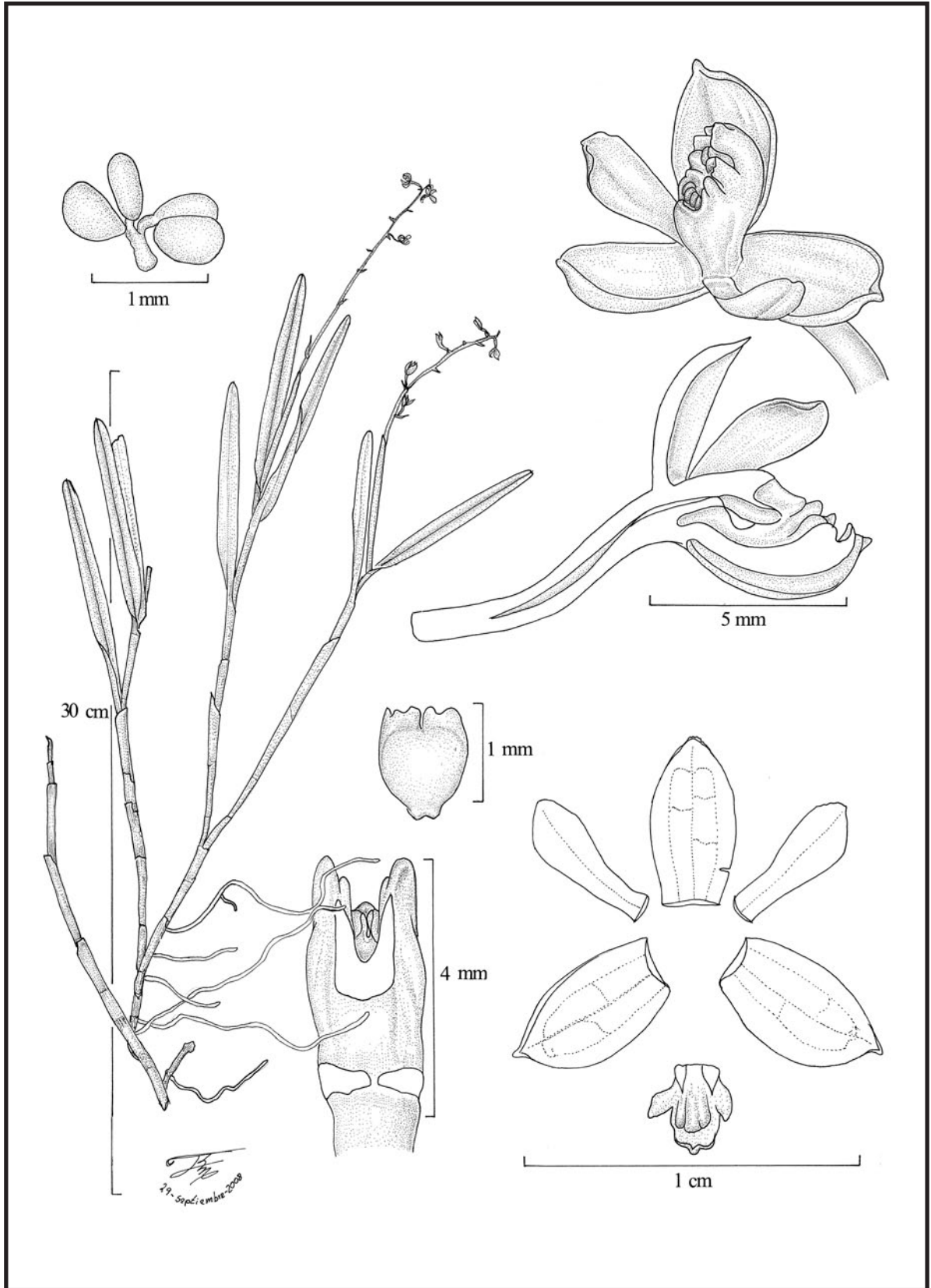
CONSERVATION STATUS: DD. Data deficient.

RECOGNITION: *Epidendrum bolivianum* belongs to the Andean Group, Soratae Subgroup which is characterized by the monopodial branching stem, the acute to obtuse leaves, infundibuliform sheaths, short, racemose inflorescences, and the entire or 3-lobed lip. The species is recognized by the short plants, ca. 25-40 cm tall, the branches produced from the sub-apical internodes of the previous stems, oblong-lanceolate to lanceolate leaves 3-4 cm long, purple-brown flowers, sepals 13 mm long, the midlobe of the lip trapezoid, and the strongly arching column. *Epidendrum chrisomyristicum* Hágsater & E. Santiago has apically profusely branching stems (forming large shrubs), lanceolate to narrowly elliptic leaves, those of the main stem 2.8-11.5 cm long, yellow flowers, sepals 10-12.5 mm long, and the midlobe of the lip "T" shaped. *Epidendrum soratae* Rchb.f. also has short plants 22-27 cm tall, yellowish green flowers, sepals 6-7 mm long, and the lip slightly 3-lobed, reniform.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In reference to Bolivia, where the type was collected.





EPIDENDRUM BRACHYGLOSSUM Lindl.

Plate 1212

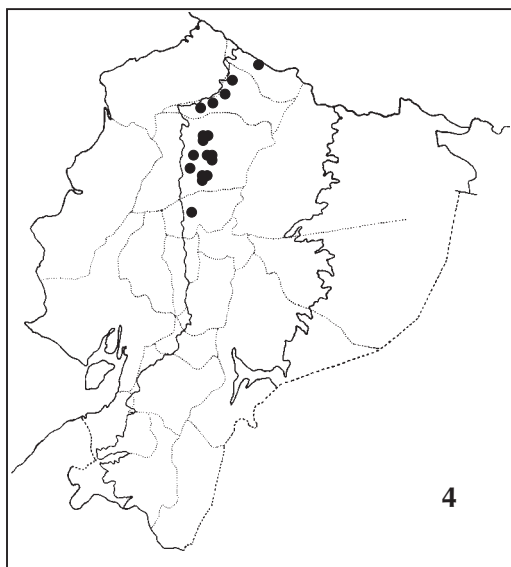
EPIDENDRUM BRACHYGLOSSUM Lindl., Bot. Reg. 30: Misc. 83, 6. 1844. Non Cogniaux 1909. [= *Neocogniauxia monophylla* (Griseb.) Schltr.]

Type: ECUADOR: [Pichincha]: On the western face of the Andes, near Nanegal, **Hartweg s.n.** Holotype: Quito, ex Herb. Hookerianum, K-L! Isotypes: Andes of Quito, ex Herb. Benthonianum, K-L! Nanegal, the specimen on the middle right side, with 3 flowers, W-R 4779! Sketch of the holotype: [drawing on the left side] W-R 5785!

Hierba rastrera, simpodial, epífita, 15-27 cm de alto. **Raíces** 1-2 de la base de cada tallo, gruesas, carnosas, 2-3 mm de grosor. **Tallos** producidos de los nudos inferiores del tallo anterior, a 1-5.5 cm arriba de la base; erectos, rectos, teretes, 6-14 x 0.25-0.5 cm; cubierto en la base por 3 vainas no foliosas, escariosas, iguales a las foliares. **Hojas** 3-4 por tallo, distribuidas en el tercio apical del tallo, vainas tubulares, estriadas y finamente rugosas en seco 7-23 x 3-5 mm; lámina lanceolado oblonga, ápice obtuso, aristado y cóncavo, generalmente rajándose al extenderse, margen diminutamente eroso, 3.0-8.4 x 0.6-0.9 cm. **Brácteas espatáceas** 1-2, ancipitosas, oblongas, agudas, 28-50 x 2.2-3.7 mm. **Inflorescencia** apical, racemosa, tipo cola de rata, alargada, algo laxa, 12-20 cm de largo; el pedúnculo erecto, 5-10 cm de largo, cubierto entre 1/3 y 3/4 por las brácteas espatáceas, arriba ocasionalmente con alguna bráctea linear acuminada de 5-20 mm de largo, el raquis recto, 7-10 cm de largo. **Flores** 9-20, simultáneas, no resupinadas, sépalos y pétalos amarillo-verdosos, labelo blanco, columna ligeramente manchada de púrpura, fragancia no registrada. **Brácteas florales** más cortas que el ovario, triangulares, agudas, 1-3 mm de largo. **Ovario** corto, fuertemente inflado ventralmente hacia el ápice, 4-5 mm de largo. **Sépalos** extendidos, obovados, agudos, 3-nervados, margen entero, 4.0-6.0 x 2.5-3.0 mm; los **laterales** oblicuos, con una quilla dorsal apical. **Pétalos** extendidos, angostamente oblanceolado espatulados, obtusos, 1-3 nervados, margen entero, extendido, 4.0-5.5 x 1.0-1.2 mm. **Labelo** unido a la columna, cordado en la base, trilobado, margen entero, 3-4 x 3.5-4.0 mm; bicalloso, los callos carnosos, prominentes, separados por una quilla ligeramente más larga que los callos, carnosos, lóbulos laterales enteros, oblicuamente subcuadrados a suborbiculares, enteros a agudos; lóbulo medio reducido, cuadrado. **Columna** corta, gruesa, dilatada hacia el ápice, trunca, 4.0-4.5 mm de largo. **Clinandrio** reducido, entero, carnosos. **Antera** reniforme, 4-locular. **Polinios** 4, obovoides, lateralmente comprimidos. **Nectario** sin penetrar el ovario, ancho, inflado, agudo, no ornamentado. **Cápsula** no vista.

Epiphytic, sympodial, creeping **herb.** **Roots** 1-2 from the base of each stem, thick, fleshy. **Stem** produced from the lower nodes of the previous stem, somewhat above the base, erect, straight, terete. **Leaves** 3-4 per stem, distributed along the apical third of the stem; sheaths tubular, striated, rugose when dry, blade oblong-lanceolate, apex obtuse, aristate, concave, generally tearing when spread, margin minutely erose. **Spathaceous bracts** 1-2, ancipitose, oblong, acute. **Inflorescence** apical, racemose, erect, somewhat lax-flowered; peduncle erect, about 1/3 to 3/4 covered by the spathaceous bracts, sometimes with linear, acuminate bract above; rachis straight. **Flores** 9-20, simultaneous, non-resupinate, sepals and petals greenish yellow, lip white, column slightly tinged with purple. **Floral bracts** shorter than the ovary, triangular, acute. **Ovary** short, strongly ventrally inflated towards the apex, short. **Sepals** spreading, obovate, acute, 3-veined, margin entire; lateral sepals oblique, with an apical, dorsal keel. **Petals** spreading, narrowly oblanceolate-spatulate, obtuse, 1-3-veined, margin entire, spreading. **Lip** united to the column, base cordate, 3-lobed, margin entire; bicallose, the calli fleshy, prominent, separated by a slightly longer central, fleshy keel; lateral lobes of the lip obliquely subquadrate to suborbicular, entire to acute; midlobe reduced, quadrate. **Column** short, thick, dilated towards the apex, truncate. **Clinandrium-hood** reduced, entire, fleshy. **Anther** reniform, 4-celled. **Pollinia** 4, obovoid, laterally compressed. **Nectary** without penetrating the ovary, wide, inflated, acute, smooth.

OTHER SPECIMENS: ECUADOR: Andes of Quito, *Hartweg 1417*, K-L x2! W-R! **Carchi:** Maldonado-Tulcán road ca km 30, 2900-3100 m, 5 X 1981, *Werling 240*, QCA! **Cotopaxi:** Around Pilaló, 2400 m, 7 VIII 1968, *Holm-Nielsen 1511*, AAU! AMES! **Imbabura:** Along trail between Pinan [Piñan] and Irubí, N of Volcán de Cotacachi, 8500 ft. [2600 m], 15 III 1944, *Drew E-123a*, AMES! Road to Intag valley above Apuela, 2700 m, 7 V 1980, *Holm-Nielsen 23304*, AAU! **Pichincha:** Below San Juan towards Chiriboga, 3250 m, 29 IV 1955, *Asplund 16122*, S! Between Nono and Nanegal, steep rocky slope, 2000 m, 11 VIII 1955, *Asplund 17245*, S! Near San Carlos between Nono and Nanegal, 1700 m, 28 VIII 1955, *Asplund 17478*, S! Below San Juan towards Chiriboga, 2900 m, 20 I 1956, *Asplund 19054*, AMES! S! Km 59, Quito to Mindo on road via Nono and Tandayapa, 1850 m, 16 VI 1987, *Dodson 17194*, MO! Road Sto. Domingo-Quito, Cornejo Astorga (Tandapí), 2000 m, 7-10 V 1968, *Harling 9345*, GB! Atacazo, 3000 m, 15 VII 1983, *Hirtz 1125*, MO! SEL! Valley of Lloa, *Jamieson s.n.*, W-R! Along road to Mindo west of Quito, 2000 m, 1 II 1978, *Luer 2372*, SEL! NW of Potrerillos, 18.5-20 km by dirt road NW of Calacalí, 2600-2700 m, 15 II 1988, *Molau 3057*, GB! QCA! Road Aloag-Santo Domingo-San Ignacio, km 23, 25 II 1967, *Sparre 14611*, S! Parroquia Nanegal, montañas de Maquipucuna, cerro Sosa and ridge adjacent of cerro Montecristi, 2250-2300 m, 9 VII 1991, *Webster 28917*, MO! (Illustration voucher) Carretera San Juan-Chiriboga-Empalme, sector Guajalito km 55, 2100-2300 m, 20 IX 1986, *Zak 1245*, MO! QCA!



DISTRIBUTION AND ECOLOGY: Endemic to Ecuador, in the interandean valley and on the western slopes of the Andes; epiphytic at 2000-3100 m altitude. Flowering from April to October.

RECOGNITION: *Epidendrum brachyglossum* Lindl. belongs to the Mancun group which is characterized by the sympodial habit, few-leaved stems, racemose inflorescence with 1-2 ancipitose, long, spathaceous bracts with parallel sides, and Mancun Subgroup which is non-resupinate, fleshy flowers with a generally reduced lip. The species can be recognized by its laterally compressed stems, oblong-lanceolate leaves (3.0-8.4 x 0.6-0.9 cm), somewhat lax-flowered inflorescence, linear, 1-3-veined petals, bicallose, 3-lobed lip, the lateral lobes obliquely sub-quadrate to sub-orbicular, entire to acute, midlobe quadrate, entire. *Epidendrum microtum* (Lindl.) Hágsater & L. Sánchez, has large, wide leaves, 6-16 x 1.8-2.5 cm, lip larger, lateral lobes elliptic to sub-triangular, midlobe trapezoid with the margin undulate. *Epidendrum microglossum* Schltr. has a very lax-flowered inflorescence, flexuous rachis and spatulate petals, the 3-lobed lip with similar, elliptic to sub-orbicular lip, the midlobe reduced, obtuse.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek βραχυς, short, and γλωσσα, tongue, in reference to the reduced lip which is typical of this group of species.

REFERENCES: Dodson, C. H. 1999. Orchidaceae in Jørgensen, P.M., & S. León-Yáñez (eds.), Catalogue of the Vascular Plants of Ecuador, **Monogr. Syst. Bot. Missouri Bot. Gard.** 75: 630-775.

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Illustrator: R. Jiménez M.

Editors: E. Hágsater & L. Sánchez S.

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ICONES ORCHIDACEARUM 12. 2009.

Plate 1212

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

Type: COLOMBIA: Antioquia: Páramo Carauta, 3000 m, *G. Schmidtchen s.n.* Holotype: W-R 11165! (Illustration voucher).

Epidendro lirionis Hágsater & Dodson superficialiter simile sed floribus resupinatis, ovario longiore, columna ad basem ventraliter canaliculata et alas apicales valde prominentes ferenti, in exsiccatis callos grandes simulantes, labelli lobulis lateralibus parvis transverse rectangularibus, lobulo medio anguste triangulare acuto, discrepans.

Hierba simpodial, cespitosa, 24 cm de alto incluyendo la inflorescencia. **Raíces** de la base del tallo, delgadas, carnosas, 1.2 mm de grosor. **Tallo** tipo caña, erecto, recto, terete en la base, algo lateralmente comprimido hacia el ápice, 6.5 x 0.25-0.45 cm; cubierto en la base por 2 vainas tubulares, no foliosas, escariosas, finamente estriadas; 2-4 x 0.25-0.45 cm. **Hoja** 1, en el ápice del tallo, sésil; lámina linear oblonga, acanalada, ápice obtuso, margen entero, 9.3 x 0.3 cm. **Bráctea espatácea** 1, oblonga, ancipitosa, aguda, 4.5 x 0.33 cm. **Inflorescencia** apical, racemosa, alargada, laxa, 17 cm de largo; el pedúnculo erecto, recto, lateralmente aplanado, 5 cm de largo, cubierto totalmente por la bráctea espatácea. **Flores** 45, simultáneas, resupinadas, algo carnosas, sin datos de color ni fragancia. **Brácteas florales** mucho más cortas que el ovario, triangular lanceoladas, agudas, abrazadoras, 1-3 mm de largo. **Ovario** terete, delgado, algo arqueado hacia abajo, no inflado, no ornamentado, 11-13 mm de largo. **Sépalos** libres, obovado elípticos, margen entero, extendido, 4.7-5 x 2.5 mm; el **dorsal** extendido, ápice redondeado, 5-nervado; los **laterales** entreabiertos, ligeramente oblicuos, ápice obtuso, diminutamente apiculado, 3 o 4-nervados. **Pétalos** extendidos, libres, angostamente espatulados, ápice redondeado, 1-nervados, margen entero, extendido, 4.5 x 1.5 mm. **Labelo** unido a la columna, trilobado, arqueado hacia arriba en posición natural, margen entero, 3.5 x 1.5 mm; bicalloso, los callos casi ocultos entre las alas apicales de la columna, redondeados, algo lateralmente aplanados, alargados hasta cerca de la base del lóbulo medio; lóbulos laterales muy pequeños y erectos a los lados de las alas apicales de la columna, transversalmente rectangulares, las esquinas redondeadas, 0.2 x 1 mm; lóbulo medio angostamente triangular, carnoso, agudo, diminutamente apiculado, arqueado hacia arriba en posición natural, 2.5 x 1 mm. **Columna** recta, gruesa, 3.5 mm de largo, en la base ventralmente canaliculada, el ápice con un par de alas prominentes, redondeadas, carnosas, que se pueden confundir con callos grandes*. **Clinandrio** reducido, margen entero. **Antera** reniforme, 4-locular. **Polinios** 4, obovoides, algo lateralmente comprimidos; caudículas suaves y granuladas, más cortas que los polinios. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** prominentes, ocupando 1/2 de la cavidad estigmática. **Nectario** muy corto, sin penetrar el ovario, amplio, no inflado, liso. **Cápsula** no vista.

Sympodial, caespitose **herb. Roots** from the base of the stem, thin, fleshy. **Stems** cane-like, erect, straight, terete at the base, somewhat laterally compressed towards the apex; base covered by 2, non-foliar, scarios, minutely striated, tubular sheaths. **Leaf** 1, at the apex of the stem, sessile; blade linear-oblong, canaliculate, apex obtuse, margin entire. **Spathaceous bract** 1, oblong, ancipitose, acute. **Inflorescence** apical, racemose, elongate, lax-flowered; peduncle erect, straight, laterally compressed, totally covered by the spathaceous bract. **Flowers** 45, simultaneous, resupinate, somewhat fleshy. **Floral bracts** much shorter than the ovary, triangular-lanceolate, acute, amplexicaul. **Ovary** terete, thin, somewhat arching downwards, not inflated, smooth. **Sepals** free, obovate-elliptic, margin entire, spreading; the dorsal sepal spreading, apex rounded, 5-veined; lateral sepals partly spreading, slightly oblique, apex obtuse, minutely apiculate, 3-4-veined. **Petals** spreading, free, narrowly spatulate, apex rounded, 1-veined, margin entire, spreading. **Lip** united to the column, 3-lobed, arched upwards in natural position, margin entire; bicallose, the calli nearly totally hidden in between the apical wings of the column, rounded, somewhat laterally compressed, small and elongate, barely appearing from in between the apical lobes of the column, reaching the base of the midlobe; lateral lobes very small, upright against the apical wings of the column, transversely rectangular, corners rounded; midlobe narrowly triangular, fleshy, acute, minutely apiculate, arching upwards in natural position. **Column** straight, thick, the base ventrally canaliculate, the apex with a pair of prominent rounded, fleshy wings, which can be confused as a pair of large calli*. **Clinandrium-hood** reduced, margin entire. **Anther** reniform, 4-celled. **Nectary** very short, without penetrating the ovary, wide, not inflated, smooth.

*NOTE: The apical wings of the column are peculiar in that they are slightly dorsally notched at the apex of the body of the column, so as to appear at first sight like a pair of large calli. However, the calli are small, elongate, narrow, and barely visible in between the column wings, on the disc of the lip. As we have only seen the type, a pressed specimen, we do not know if there is any color in the live flowers that may distinguish these structures.

DISTRIBUTION AND ECOLOGY: Known only from the Cordillera Occidental in western Colombia, at about 3000 m altitude.

OTHER SPECIMENS: None seen.

RECOGNITION: *Epidendrum carautaense* belongs to the Mancum group which is characterized by the sympodial habit, few-leaved stems, racemose inflorescence with 1-2 ancipitose, long, spathaceous bracts with parallel sides; the precise sub-grouping has not been worked out. The species is recognized by the unifoliate stems, the blade thickened and sulcate, lateral lobes of the lip very small, erect, transversely rectangular; midlobe narrowly triangular, fleshy, acute, minutely apiculate, arched upwards, the column ventrally canaliculate at the base, with a pair of prominent, apical, rounded, fleshy wings. *Epidendrum lirion* Hágsater & Dodson is to some extent reminiscent of this species, sharing the upright lateral lobes of the lip embracing the apex of the column, though much larger and rounded, and the subquadrate midlobe is also arched upwards in front of the apex of the column, otherwise the flowers are snow-white,

non-resupinate, sepals and petals much wider, elliptic. There are another two species with a similar habit, but longer ovaries (12-25 mm long), *Epidendrum cilindraceum* Lindl., which has short, angular column-wings, the ovary verrucose towards the apex, wide, flat leaves, a compact raceme, the lateral lobes of the lip larger, falcate, the margin entire with the sub-rectangular midlobe dilated towards the apex and forming two small lobes. *Epidendrum elegantissimum* F.C. Lehm. & Kraenzl. has short, falcate column-wings, non-resupinate flowers, the lateral lobes of the lip progressively lacinate, and the midlobe ob-cuneate, with the margin deeply lacinate.

CONSERVATION STATUS: DD. Data deficient. Known only from the type, collected in the second half of the 18th Century.

ETYMOLOGY: In reference to the town of Carauta, on the Cordillera Occidental in western Colombia, above which the type was collected.



Authors: E. Hágsater & L. Sánchez S.

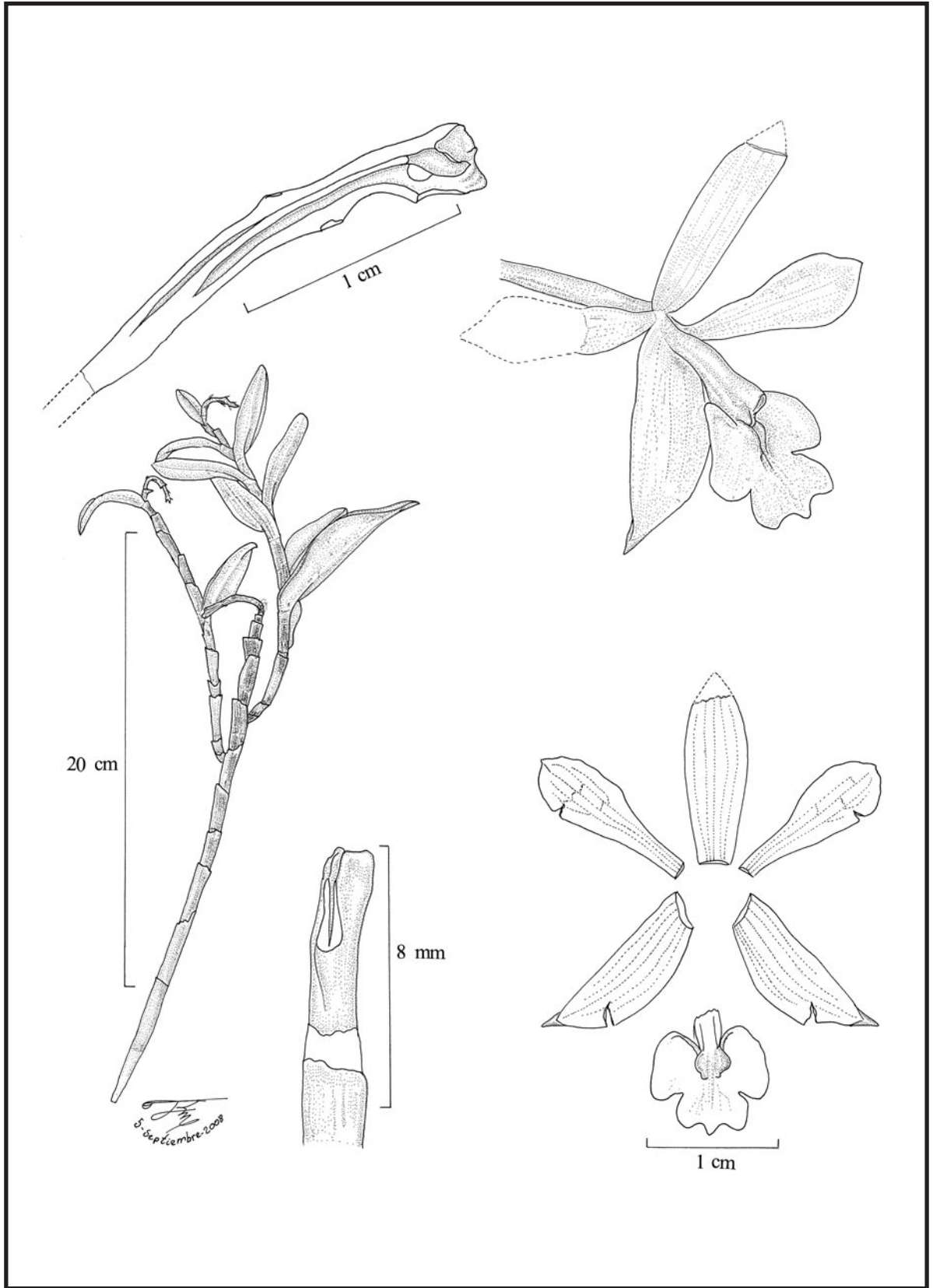
Illustrator: R. Jiménez M.

Editors: E. Hágsater & L. Sánchez S.

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ICONES ORCHIDACEARUM 12. 2009. Plate 1213



EPIDENDRUM CARDIOGLOSSUM Rchb.f.

Plate 1214

EPIDENDRUM CARDIOGLOSSUM Rchb.f., *Linnaea*, 22(6): 841. 1849.

Type: VENEZUELA: [Miranda:] Silla de Caracas, **J. W. K. Moritz 621**. Holotype: W-R 49951!

Hierba terrestre, monopodial, ramificada, erecta, 60-200 cm de alto. **Raíces** no vistas. **Tallos** tipo caña, teretes, erectos, rectos, ramificados hacia el ápice; el principal de más de 40 x 0.5-0.8 cm; las ramificaciones (que a su vez se ramifican), 7-16 x 0.3-0.5 cm; cubiertos en las porciones basales por vainas tubulares, no foliáceas, algo imbricadas, escariosas y fibrosas con el tiempo, 5-10 mm de largo. **Hojas** numerosas en el tallo principal, 5-7 en las ramificaciones, distribuidas en las 2/3 partes apicales de los tallos, desiguales en tamaño (la basal generalmente muy pequeña), alternas, articuladas, subcoriáceas; vaina tubular, 7-35 mm de largo; lámina oblonga a elíptica, obtusa, margen entero, extendido; 2-10 x 0.7-2 cm. **Bráctea espátea** ausente. **Inflorescencia** apical, racemosa, florece una sola vez, arqueado-nutante, pauciflora, laxa, corta, 2-4 cm de largo; pedúnculo muy corto, terete, delgado, 4 mm de largo. **Brácteas florales** mucho más cortas que el ovario, lanceoladas, agudas, abrazadoras, 2-3 mm de largo. **Flores** 4-6, resupinadas, simultáneas, de color amarillo a verdoso; sin datos de fragancia. **Ovario** terete, delgado, no inflado, no ornamentado, 21 mm de largo. **Sépalos** entreabiertos, libres, carnosos, elípticos, 5-nervados, margen entero, revoluto, 12-15 x 4.5-6 mm; el **dorsal** obtuso; los **laterales** oblicuos, agudos, cortamente aristados. **Pétalos** entreabiertos, libres, oblanceolados, redondeados, 3-nervados, margen entero, revoluto, 11-14 x 3-4 mm. **Labelo** unido a la columna, 3-lobado, base profundamente cordada, margen entero, 10.5 x 9 mm; bicallose, los callos laminares, prominentes; disco provisto de tres carinas, lisas, bajas, que se desvanecen mucho antes del ápice de la lámina; lóbulos laterales hemielípticos, 3 x 5.2 mm; lóbulo medio transversalmente oblongo a subrectangular, truncado en el ápice, diminutamente apiculado, 4 x 5 mm. **Columna** recta, delgada, 7 mm de largo. **Clinandrio** corto, margen entero. **Antera** y **Polinios** no vistos. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** y **Nectario** no vistos. **Cápsula** pedicelo terete, delgado, 15 mm de largo; cuerpo esférico, 27-30 x 20-25 mm; cuello apical, 8 mm de largo.

Terrestrial, monopodial, erect, branching **herb**. **Stems** cane-like, terete, erect, straight, branching towards the apex, the main stem about twice as long as the branches or more, the branches themselves branching; covered towards the base by non-foliar, tubular, somewhat imbricating, scariosus sheaths, becoming fibrous with time. **Leaves** numerous on the main stem, 5-7 on the branches, distributed along the apical 2/3 of the stems, unequal in size (the basal leaf generally smaller), alternate, articulate, sub-coriaceous; sheath tubular; blade oblong to elliptic, obtuse, margin entire, spreading, those on the main stem somewhat larger. **Inflorescence** apical, racemose, flowering only once, arching-nutant, short, lax, few-flowered; peduncle very short, terete, thin. **Floral bracts** much shorter than the ovary, lanceolate, acute, amplexicaul. **Flowers** 4-6, resupinate, simultaneous, yellow to green. **Ovary** terete, thin, not inflated, smooth. **Sepals** partly spreading, free, fleshy, elliptic, 5-veined, margin entire, revolute; the dorsal sepal obtuse, the lateral sepals oblique, acute, short aristate. **Petals** partly spreading, free, oblanceolate, rounded, 3-veined, margin entire, revolute. **Lip** united to the column, 3-lobed, base deeply cordate, margin entire; bicallose, the calli laminar, prominent, disc provided with 3, low, smooth keels that disappear long before reaching the apex of the lip; lateral lobes hemi-elliptic; midlobe transversely oblong to sub-rectangular, apex truncate, minutely apiculate. **Column** straight, thin. **Clinandrium-hood** short, margin entire. **Rostellum** apical, slit. **Capsule** pedicel terete, thin, body spherical, apical neck prominent.

OTHER SPECIMENS: COLOMBIA: Without locality data, W-R 49953! [**Norte de Santander:**] Without collector data, Pamplona, W-R 49952! **VENEZUELA:** **Aragua:** carretera Maracay-Choroní, 1600 m, 15 III 1940, *Pittier 14274*, AMES! **Anzoátegui:** Cerro Peonía (Cerro de los Pajaritos), 2350 m, 21 III 1945, *Steyermark 61671*, F! [**Distrito Federal-Vargas:**] Galipán, arriba de Caracas, 25 X 1921, *Pittier 98*, AMES 55690! (in part) In mountains near Galipán, 25 X 1921, *Pittier 99*, G! US! (Illustration voucher). **Mérida:** La Mucuy, 3000-3400 m, 15 VIII 1958, *Pannier 1449*, AMES! **Miranda:** Pico de Naiguatá, above Los Chorros, 2200-2765 m, 16 VI 1945, *Steyermark 62974a*, F! **Sucre:** Cerro Turimiquire, 1700-2500 m, 5 V 1945, *Steyermark 62511*, US! *Ibid.* 2360-2500 m, 6 V 1945, *Steyermark 62596*, F!

OTHER RECORDS: VENEZUELA: **Miranda:** Pico de Naiguatá, 2650 m, *Manara s.n.*, note and presumably illustration published in *Flora de Venezuela* 15(3): 319-320.

DISTRIBUTION AND ECOLOGY: Known from the Cordillera de la Costa and the Andes in Venezuela, and neighboring Colombia, terrestrial growing at 1600-3000 m altitude. Flowering from October to May.

RECOGNITION: *Epidendrum cardioglossum* belongs to the Andean Group, *Cernuum* Subgroup, characterized by the monopodial branching habit, cane-like stems, branching sub-apically, the branches shorter than the main stem, leaves coriaceous to sub-coriaceous and fleshy flowers, the lip 3-lobed. The species is recognized by the oblong to elliptic, obtuse leaves, short, few-flowered inflorescences, the flowers yellow to green, the 3-lobed lip with elliptic lateral lobes, and the midlobe transversely oblong, minutely apiculate. *Epidendrum pseudocernuum* Carnevali & I. Ramírez has the lateral sepals prominently aristate, longer, conical inflorescence with up to 60 greenish cream colored flowers. *Epidendrum cernuum* Kunth has an elongate, cylindrical, many-flowered inflorescence, the lip with small, obliquely ovate lateral lobes, the midlobe subrectangular. *Epidendrum vernixium* Rchb.f. has a lax-flowered inflorescence with successive flowers, and elongate ovary inflated behind the perianth, a 3-lobed lip, and the lateral lobes elliptic and falcate.

NOTE: Foldats (1970) included many specimens under this species, many of which we have not been able to see. Under *E. mojandae* Schltr. he included the type of what was later described as *E. chioneoides* Carnevali & G.A. Romero. He also cited *Aristeguieta 4410* which is from the locality of the type of *E. cardioglossum*, and *Manara s.n.*, from the Pico de Naiguatá, which we presume is the specimen illustrated on page 319; both correspond to *E. cardioglossum*. In our opinion, *E. mojandae* is endemic to northern Ecuador.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek καρδιά, heart, and γλῶσσα, tongue.

REFERENCES: Foldats, E. 1970. *Epidendrum cardioglossum*, *Flora de Venezuela*, 15(3): 185-188 and *Epidendrum mojandae*, *ibid.* 318-320. Carnevali, G., G. Gerlach & G. A. Romero. 2008. *Orchidaceae: Epidendrum* in O. Hokche et al. (eds.), **Nuevo Catálogo de la Flora Vascular de Venezuela**, 761-764.



Authors: E. Santiago & E. Hágater

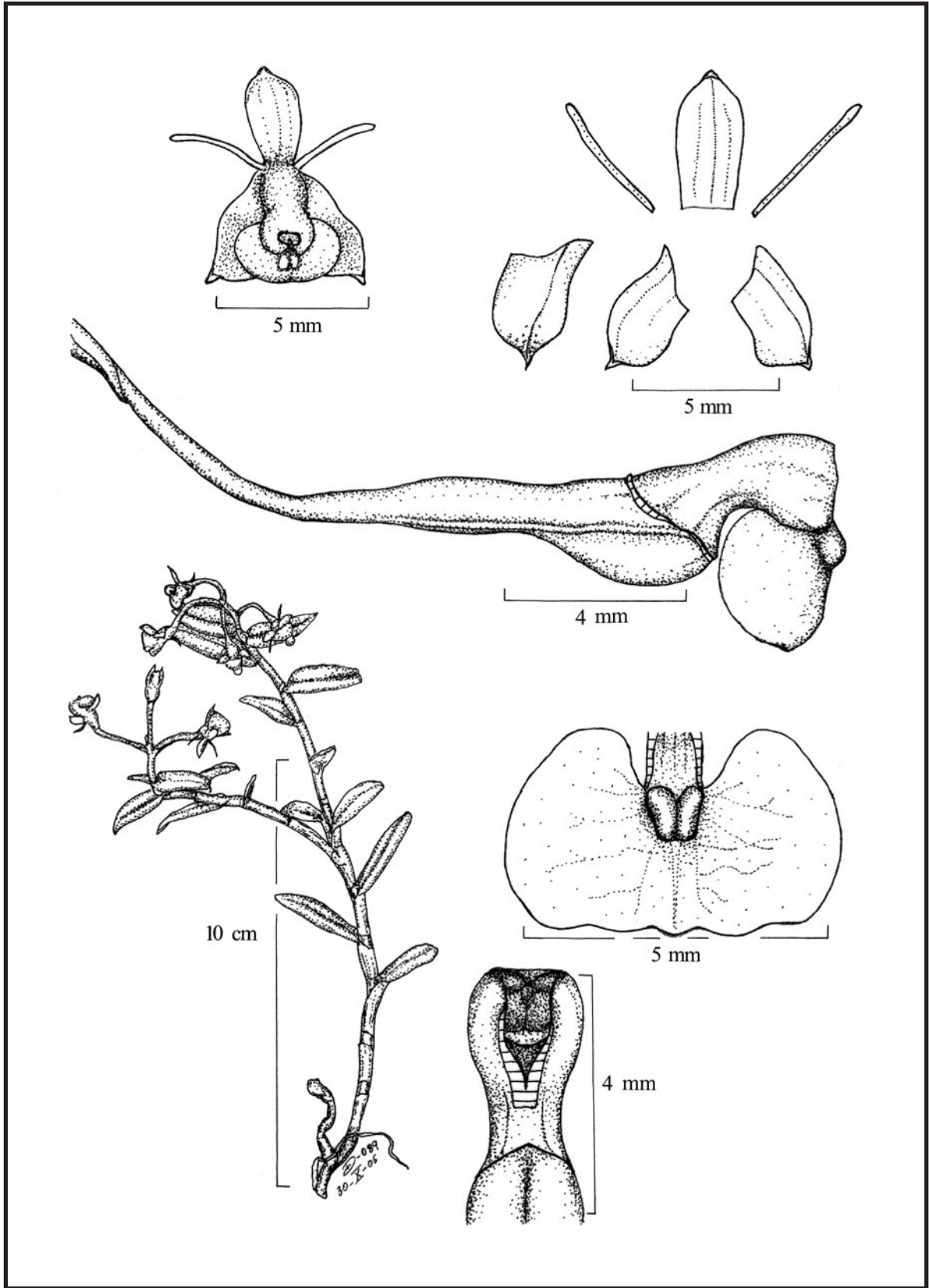
Illustrator: R. Jiménez M.

Editors: E. Hágater & L. Sánchez S.

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ICONES ORCHIDACEARUM 12. 2009. Plate 1214



EPIDENDRUM CARPISHENSE Hágsater, D.Trujillo & E.Santiago

EPIDENDRUM CARPISHENSE Hágsater, D. Trujillo et E. Santiago, *sp. nov.*

Type: PERU: Huánuco: Cumbre de Carpish, a 50 m de la casa de Silverio, dirección Mayobamba*, 2183 m, 25 diciembre 2002, **Delsy M. Trujillo Chávez 78**. Holotype: HURP! (Illustration voucher).

Epidendro obliqui Schltr. simile sed planta parva, floribus minoribus non resupinatis cum columna arcuata et ovario valde inflato, recedens.

Hierba epífita, monopodial, erecta, ramificada arriba, 14.5 cm de alto. **Raíces** basales, delgadas, ca. 1 mm de grosor. **Tallos** ramificados subapicalmente, tipo caña, teretes, delgados; el principal 14.5 x 0.2-0.3 cm; las ramas cortas, 4 cm de largo. **Hojas** 11 en el tallo principal, distribuidas a lo largo del mismo; 5 en las ramas, alternas, articuladas; vaina subinfundibuliforme, estriada, 8-12 x 2-3 mm; lámina linear-lanceolada, subobtusada, incipientemente bilobada, diminutamente apiculada, margen entero, algo carnosa, 0.7-2.5 x 0.4-0.7 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, corta, racemosa, florece una sola vez, ca. 1 cm de largo; pedúnculo terete, delgado, 7 mm de largo; desprovisto de brácteas. **Bráctea floral** mucho más corta que el ovario, triangular lanceolada, acuminada, abrazadora, 2-4 mm de largo. **Flores** 3-4, simultáneas, no resupinadas, de color amarillo cremoso; sin datos de fragancia. **Ovario** terete, delgado, liso, fuertemente inflado ventralmente desde la mitad basal de la columna hasta detrás del perianto, 15 mm de largo. **Sépalos** obovado elípticos, obtusos, dorsalmente apiculados, 3-nervados, margen entero, extendido, 4.5-5 x 2-2.5 mm; el **dorsal** extendido, libre; los **laterales** entreabiertos, unidos de manera oblicua a la columna; la superficie dorsal escasamente verrugosa hacia el ápice. **Pétalos** entreabiertos, libres, linear filiformes, ápice redondeado, 1-nervados, margen entero, extendido, 5 x 0.3 mm. **Labelo** unido a la columna, reniforme, convexo en posición natural, profundamente cordado en la base, ápice truncado con el margen irregular, 3.5 x 5.5 mm; bicalloso, los callos prominentes, subglobosos, alargados hasta la mitad de la lámina. **Columna** arqueada, estrecha en la parte media, 4.5 mm de largo. **Clinandrio** corto, margen entero. **Antera** y **Polinios** no vistos. **Rostelo** apical, hendido. **Lóbulos laterales del estigma**, **Nectario** y **Cápsula** no vistos.

Epiphytic, monopodial, erect **herb**, branching above. **Roots** basal, thin. **Stems** cane-like, terete, thin, scarcely subapically branched; the branches shorter than the main stem. **Leaves** 11 on the main stem, distributed throughout, 5 on the branches, alternate, articulate; sheath sub-infundibuliform, striate; blade linear-lanceolate, sub-obtuse, slightly bilobed, minutely apiculate, margin entire, somewhat fleshy. **Inflorescence** apical, short, racemose, flowering only once; peduncle terete, thin, without bracts. **Floral bract** much shorter than the ovary, triangular-lanceolate, acuminate, amplexicaul. **Flowers** 3-4, simultaneous, non-resupinate, creamy yellow. **Ovary** terete, thin, smooth, strongly inflated ventrally from the middle of the column to behind the perianth. **Sepals** obovate-elliptic, obtuse, dorsally apiculate, 3-veined, margin entire, spreading, the dorsal sepal spreading, free, the lateral sepals partly spreading, obliquely united to the column, dorsal surface scarcely verrucose towards the apex. **Lip** united to the column, reniform, convex in natural position, base deeply cordate, apex truncate, margin irregular; bicallose, the calli prominent, sub-globose, elongate, reaching the middle of the lip. **Column** arched, constricted in the middle. **Clinandrium-hood** short, margin entire. **Rostellum** apical, slit.

OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: Known from northern Peru, along the ridge of the Cordillera Oriental, epiphytic at 2813 m altitude. Flowering in December.

RECOGNITION: *Epidendrum carpishense* belongs to the Soratae 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 small plants (ca. 15 cm tall), scarcely branched, with linear-lanceolate, fleshy leaves to 2.5 cm long, 3-4

creamy yellow flowers, sepals 4.5-5 mm long; lip reniform with the margin entire, bicallose, the calli prominent, reaching the center of the lip. *Epidendrum moscozoi* Hágsater & E. Santiago, has plants about as tall, but produces the inflorescence from very short branches and thus appear to be lateral on the stems, with 3, white-colored flowers, the lip reniform with the base cordate, margin crenate, and very short calli. *Epidendrum soratae* Rchb.f. has taller plants (to 27 cm) with lanceolate leaves 1.7-4.7 cm long, 8-12, green or yellowish green flowers, sepals 6.7-7 mm long, and the lip reniform, slightly 3-lobed at the apex. *Epidendrum obliquum* Schltr. has plants to 57 cm tall, lanceolate leaves 1-4 cm long, and the reniform lip has a slightly emarginate apex, the ovary is not inflated.

CONSERVATION STATUS: DD. Data deficient.

***NOTE:** Mayobamba refers to a small town near Carpish Pass, not Moyobamba, the capital of the Department of San Martín.

ETYMOLOGY: In reference to the type locality, the Carpish Pass, on the eastern edge of the Cordillera Oriental.



Authors: E. Hágsater, D. Trujillo & E. Santiago

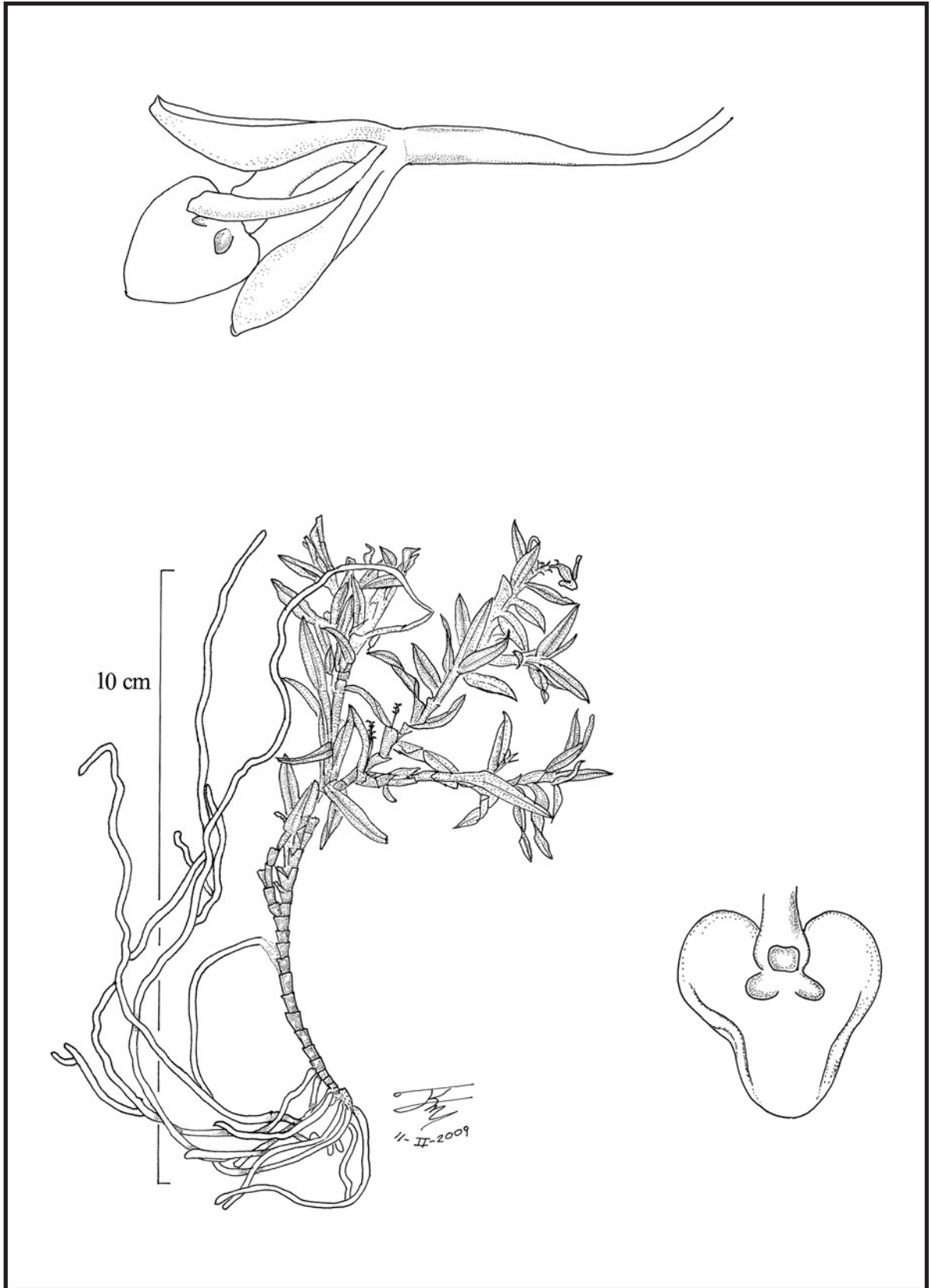
Illustrator: D. Trujillo

Editors: E. Hágsater & L. Sánchez S.

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ICONES ORCHIDACEARUM 12. 2009. Plate 1215



EPIDENDRUM CARTILAGINIFLORUM Rchb.f.

Plate 1216

EPIDENDRUM CARTILAGINIFLORUM Rchb.f., Xenia Orch. 3: 24. 1878.

Type: BOLIVIA: [La Paz:] Ananea: Cerro de Tuilli supra arbores, 3100 m, Junio 1860, **G. Mandon 1137 bis**.

Holotype: W-R 49742! Illustration (flower and lip, with description) W-R 33756! (Illustration voucher flowers and lip)

[*Mandon 1137 bis* from Sorata, is a different collection*. Not *Mandon 1137*= *E. scopulorum* Rchb.f.]

Hierba epífita, erecta, monopodial, ramificada, ca. 30 cm de alto. **Raíces** de la base del tallo principal, sencillas, largas, gruesas, ca. 3 mm de grosor. **Tallos** muy ramificados, producidos de un entrenudo subapical del tallo anterior, erectos, delgados; el basal de ca. 15 x 0.8 cm; los superiores, muy cortos, ca. 4 x 0.4 cm. **Hojas** numerosas en el tallo principal, 2-3 en los superiores, distribuidas a lo largo de todo el tallo, articuladas, alternas; vainas tubulares, infundibuliformes, estriadas, 5-10 x 3-4 mm; lámina lanceolada, aguda, 3-4.5 x 0.7-0.9 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, suberecta, pauciflora, laxa, muy corta, 1.5 cm de largo; pedúnculo subsésil. **Flores** 3, simultáneas, resupinadas, de color ocre, cartilaginosas, sin datos de fragancia. **Bráctea floral** mucho más cortas que el ovario, angostamente triangulares, agudas, abrazadoras, 4-6 mm de largo. **Ovario** terete, delgado, ligeramente inflado en los 2/3 apicales, 23 mm de largo. **Sépalos** entreabiertos, libres, oblanceolados, agudos, 16 x 5 mm; los **laterales** oblicuos. **Pétalos** entreabiertos, libres, lineares, agudos, 15 x ca. 1 mm. **Labelo** unido a la columna, entero, carnoso, triangular cordiforme, obtuso, base ligeramente cordada, margen entero, 7 x 5 mm; bicalloso, los callos redondeados, pequeños; disco desprovisto de quillas. **Columna** delgada, 11 mm de largo. **Clinandrio** corto. **Antera y Polinios** no vistos. **Rostelo** apical, hendido. **Cápsula** no vista.

Epiphytic, erect, monopodial **herb** with sub-apical branching. **Roots** from the base of the main stem, simple, long, thick. **Stems** much branched, produced from a subapical internode of the previous stem, erect, thin; the main stem longer than the branches. **Leaves** numerous on the main stem, 2-3 on the branches, distributed throughout the stems, articulate, alternate; sheaths tubular, infundibuliform, striated; blade lanceolate, acute. **Inflorescence** apical, racemose, sub-erect, lax, few-flowered, very short; peduncle sub-sessile. **Flowers** 3, simultaneous, resupinate, ochre colored, cartilage-like. **Floral bracts** much shorter than the ovary, narrowly triangular, acute, amplexicaul. **Ovary** terete, thin, slightly inflated along the apical 2/3, long. **Sepals** partly spreading, free, oblanceolate, acute; the lateral sepals oblique. **Petals** partly spreading, free, linear, acute. **Lip** united to the column, entire, fleshy, triangular-cordiform, obtuse, base slightly cordate, margin entire; bicallose, the calli rounded, small; disc without keels. **Column** thin, long. **Clinandrium-hood** short.

OTHER SPECIMENS: BOLIVIA: La Paz: Soratae inter Chiapata [Cochipata] et rivum Ucumarini, 3200 m, VII 1857, *Mandon 1137 bis*, P! (a mixed collection, only the large specimen on the right, the smaller specimens correspond to *E. scopulorum*) W-R 49741! (Illustration voucher, plant)

DISTRIBUTION AND ECOLOGY: Known only from upper eastern slope of the Andes, east of lake Titicaca, in paramo yungueño, at 3100-3200 m altitude. Flowering in June and July.

RECOGNITION: *Epidendrum cartilaginiflorum* belongs to the Andean Group, Soratae Subgroup characterized by the monopodial, branching habit, the new stems generally arising from the apex of the previous stem, thus appearing as long stems with lateral inflorescences, acute to acuminate leaves and infundibuliform sheaths. The species is recognized by the very short, few-flowered inflorescences, the ochre-colored flowers, sepals 16 mm long, column 11 mm long, and the triangular-cordiform lip. *Epidendrum scopulorum* Rchb.f. is vegetatively very similar, but the flowers are violet-purple, sepals 9 mm long, and column 6 mm long. *Epidendrum soratae* Rchb.f. has up to 12 flowers on an inflorescence, 7 mm long sepals, a slightly 3-lobed lip and the ovary ventrally inflated. *Epidendrum bolivianum* Schltr. has purple-brown flowers, 13 mm long sepals, and a 3-lobed lip, minutely apiculate.

***NOTE:** It evident to us that Mandon used his numbers for what he thought was a single species from different localities.

Thus there are two different localities for his *1137 bis*, the holotype comes from Ananea, while other specimens were collected near Sorata. In the same Sorata locality he collected *1137* which corresponds to *E. scopulorum*.

CONSERVATION STATUS: DD. Data deficient. Apparently rare.

ETYMOLOGY: From the Latin *cartilagosus*, flexible but firm and tough, or a polished cartilage-like aspect, in reference to the aspect of the flowers.



Authors: E. Santiago & E. Hágsater

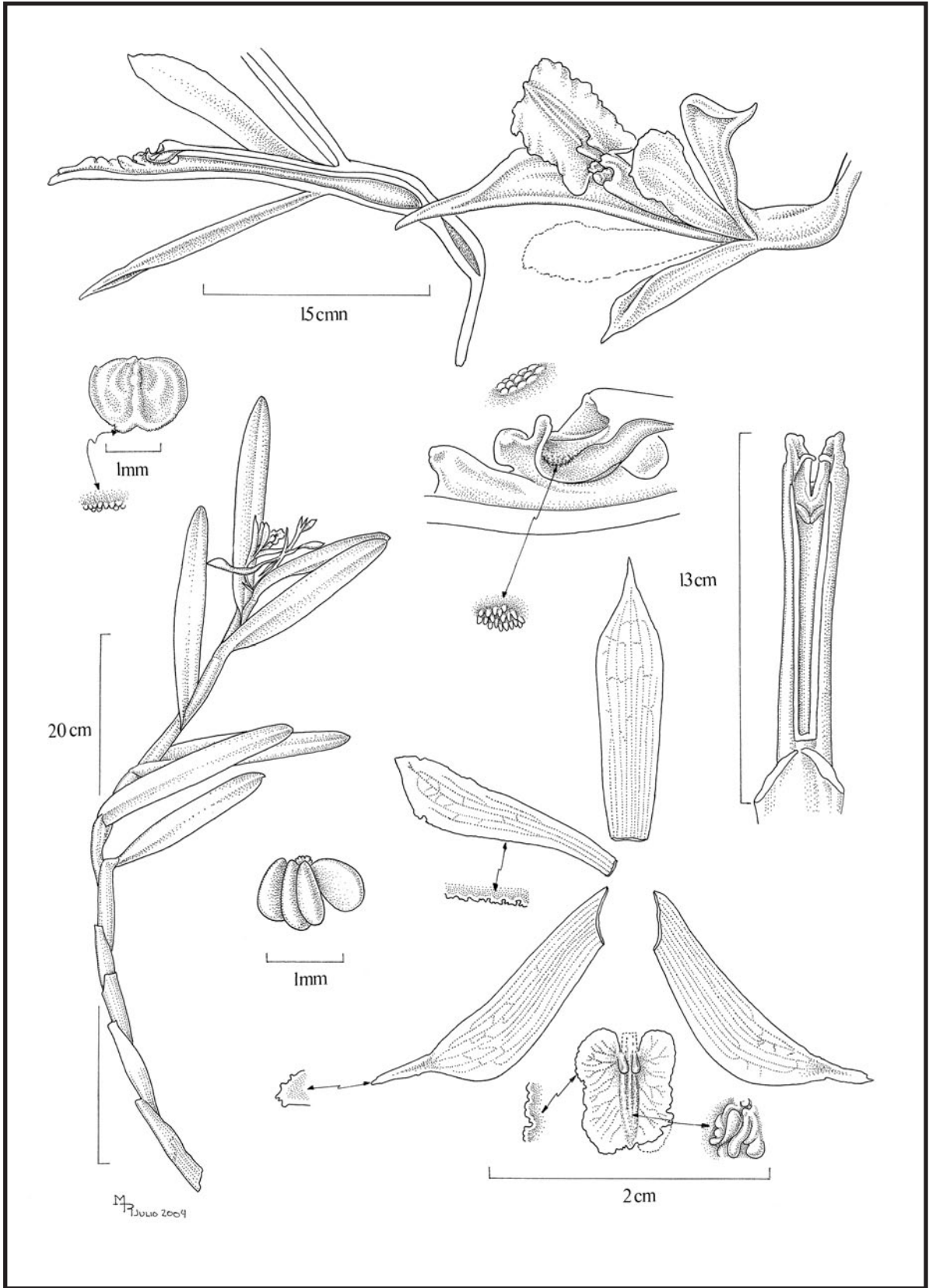
Illustrator: R. Jiménez M.

Editors: E. Hágsater & L. Sánchez S.

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ICONES ORCHIDACEARUM 12. 2009. Plate 1216



EPIDENDRUM CENTRONUM Hágsater & Dodson

Plate 1217

EPIDENDRUM CENTRONUM Hágsater et Dodson, *sp. nov.*

Type: ECUADOR: Loja: Cajanuma Mts. south of Loja, 2500 m, **Dennis Dalessandro 735**. Holotype: MO!
(Illustration voucher).

Epidendrum pozoi Hágsater & Dodson simile sed floribus viridibus cum labello infuscato, ovario brevi et superficialiter inflato, labello parum trilobato panduriformi, sepalis cum arista erosa prominenti, separabile.

Hierba probablemente terrestre, monopodial, ramificada, 80 cm de alto. **Raíces** no vistas. **Tallos** ramificados cuando maduros, tipo caña, teretes hacia la base a lateralmente aplanados hacia el ápice, cubiertos en la base por vainas tubulares no foliares, finamente estriadas, rugosas y fibrosas con el tiempo, 22-25 mm de largo; el principal ca. de 80 x 0.4-0.6 cm; las ramificaciones probablemente más cortas. **Hojas** 7 o más en el tallo principal, suberectas, articuladas, dísticas; vainas tubulares, finamente estriadas, rugosas, 12-35 mm de largo; lámina oblongo lanceolada a oblongo elíptica, subobtusas, coriácea, margen entero, extendido, 6-9 x 0.8-1.3 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, florece una sola vez, racemosa, erecta, pauciflora, laxa, 3.5 cm de largo; pedúnculo muy corto, lateralmente aplanado, 3 mm de largo. **Brácteas florales** prominentes, casi de la mitad del largo del ovario, triangular lanceoladas, largamente acuminadas, abrazadoras, 9-13 mm de largo. **Flores** 6, glabras, sucesivas, no resupinadas, sépalos y pétalos verdes, labelo teñido de pardo. **Ovario** terete, delgado, ligeramente inflado detrás del perianto, no ornamentado, 21 mm de largo. **Sépalos** entreabiertos, libres, glabros, oblongo oblanceolados, subagudos, con una arista dorsal erosa, muy prominente, 9-nervados, margen extendido, entero, 20-21 x 5 mm; los laterales oblicuos, ligeramente falcados. **Pétalos** entreabiertos, oblanceolados, obtusos, 3-nervados, margen serrado-crenado, extendido, 17 x 4 mm. **Labelo** unido a la columna, incipientemente trilobado, panduriforme, base cordada, margen crenulado, 9 x 7 mm; bicalloso, los callos prominentes, laminares; disco provisto de 3 quillas delgadas, que se unen en una sola quilla que se desvanece en el ápice de la lamina; lóbulos laterales incipientes, hemicirculares; lóbulo medio subcuadrado, con el ápice ligeramente emarginado. **Columna** recta, delgada, el ápice con un par de alas redondeadas, 13 mm de largo. **Clinandrio** reducido, margen entero. **Antera** reniforme, 4-locular. **Polinios** obovoides, algo lateralmente aplanados; caudículas mucho más cortas que los polinios, suaves y granulosas. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** pequeños. **Nectario** penetrando 1/3 del ovario, ligeramente inflado, liso. **Cápsula** no vista.

Probably terrestrial, monopodial, branching **herb**. **Stems** branching when mature, cane-like, terete towards the base, laterally compressed towards the apex, the base covered by non foliaceous, tubular, striated, rugose sheaths, becoming fibrous with time; the main stem longer than the branches. **Leaves** 7 or more on the main stem, sub-erect, articulate, distichous; sheaths tubular, minutely striated, rugose; blade oblong-lanceolate to oblong-elliptic, sub-obtuse, coriaceous, margin entire, spreading. **Inflorescence** apical, flowering only once, racemose, erect, lax, few-flowered; peduncle very short, laterally compressed. **Floral bracts** prominent, nearly half as long as the ovary, triangular-lanceolate, long acuminate, amplexicaul. **Flowers** 6, glabrous, successive, non-resupinate, sepals and petals green, lip tinged brown. **Ovary** terete, thin, slightly inflated behind the perianth, smooth. **Sepals** partly spreading, free, glabrous, oblong-oblanceolate, subacute, with a prominent dorsal, erose awn, 9-veined, margin entire, spreading; the lateral sepals oblique, slightly falcate. **Petals** partly spreading, oblanceolate, obtuse, 3-veined, margin serrate-crenate, spreading. **Lip** united to the column, slightly 3-lobed, panduriforme, base cordate, margin crenulate; bicallose, the calli prominent, laminar, disc provided with 3 narrow keels, united and forming a single keel that disappears at the apex of the blade; lateral lobes shallow, semi-circular; midlobe sub-quadrangle, the apex slightly emarginate. **Column** straight, thin, the apex with a pair of rounded wings, long. **Clinandrium-hood** reduced, margin entire. **Anther** reniform, 4-celled. **Pollinia** obovoid, somewhat laterally compressed; caudicles much shorter than the pollinia, soft and granulose. **Rostellum** apical, slit. **Nectary** penetrating 1/3 of the ovary, slightly inflated, smooth.

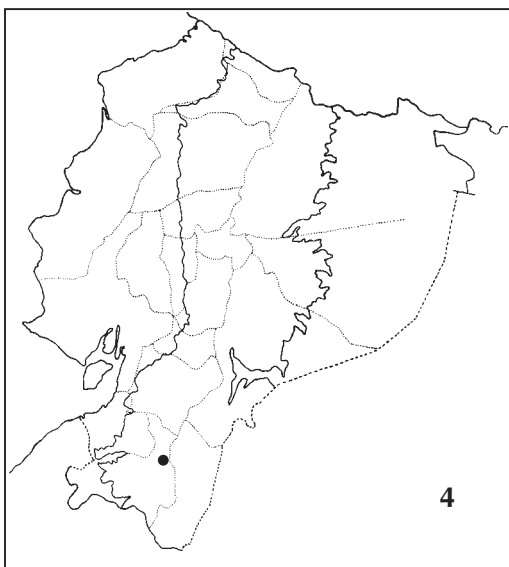
OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: Known only from the type, from southern Ecuador, probably terrestrial, at 2500 m altitude. Flowering in September.

RECOGNITION: *Epidendrum centronum* belongs to the Andean Group, Vernixium Subgroup, characterized by the monopodial, branching stems, erect inflorescences, lax flowered, the flowers non-resupinate, the lip more or less 3-lobed. The species is recognized by the oblong-lanceolate to oblong-elliptic, 8-13 mm wide leaves, the short peduncle of the inflorescence, 3.5 cm long, 6 successive, green flowers, the lip tinged brown, sepals 20-21 mm long, prominently aristate, and the panduriforme lip, slightly longer than wide. *Epidendrum pozoi* Hágsater & Dodson is vegetatively very similar, but the inflorescence is longer, 6-10 cm long, the flowers green, concolor, (turning yellow with age), the ovary elongate, 34-62 mm long, and the lip clearly 3-lobed. *Epidendrum panduratum* Hágsater & Dodson has wider, ovate-elliptic leaves, the apex retuse, the densely, 6-12 flowered inflorescence of simultaneous, pink-green flowers, the sepals 15-16 mm long minutely apiculate.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek κεντρον, a sharp point, sting, spur of a cock, in reference to the awned lateral sepals, which characterize this species.



Authors: E. Hágsater & E. Santiago

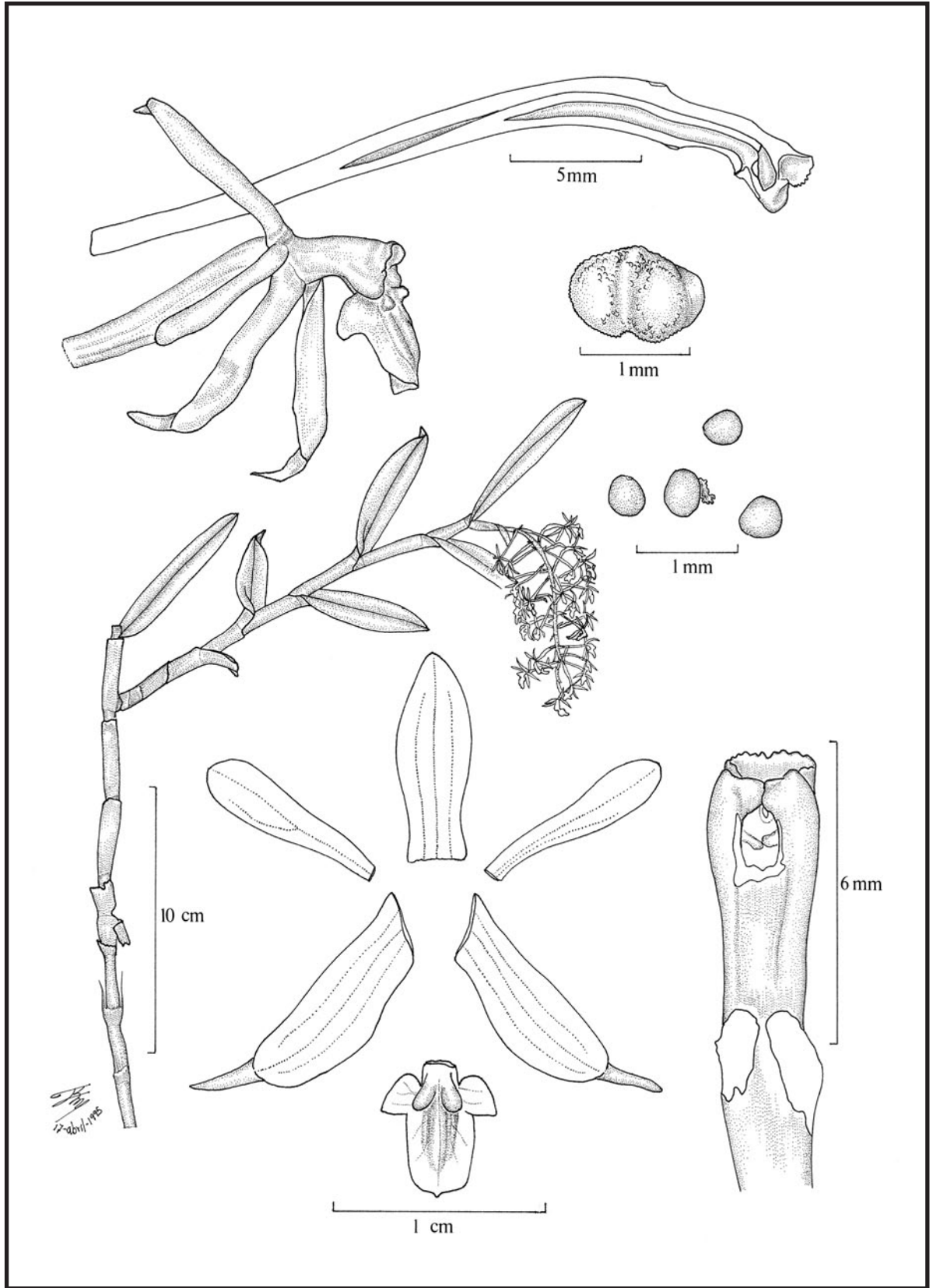
Illustrator: M. López R.

Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009. Plate 1217



EPIDENDRUM CERNUUM Kunth

Plate 1218

EPIDENDRUM CERNUUM Kunth, Nov. Gen. et Sp. Pl. 1: 353. 1815.

Type: COLOMBIA: Nariño: Andium Popayanensium, inter villam La Erre et convallem Yanacatu, alt. 880 hex. Floret Octobri.
Humboldt & Bonpland 2111. Holotype: P!

Hierba epífita o terrestre, ramificada, ramas menores que el tallo principal, 60-150 cm de alto. **Raíces** de la base de la planta y en algunos entrenudos basales del tallo, carnosas, gruesas, blancas, 2-3.5 mm de grosor. **Tallos** ramificados subapicalmente, tipo caña, teretes, rectos; el principal, 45-150 x 0.5-1.5 cm; las ramas que a su vez se ramifican, ca. 15-32 x 0.3-0.7 cm; cubiertos en la base por vainas no foliares, escariosas y fibrosas con el tiempo, 6-20 mm de largo. **Hojas** numerosas en el tallo principal, 4-9 en las ramas, distribuidas a lo largo de los tallos, extendidas, alternas, articuladas, coriáceas; vainas tubulares, estriadas, finamente rugosas, de color pardo rojizo, 0.5-6 x 0.3-1.1 cm; lámina oblonga a lanceolada, ápice obtuso, con una quilla dorsal diminuta, margen entero, extendido; 3-13 x 0.7-1.3 [2.6] cm. **Bráctea espátea** ausente. **Inflorescencia** apical, florece una sola vez, racemosa, cilíndrica, arqueado nutante, pluriflora, densa, 7.5-15 cm de largo; pedúnculo terete, delgado, recto, 8-10 mm de largo; provisto en la base por una bráctea linear triangular, acuminada, abrazadora, 4 mm de largo. **Brácteas florales** mucho más cortas que el ovario, linear triangulares, acuminadas, abrazadoras, 2-4.5 mm de largo. **Flores** ca. 40-80, simultáneas, resupinadas, amarillo verdosas a pardo amarillentas, con el labelo y la columna amarillos; suaveolentes. **Ovario** terete, delgado, liso, ligeramente dilatado justo detrás del perianto, de color pardo rojizo, 10-23 mm de largo. **Sépalos** extendidos, libres, elípticos, algo constreñidos cerca de la base; ápice redondeado, con una arista muy prominente, 3-nervados, margen entero, revolute en posición natural, membranáceos, glabros, 10-13 x 3.6 mm; los **laterales** ligeramente oblicuos. **Pétalos** extendidos, angostamente espatulados, ápice redondeado, 1-nervados, margen entero y ligeramente revolute, 9.5 x 2.2 mm. **Labelo** unido a la columna, trilobado, cordado en la base, margen entero, ligeramente revolute, 6 x 5.5 mm; bicalloso, los callos subesféricos, prominentes; disco con tres quillas romas, que se desvanecen antes de llegar al seno apical del lóbulo medio; lóbulos laterales pequeños, oblicuamente ovados, 1 x 2 mm; lóbulo medio más grande, subrectangular, algo más largo que ancho, ápice truncado, diminutamente apiculado, 4 x 3.3 mm. **Columna** ligeramente arqueada, delgada, 6 mm de largo. **Clinandrium** prominente, formando un embudo incipiente en el ápice de la columna, dirigido ligeramente hacia arriba, margen eroso. **Antera** reniforme, 4-locular, la superficie dorsal papilosa. **Polinios** 4, obovoideos, lateralmente comprimidos; caudículas suaves y granuladas, más cortas que los polinios. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** de la mitad del largo de la cavidad estigmática. **Nectario** poco profundo, penetrando ca. de ¼ parte del ovario, delgado, no inflado, no ornamentado. **Cápsula** no vista.

Epiphytic or terrestrial, branching herb, the branches shorter than the main stem. **Roots** from the base of the plant and some basal internodes of the stem, fleshy, thick, white. **Stems** branching sub-apically, cane-like, terete, straight, them main stem longer than the branches; the base covered by non foliar sheaths, scarious, becoming fibrous with time. **Leaves** numerous on the main stem, 4-9 on the branches, distributed throughout the stems, spreading, alternate, articulate, coriaceous; sheaths tubular, striated, minutely rugose, reddish brown; blade oblong to lanceolate, apex obtuse, with a minute dorsal keel, margin entire, spreading. **Inflorescence** apical, flowering only once, racemose, cylindrical, arching nutant, densely many-flowered; peduncle terete, thin, straight, provided at the base with a linear-triangular, acuminate, amplexicaul bract. **Floral bracts** much shorter than the ovary, linear-triangular, acuminate amplexicaul. **Flores** ca. 40-80, simultaneous, resupinate, greenish yellow to yellowish brown, the lip and column yellow, sweetly fragrant. **Ovary** terete, thin, smooth, slightly dilated just behind the perianth, reddish brown. **Sepals** spreading, free, elliptic, somewhat constricted near the base, apex rounded, very prominently aristate, 3-veined, margin entire, revolute in natural position, membranaceous, glabrous; lateral sepals slightly oblique. **Petals** spreading, narrowly spatulate, apex rounded, 1-veined, margin entire and slightly revolute. **Lip** united to the column, 3-lobed, base cordate, margin entire, slightly revolute; bicallose, the calli sub-spherical, prominent; disc with three rounded keels that disappear before the apical sinus of the midlobe; lateral lobes small, obliquely ovate; midlobe larger, sub-rectangular, somewhat longer than wide, apex truncate, minutely apiculate. **Column** slightly arching, thin. **Clinandrium-hood** prominent, forming a small funnel at the apex of the column, directed upwards, margin erose. **Anther** reniform, 4-celled, the dorsal surface papillose. **Polinia** 4, obovoid, laterally compressed; caudicles soft and granulose, shorter than the pollinia. **Rostellum** apical, slit. **Nectary** shallow, penetrating ca. ¼ of the ovary, thin, not inflated, unornamented.

OTHER SPECIMENS: COLOMBIA: Boyacá: Sierra Nevada del Cocuy, Quebrada de las Playas, 9 VIII 1957, *Grub 384*, K-L! US! **Cauca:** El Tambo, 3000 m, 25 IX 1939, *Sneider 2002*, CM! F! G! S! US! Silvia Curho, *B.T 278*, AMES! K-L! L! NY! **Nariño:** km 18-22 road from Pasto to Laguna Cocha (Sindamonoy), 2000-2200 m, 23 VII 1989, *Dodson 18117*, AMO! (Illustration voucher) Flower in spirit AMO! COL! HUA! East side of Lake Laguna Cocha, 5 km S of Hotel Guamúes, 2750 m, *Dodson 18122*, AMES! AMO! SEL! Near Laguna La Cocha, along main road from Pasto to Mocoa, *Garay 27*, AMES! COL! between La Cocha and Sibundoy, 2700 m, 30 VII 1978, *Luer 3074*, SEL! Laguna Cocha, Isla de la Corota, 2900 m, 16 VI 1964, *Mora 3082*, AMES! **Tolima:** Alto de Letras, 2800 m, 25 VIII 1983, *Albert de Escobar 3605*, MO!

OTHER RECORDS: COLOMBIA: Without locality data, *Ortiz Valdivieso s.n.*, photo in CD of Gallery of Colombian Orchids, 2007.

DISTRIBUTION AND ECOLOGY: Endemic from southern Colombia, Nariño, around Pasto and Laguna Cocha, at 2000-3000 m altitude, also Cauca and Tolima; terrestrial on road embankments and rarely epiphytic in disturbed pastures. Flowering in June to October.

RECOGNITION: *Epidendrum cernuum* belongs to the Andean Group, Cernuum Subgroup, characterized by the monopodial habit, cane-like stems with sub-apical branches which are considerably shorter than the main stem, coriaceous to sub-coriaceous leaves, apex bilobed, and fleshy flowers, the lip 3-lobed. The species is recognized by the generally oblong leaves, long, cylindrical, many-flowered inflorescence with greenish yellow to yellowish brown, simultaneous flowers, the lateral sepals are prominently aristate, the lateral lobes of the lip obliquely ovate, somewhat smaller than the midlobe which is sub-rectangular, the apex truncate and minutely apiculate. *Epidendrum pseudocernuum* Carnevali & I. Ramírez is vegetatively very similar, but the inflorescence shorter, lax, few-flowered, never cylindrical, and the column strongly arched; it is apparently endemic to the cordillera of Mérida, Venezuela. *Epidendrum brevicernuum* Hágsater & Dodson has shorter, lax, few-flowered inflorescences, greenish white to green flowers, the lateral lobes of the lip as large as the midlobe, and the apex of the midlobe emarginate, no apiculate. *Epidendrum cleefii* Hágsater & E. Santiago has a shorter inflorescence, 6.5-9 cm long, and the midlobe of the lip narrow, obtuse and not apiculate, much longer than the lateral lobes.



NOTE: This species was misinterpreted by Lindley according to Garay, (1962) and redescribed as *E. fruticosum* by Schlechter. However, the type of the latter is from Peru, and different. The name *E. cernuum* has been used extensively for other species, as misused by Lindley.

CONSERVATION STATUS: DD. Data deficient. A highly endemic species, if the material we have seen is representative of the distribution.

ETYMOLOGY: From the Latin *cernuus*, drooping, in reference to the pendent scape of the inflorescence, "spica cernua".

REFERENCE: Garay, L. A. 1962. Studies in American Orchids, V, *Caldasia* 8(40): 522-523.

Authors: E. Santiago & E. Hágsater

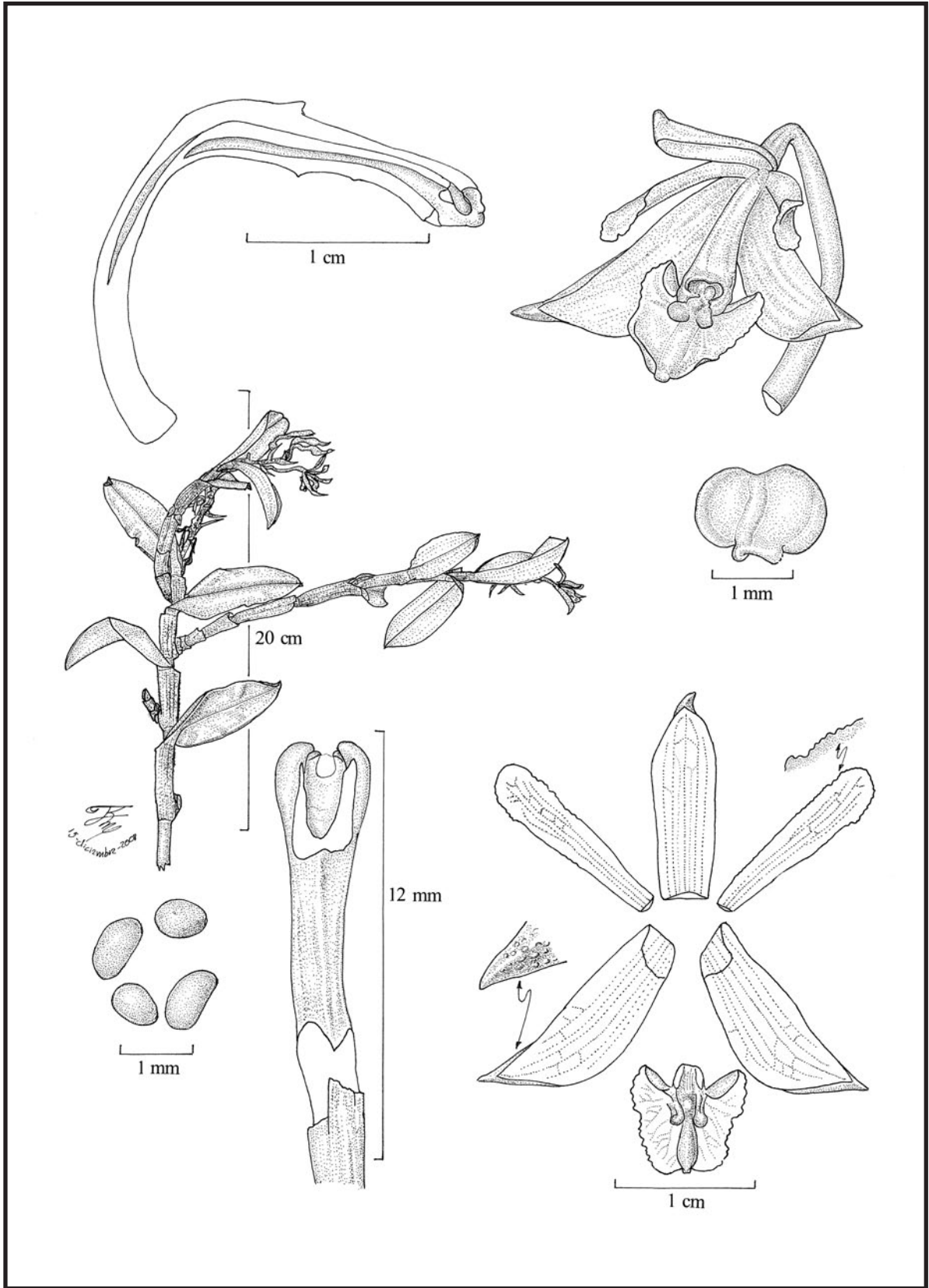
Illustrator: R. Jiménez M.

Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009. Plate 1218



EPIDENDRUM CHAOTICUM Hágsater & E.Santiago

Plate 1219

EPIDENDRUM CHAOTICUM Hágstater et E.Santiago, *sp. nov.*

Type: ECUADOR: Morona Santiago: Área de Bosque Vegetación Protectora Tambillo, 2900 m, 1 October 2001, **Linder Suin 1053**. Holotype: AMO! (Illustration voucher).

Epidendro quadrangulati A.D.Hawkes simile sed foliis anguste ellipticis, floribus majoribus, sepalis dorsaliter verrucosis et labello subintegro, abhorrens.

Hierba terrestre, monopodial, 180 cm de alto. **Raíces** basales, carnosas. **Tallos** ramificados arriba, tipo caña, erectos, rectos; el principal 55-80 x 0.5-1.0 cm; las ramificaciones más cortas, 20 x 0.5-1.0 cm. **Hojas** 16-26, distribuidas en los 2/3 apicales del tallo, alternas, articuladas, coriáceas; vainas tubulares, finamente estriadas, escariosas, 1.5-2 x 0.5-1.1 cm; lámina angostamente elíptica, ápice obtuso, margen entero, 4-7 x 1.5-1.8 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, suberecta, racemosa, corta, pauciflora, laxa, 4 cm de largo; pedúnculo corto, 9 mm de largo, desprovisto de brácteas. **Brácteas florales** más cortas que el ovario, triangulares, acuminadas, abrazadoras, 10 mm de largo. **Ovario** terete, delgado, liso, no inflado, retorcido justo detrás del perianto, 30 mm de largo. **Flores** 8-12, sucesivas, no resupinadas, carnosas, de color verde con una sufusión marrón-amarillenta muy pálida, sin datos de fragancia. **Sépalos** entreabiertos, oblongos (algo más anchos en el ápice), 7-nervados, dorsalmente verrucosos, margen apical eroso, ligeramente revuelto, 20 x 5 mm; el **dorsal** libre, redondeado en el ápice; los **laterales**, unidos entre sí y fusionados de manera oblicua a la base de la columna, oblicuos, agudos. **Pétalos** entreabiertos, libres, linear-oblancoolados, subobtusos, diminutamente apiculado, 3-nervados, margen apical finamente eroso, 18 x 5 mm. **Labelo** unido a la columna, subentero, subcuadrado, base profundamente cordada y conduplicada, truncado en el ápice, margen entero, extendido y eroso dentado hacia la mitad apical, 12 x 10 mm; bicalloso, los callos delgados, alargados, rodeados de 6 venas engrosadas erosas, cortas y radiantes, que se desvanecen hacia la mitad de la lámina; disco unicarinado, la carina intercallosa, ancha, carnosa y alargada hasta el ápice de la lámina. **Columna** recta, delgada, 12 mm de largo. **Clinandrium** reducido, margen entero. **Antera** reniforme, con la superficie ventral transversalmente rugosa, 4-locular. **Polinios** 4, obovoides, lateralmente comprimidos, desiguales, el par interior algo mas pequeños. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** prominentes, de la mitad del largo de la cavidad estigmática. **Nectario** penetrando 1/3 del ovario. **Cápsula** no vista.

Terrestrial monopodial, tall **herb**. **Roots** basal, fleshy, thick. **Stems** cane-like, erect, straight, branching above, the branches shorter than the main stem. **Leaves** numerous on the main stem, distributed along the apical 2/3 of the stems, alternate, articulate, coriaceous; sheaths tubular, minutely striated, scariosae; blade narrowly elliptic, obtuse. **Inflorescence** apical, sub-erect, racemose, short, lax, few-flowered; peduncle short, without bracts. **Floral bracts** shorter than the ovary, triangular, acuminate, amplexicaul. **Ovary** terete, thin, smooth, not inflated, twisted behind the perianth, long. **Flowers** 8-12, successive, non-resupinate, fleshy, green suffused with pale yellowish purple. **Sepals** partly spreading, oblong (somewhat wider towards the apex), 7-veined, dorsally verrucose, apical margin erose, slightly revolute; dorsal sepals free, apex rounded; lateral sepals connate at the base and obliquely fused to the base of the column, oblique, acute. **Petals** partly spreading, free, linear-oblancoolate, sub-obtuse, minutely apiculate, 3-veined, apical margin minutely erose. **Lip** united to the column, sub-entire, sub-quadrate, base deeply cordate and conduplicate, apex truncate, margin entire, spreading, the apical half erose-dentate; bicallose, the calli narrow, elongate, surrounded by 6 short, thickened, erose, radiating keels the disappear at the middle of the lip. **Column** straight, thin. **Clinandrium-hood** reduced, margin entire. **Anther** reniform, the ventral surface transversely rugose, 4-celled. **Pollinia** 4, obovoid, laterally compressed, unequal, the inner pair somewhat smaller. **Rostellum** apical, slit. **Nectary** penetrating 1/3 of the ovary, thin, smooth.

OTHER SPECIMENS: ECUADOR: Azuay: Sigsig, 6 V 1981, *Kuhn 47*, SEL! PERU: Huánuco: west side of Carpish Pass, 2370 m, 19 IX 1985, *Bennett 3484*, MO, (illustration published in *Icon. Pl. Trop. ser. 2, 1: t. 57. 1989*, as *Epidendrum aurorae* Dodson & Bennett; not the text).

DISTRIBUTION AND ECOLOGY: Known from northern Peru and southern Ecuador, on the upper Amazon slope of the Andes, at 2370-2900 m altitude. Flowering from July to October.

RECOGNITION: *Epidendrum chaoticum* belongs to the Andean Group, Fritizianum Subgroup characterized by the cane-like stems with sub-apical branching, leaves membranaceous, acute-acuminate, the addressed leaf sheaths, and entire or 3-lobed lip. The species is recognized by the tall plants, to 180 cm, the narrowly elliptic, obtuse leaves 1.5-1.8 cm wide, erect, few-flowered inflorescence, greenish flowers, sepals 20 mm long, with the margin slightly revolute, entire, sub-quadrate lip, the margin erose. *Epidendrum fritizianum* Hoehne has shorter plants, up to 100 cm tall, oblong-elliptic leaves, 2.3-2.5 cm wide, the apex acute, arching-nutant inflorescence the flowers green dotted purple, sepals 8-9 mm long, the margin spreading, and the lip 3-lobed. *Epidendrum vernixium* Rchb.f. has oblong-lanceolate, sub-obtuse leaves, a many-flowered inflorescence, 12 mm long sepals, and a 3-lobed lip with the lateral lobes falcate-reniform.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek *χαωδης*, in reference to the chaotic story of this species, where an illustration was published in *Icon. Pl. Trop. ser. 2, 1: t. 57. 1989* (but not the text), as *Epidendrum aurorae* Dodson & D.E.Benn., but the basionym of than name being *Epidendrum polyphyllum* F.Lehm. & Kraenzl., for which the new name *Epidendrum fritizianum* had been previously published by Hoehne, thus making the Dodson & Bennett name superfluous.



Authors: E. Hágstater & E. Santiago

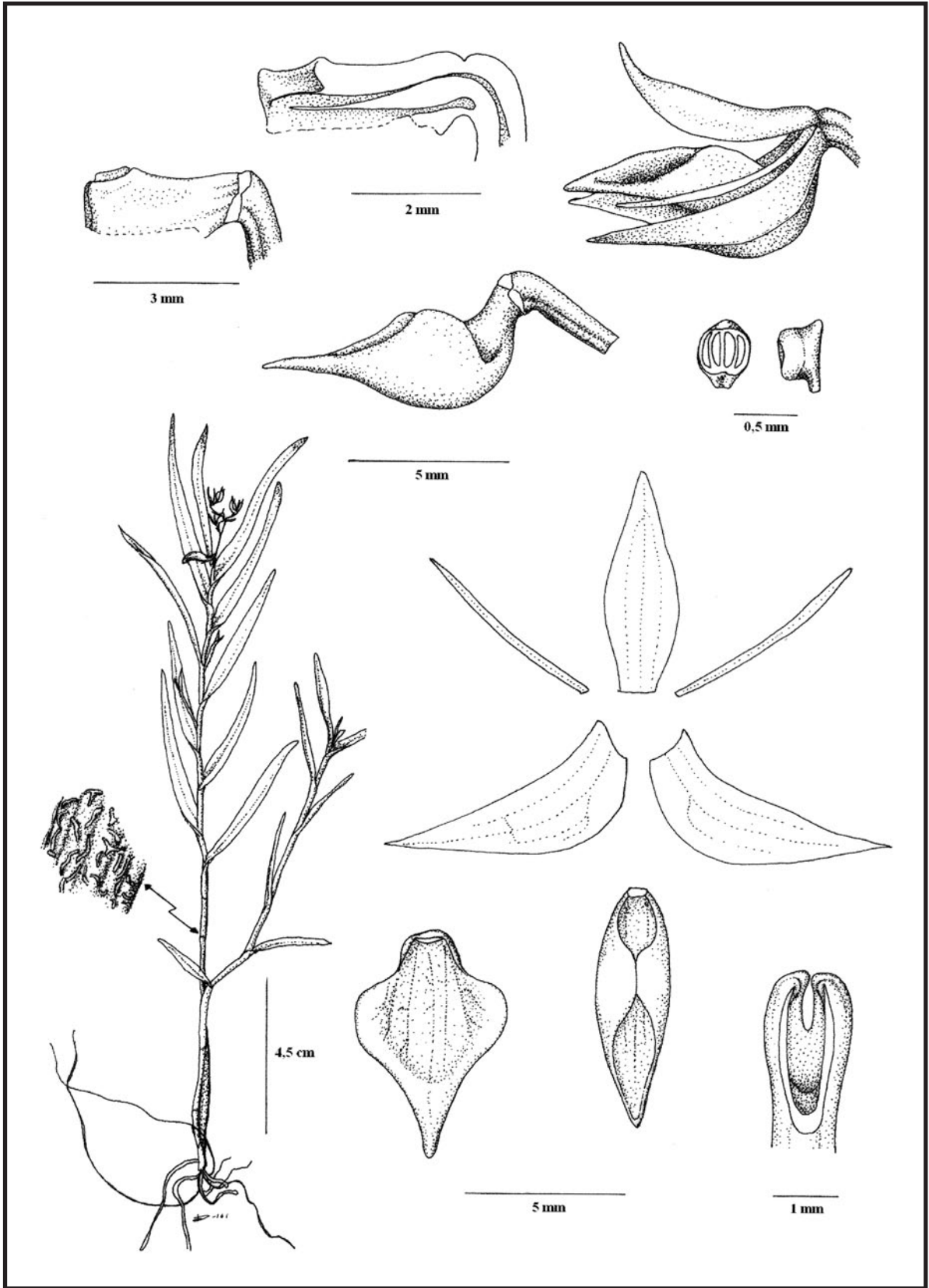
Illustrator: R. Jiménez M.

Editors: E. Hágstater & L. Sánchez S.

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ICONES ORCHIDACEARUM 12. 2009. Plate 1219



EPIDENDRUM CHINCHAOËNSE Hágsater, D.Trujillo & E.Santiago

EPIDENDRUM CHINCHAOËNSE Hágsater, D. Trujillo et E. Santiago, *sp. nov.*

Type: PERU: Huánuco; Distrito Chinchao, San Pedro Carpish, 2910 m, UTM 18L 0379701-8925292, 18 febrero 2007, *Delsy Trujillo 355*. Holotype: HURP! (Illustration voucher); digital images of live plant, AMO!

Epidendrum tolimense Lindl. simile sed foliis longioribus anguste lanceolatis, ovario apicaliter geniculato ad 90°, floribus minoribus, sepalis lateraliter falcatis et petalis lineari-filiformibus, dignoscendum.

Hierba terrestre o epífita, cespitosa, ramificada, 23 cm de alto. **Raíces** basales, carnosas, gruesas, ca. 2-4 mm de grosor. **Tallos** erectos, ramificados cuando maduros, tipo caña, el principal 17 cm de largo. **Hojas** 13 en el principal, distribuidas en los 2/3 superiores del tallo, suberectas; vaina tubular, finamente rugulosa, 1.5-2.2 x 0.2-0.4 cm; lámina angostamente lanceolada, obtusa, coriácea, margen finamente crenulado, extendido, 2.2-5.6 x 0.5-0.8 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, del tallo maduro o de las ramificaciones, racemosa a paniculada, arqueado colgante, puede producir racimos sucesivos cuando aún está en floración el anterior, 2.7 cm de largo; pedúnculo corto, delgado sin ser filiforme, arqueado bruscamente arriba de la primer bráctea floral, ca. 2 cm de largo. **Brácteas florales** casi tan largas como el ovario, ovado triangulares, acuminadas, ca. 3 mm de largo. **Flores** ca. 3 por racimo, simultáneas, desarrollándose poco a poco junto con la inflorescencia, el labelo siempre orientado hacia la raquis, carnosas, verde amarillentas. **Ovario** grueso, bruscamente arqueado en el ápice a 90°, no inflado, no ornamentado, 4 mm de largo. **Sépalos** entreabiertos, lanceolados, acuminados, carnosos, glabros, margen entero, extendido; el **dorsal** 3-nervado, 6.5 x 2.2 mm; los **laterales** fuertemente falcados, dorsalmente carinados, 2-nervados, la nervadura media bifurcada, 8 x 2.3 mm. **Pétalos** entreabiertos, casi rectos, linear filiformes, agudos, 1-nervados, margen entero, extendido, 6.5 x 0.3 mm. **Labelo** unido a la columna, entero, anchamente trullado, lados redondeados, base anchamente cuneada, ápice acuminado, carnosos, se puede extender, en posición natural enrollado longitudinalmente, los lados abrazan el ápice de la columna sin encimarse arriba, 6.0 x 4.8 mm; ecalloso, sin quillas. **Columna** recta, gruesa, 3.3 mm de largo. **Clinandrio** reducido, margen entero. **Antera** ovoide, carnosas, 4-locular. **Rostelo** apical, hendido. **Nectario** sin traspasar el perianto, ni inflado, no ornamentado. **Cápsula** no vista.

Cespitose terrestrial or epiphytic **herb**, branched above. **Roots** fleshy, thick, basal. **Stems** cane-like, terete, branched above from the mature main stem. **Leaves** 13 on the main stem, distributed throughout the upper 2/3 of the stem, sub-erect; sheath tubular, rugose; blade narrowly lanceolate, obtuse, coriaceous, margin finely crenulate, spreading. **Inflorescence** apical, racemose to paniculate, arching-nutant, can produce new racemes even while the previous raceme is still in flower; peduncle short, thin but not thread-like. **Floral bracts** shorter than the ovary, ovate-triangular, acuminate. **Ovary** thick, abruptly arched 90° at the apex, not inflated, smooth. **Flowers** ca. 3 per raceme, simultaneous, developing together with the rachis, the lip always turned towards the rachis, fleshy, yellowish-green. **Sepals** partly open, lanceolate, acuminate, fleshy; the **dorsal** sepal 3-veined; the **lateral** sepals strongly falcate, dorsally carinate, 2-veined, the mid-vein bifurcate. **Petals** partly spreading, nearly straight, linear-filiform, acute, 1-veined, margin entire, spreading. **Lip** united to the column, entire, widely trullate, the sides rounded, base widely cuneate, apex acuminate, fleshy, it can be spread, longitudinally in-rolled in natural position, embracing the apex of the column without covering it; ecallose, without keels. **Column** straight, thick. **Clinandrium-hood** reduced, entire. **Anther** ovoid, fleshy, 4-celled. **Nectary** without surpassing the perianth.

OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: Known only from north-eastern Peru, upper ridge of the Cordillera Oriental, at 2910 m altitude, epiphytic or terrestrial in very wet, moss-covered woods. Flowering in February.

RECOGNITION: *Epidendrum chinchoaense* belongs to the Eleanthoides Group, Rhombochilum Subgroup recognized by the branching habit, small fleshy leaves and a short 3-4 flowered, nutant inflorescence on a short thick peduncle. The species is recognized by the long, coriaceous leaves to 5.6 cm long, relatively small flowers, lateral sepals 8 mm long, falcate, acuminate, and the linear-filiform petals. *Epidendrum tolimense* Lindl. has shorter, ovate-lanceolate leaves to 3.7 cm long, 10-11 mm long sepals, apiculate, sub-orbicular to ovate-sub-cordate lip when spread, and the wide nectary. *Epidendrum rhodanthum* Hágsater & Dodson also has 4 pollinia, the flowers white and old rose colored, the lip is proportionately wider, and the nectary narrow. *Epidendrum chrysanthum* Hágsater & Dodson has smaller flowers, sepals being about 4.5 mm long, and only has 2 pollinia. *Epidendrum rhombochilum* L.O. Williams has 7-8 mm long sepals, also has two pollinia, each with a slit along one side. Most species in this group are found in Ecuador and neighboring areas of Colombia and Peru. *Epidendrum guacamayense* Hágsater & Dodson belongs to the Guacamayense Subgroup with branching inflorescences with long, hair-thin peduncles.

NOTE: The illustration hereby provided does not show any pubescence at the base of the lip or entrance of the nectary, a common feature in this group of species. However, as such pubescence is not always evident unless observed under the microscope, we cannot vouch one way or the other.

CONSERVATION STATUS: DD: Data deficient.

ETYMOLOGY: In reference to the district of Chinchao, Huánuco, Peru, where the type was collected.

REFERENCE: Santiago, E. & E. Hágsater. 2008. *Epidendrum tolimense* in E. Hágsater & E. Sánchez (eds.) **Icon. Orchid. (Mexico)** 11: pl. 1187.



Authors: E. Hágsater, D. Trujillo & E. Santiago

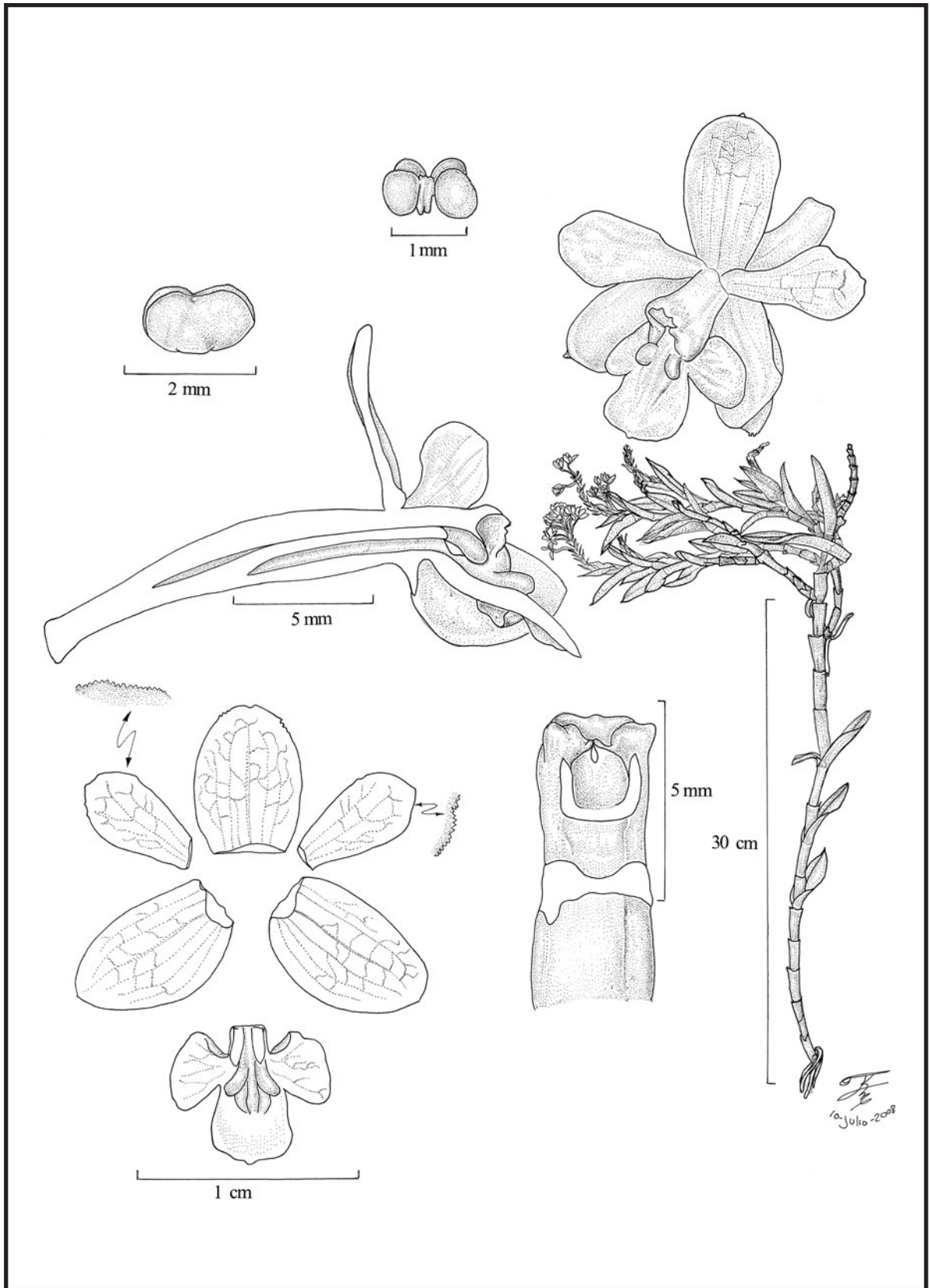
Herbario AMO

México, D.F. MÉXICO

Illustrator: D. Trujillo

Editors: E. Hágsater & L. Sánchez S.

ICONES ORCHIDACEARUM 12. 2009. Plate 1220



EPIDENDRUM CHIONEUM Lindl.

Plate 1221

EPIDENDRUM CHIONEUM Lindl. Edward's Bot. Reg. 31: 73. 1845.

Type: COLOMBIA: [Boyacá:] Tunja, 12,000 ft. **J. Linden 1344**. Holotype: K-! (the specimen on the left, *Bernard s.n.*, corresponds to *E. zipaquiranum*). Isotypes: C! OXF! W-R x2!

Synonym: *Epidendrum claesianum* Cogn., Gard. Chron. 1901 (1): 70. 1901. Holotype: COLOMBIA: Without locality data, **M. Fl. Claes s.n.** Holotype: BR!

Hierba terrestre, monopodial, ramificada, 25-65 cm de alto. **Raíces** de los entrenudos basales en el tallo principal y ocasionalmente escasas en la base de algunas ramificaciones, carnosas, gruesas, blancas, 2-4.5 mm de grosor. **Tallos** ramificados subapicalmente cuando maduros, tipo caña, teretes, erectos, rectos; el principal de 23-52 x 0.3-0.7 cm; las ramificaciones casi paralelas al tallo principal, algo más cortas y su vez produciendo ramas ascendentes de menor tamaño, 3-38 x 0.1-0.5 cm; cubiertos por vainas tubulares no foliosas, estriadas, finamente rugosas, escariosas y fibrosas con el tiempo, 4-25 mm de largo. **Hojas** 14-20 en el tallo principal; 4-11 en las ramificaciones, distribuidas a lo largo de los tallos, articuladas, dísticas, coriáceas, suberectas, desiguales en tamaño (las del tallo principal generalmente más grandes); vaina tubular, estriada, finamente rugosa, 0.7-1.6 x 0.1-0.75 cm; lámina lanceolada, generalmente conduplicada todo a lo largo, ápice agudo, apiculado, margen diminutamente crenado, extendido, 0.8-7.6 x 0.6-1.7 cm. **Bráctea espátacea** ausente. **Inflorescencia** apical, florece una sola vez, racemosa, (ocasionalmente se pueden llegar a producir racimos cortos a partir de un mismo pedúnculo) generalmente arqueada-nutante, pluriflora, densa, 2.5-7 cm de largo; pedúnculo corto, terete, no ornamentado, 6-8 mm de largo; desprovisto de brácteas basales. **Flores** 15-45, simultáneas, resupinadas, de color blanco níveo, sin fragancia. **Brácteas florales** prominentes, de más de la mitad del largo del ovario a más cortas, triangular lanceoladas, largamente acuminadas, abrazadoras, 3-16 mm de largo. **Ovario** terete, delgado, no inflado, no ornamentado, 10-17 mm de largo. **Sépalos** libres, carnosos, glabros, ápice redondeado, 5-nervados, margen entero, extendido, 6-9 x 3-4.5 mm; el **dorsal** extendido, obovado; los **laterales** entreabiertos, elípticos, diminutamente apiculados, ligeramente cóncavos, algo oblicuos. **Pétalos** entreabiertos, libres, obovado espatulados, redondeados, 3-nervados, la nervadura central cortamente ramificada, margen papiloso, extendido, 5.5-7.5 x 2.5-3.5 mm. **Labelo** unido a la columna, trilobado, base cordada, margen diminutamente papiloso, 5-6 x 6-7 mm; bicalloso, los callos delgados, divaricados; disco tricarinado, las carinas laterales cortas e incipientes, la central intercallosa desvaneciéndose antes de llegar al ápice de la lámina; lóbulos laterales ovados, 2.5-3 x 2.8-3 mm; lóbulo medio rectangular subdeltado, truncado en el ápice, con un apículo diminuto, 3 x 3 mm. **Columna** recta, gruesa, 3.5-4 mm de largo. **Clinandrium** corto, entero, margen crenado. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** prominentes, ocupando cerca de la mitad de la cavidad estigmática. **Nectario** penetrando hasta la mitad del ovario, no inflado, no ornamentado. **Antera** reniforme, 4-locular. **Polinios** 4, subovoideos; caudículas suaves y granuladas, casi tan largas como los polinios. **Cápsula** subesférica; pedicelo terete, delgado, 6 mm de largo; cuerpo 22-25 x 18-20 mm; cuello apical ca. 4 mm de largo.

Monopodial, branching, terrestrial **herb**. **Roots** from the basal internodes of the main stem, and occasionally and scarce from the base of some branches, fleshy, thick, white. **Stems** branching sub-apically when mature, cane-like, terete, erect, straight; the main stem considerably longer than the branches; covered by tubular, non-foliaceous, striated, minutely rugose, scarios sheaths, becoming fibrous with time. **Leaves** 14-20 on the main stem, 4-11 on the branches, distributed throughout the stems, articulate, distichous, coriaceous, sub-erect, unequal in size (those on the main stem generally larger); sheath tubular, striated, minutely rugose; blade lanceolate, generally conduplicate throughout, apex acute, apiculate, margin minutely crenate, spreading. **Inflorescence** apical, flowering only once, racemose, (occasionally producing additional short racemes from the same peduncle), generally arching-nutant, densely many-flowered; peduncle short, terete, unornamented, without basal bracts. **Flowers** 15-45, simultaneous, resupinate, snow-white, without fragrance. **Floral bracts** prominent, longer than half the ovary to shorter, triangular-lanceolate, long acuminate, amplexicaul. **Ovary** terete, thin, not inflated, unornamented. **Sepals** free, fleshy, glabrous, apex rounded, 5-veined, margin entire, spreading; dorsal sepal spreading, obovate, the lateral sepals partly spreading, elliptic, minutely apiculate, slightly concave, somewhat oblique. **Petals** partly spreading, free, obovate-spatulate, rounded, 3-veined, the mid-vein short branched, margin papillose, spreading. **Lip** united to the column, 3-lobed, base cordate, margin minutely papillose; bicallose, the calli thin, divaricate, the lateral keels short and incipient, the central keel disappearing before it reaches de apex of the blade; lateral lobes ovate, about as large as the midlobe; midlobe rectangular, sub-deltate, apex truncate, with a minute apicule. **Column** straight, thick, short. **Clinandrium-hood** short, entire, margin crenate. **Rostellum** apical, slit. **Anther** reniform, 4-celled. **Pollinia** 4, sub-obovoid; caudicles soft and granulose, nearly as long as the pollinia. **Capsule** sub spherical, pedicel terete, thin, short, apical neck short.

OTHER SPECIMENS: COLOMBIA: Without locality, *Folsom 10749*, AMO x2! Ibid. *Haught 6167*, COL! Ibid. *Kie 5073*, COL! Ibid. *Triana 186*, W-R 49937! **Boyacá:** Aquitania, (Lago de Tota), 13 V 1976, *Aguirre 352*, COL! U! Páramo de La Rusia, 3240 m, 11 XII 1972, *Cleef 7039*, (the specimen mounted on the right) U! Nevado del Cocuy, 3700 m, 10 IX 1938, *Cuatrecasas 1295*, F! US! Tunja, 22 III 1952, *Diez 60*, COL! Puente de Boyacá, 2780 m, 17 III 1996, *Hágsater 11483*, AMO x7! (Illustration voucher). Montabel, 3141 m, 17 VIII 1953, *Langenheim 3487*, COL! UC! (spirit) Villa de Leyva, 3350 m, 10 III 1981, *Melampy 1283*, MO! Ventaquemada, 2800 m, 24 II 1940, *Pérez 8076*, AMES! COL! Ventaquemada, 17 IV 1955, *Renz 8412*, RENZ! Duitama, 3000-3200 m, 5 IV 1963, *Uribe 4235*, F! NY! Paramo de la Rusia, 3000-3100 m, 2 IX 1967, *Uribe 5941*, COL! Villa Pinzón, 2700 m, *Vélez sub Ortíz-Valdivieso 1295*, HPU! Tota, 3200 m, XII 1951, *Yepes 3291*, COL! **Cundinamarca:** Paramo El Tablazo, 3400 m, 1 X 1983, *García 13*, COL! Paramo de Guasca, 1 X 1942, *Gutiérrez 394*, COL! Represa del Sisga, 2750 m, 17 III 1996, *Hágsater 11485*, AMO x5! Tausa, 13 IX 1947, *Haught 6167*, COL! US! (spirit) Serranía Chia-Tenjo, 9 XI 1985, *Ospina 1155*, COL! Sulia Hill, 5 IV 1945, *Schiefer 656*, AMES! COL! Represa de Sisga, ca. 9000 ft, 2 III 1953, *Schultes 18802*, AMES x2! U! US! Páramo de Tausa, 3000 m, 25 X 1961, *Tryon 6175*, COL! Laguna de Guatavita, 2700-2800 m, 28 III 1957, *Uribe 2948*, AMES! Tocancipá, 2800 m, 5 XI 1967, *Uribe 5996*, COL!

OTHER RECORDS: COLOMBIA: Without locality data, *Lindley 273*, W-R 5869! **Boyacá:** Villa Pinzón, 2700 m, *Vélez sub Ortíz-Valdivieso 1295*, digital photo, AMO! **Cundinamarca:** Guatavita, *Ortíz-Valdivieso s.n.*, photo in CD of Gallery of Colombian Orchids, 2007.

DISTRIBUTION AND ECOLOGY: Endemic to north-eastern Colombia, from the Cordillera Oriental, between Bogotá and Duitama, at 2100-3400 m altitude. Flowering throughout the year.

RECOGNITION: *Epidendrum chioneum* belongs to the Andean Group, Cernuum Subgroup, characterized by the monopodial, cane-like stems



with sub-apical branching, coriaceous to sub-coriaceous stems and fleshy flowers, the lip entire or 3-lobed. The species is recognized by erect sub-apical branches nearly parallel to the main stem, the coriaceous, lanceolate, acute, apiculate leaves, and the snow-white flowers devoid of any fragrance. *Epidendrum zipaquiranum* Schltr. is vegetatively similar but the flowers are yellow to green and fragrant. *Epidendrum kirkbridei* Hágsater & E. Santiago has apically rounded, obtuse leaves, the pink flowers with white calli, and small floral bracts, ca 6 mm long. *Epidendrum torquatum* Lindl. has oblong-lanceolate leaves with a rounded apex, larger flower (sepals 15 mm long), the lateral lobes of the lip as large as the midlobe, with a single keel on the midlobe. *Epidendrum jaramilloi* Hágsater & Dodson has narrowly lanceolate leaves with the apex rounded and bilobed, somewhat larger (sepals 9-13 mm long), green to greenish yellow flowers, with the dorsal surface tinged purple-brown. The latter two are apparently endemic to Ecuador.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek χιών, snow, in reference to the snow-white colored flowers.

Authors: E. Santiago & E. Hágsater

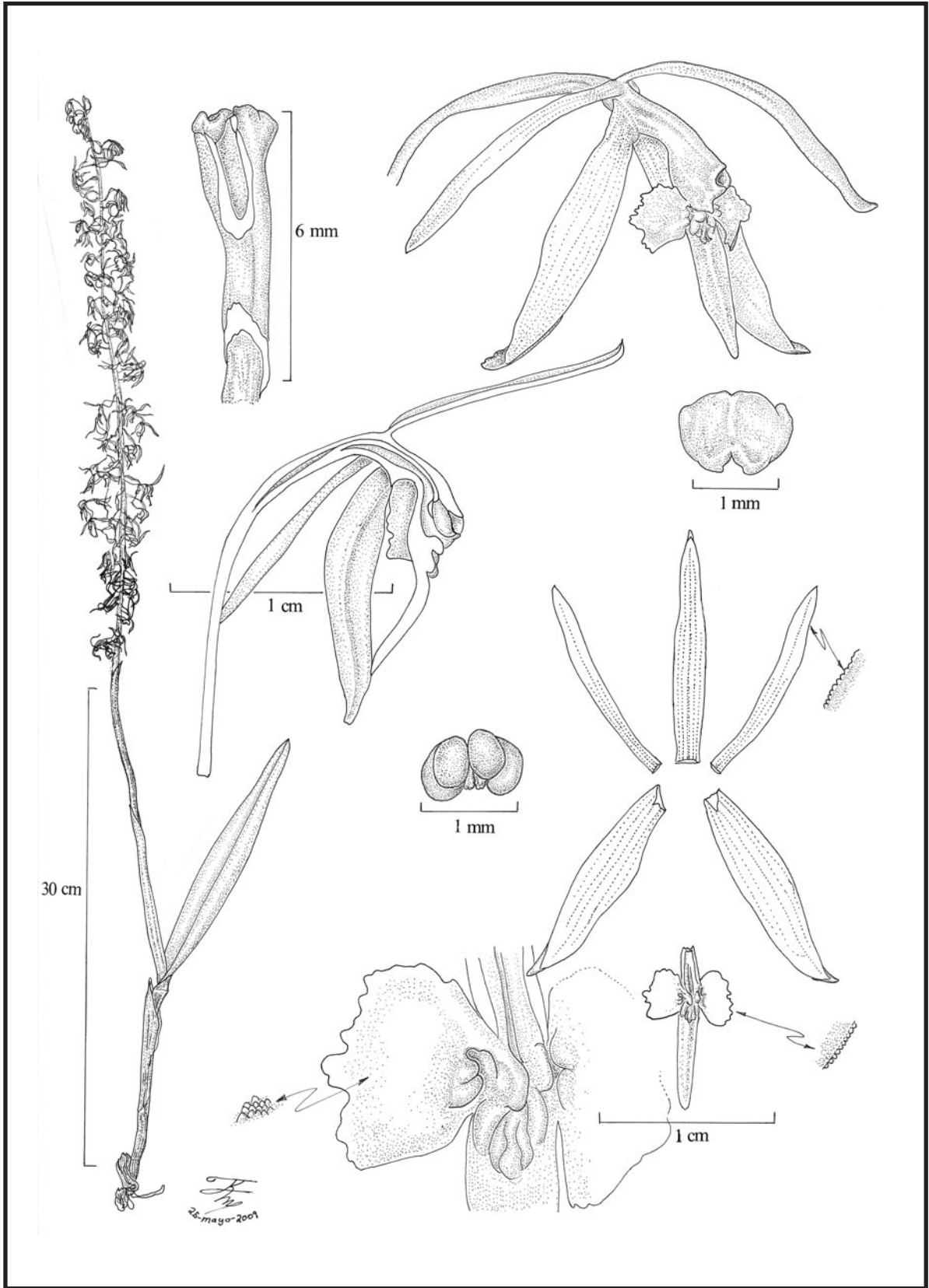
Illustrator: R. Jiménez M.

Editors: E. Hágsater & L. Sánchez S.

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México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009. Plate 1221



EPIDENDRUM CHIQUIRIBAMBENSE Hágsater & Dodson

Plate 1222

EPIDENDRUM CHIQUIRIBAMBENSE Hágsater et Dodson, *sp. nov.*

Type: ECUADOR: Loja: Chiquiribamba, [Wallis?]. Holotype: W-R 13137! (Illustration voucher).

Epidendro moritzii Rchb.f. simile sed floribus numerosioribus, segmentis floralibus proportione angustioribus, labelli lobulo medio longiore, labelli disco cum plurimis carinis incrassatis et radiantibus, columna arcuata, abhorret.

Hierba simpodial, cespitosa, erecta, 65 cm de alto. **Raíces** basales, delgadas, 2-3 mm de grosor. **Tallo** algo engrosado, sin formar un pseudobulbo, erecto, unifoliado, 13 x 0.5-0.8 cm; cubierto por 3 vainas tubulares, finamente estriadas, escariosas, 2.5-8 cm de largo. **Hoja** 1, ubicada en el ápice del tallo, articulada, erecta; vaina tubular, lateralmente aplanada, finamente estriada, 3 x 0.8 cm; lámina lanceolada, obtusa, margen entero, 18 x 2.5 cm. **Brácteas espatáceas** 2, tubulares, conduplicadas, ancipitosas, agudas, 8-12.5 cm de largo. **Inflorescencia** apical, racemosa, erecta, florece una sola vez, pluriflora, densa, 53 cm de largo; pedúnculo elongado, lateralmente aplanado, ancipitoso, erecto, recto, 20 cm de largo. **Brácteas florales** más cortas que el ovario, linear lanceoladas, acuminadas, abrazadoras, 2-3 mm de largo.

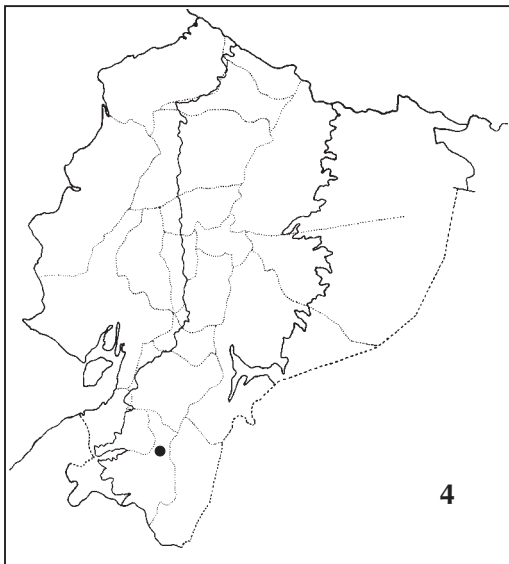
Flores ca. 130, simultáneas, resupinadas, sin datos de color ni fragancia. **Ovario** terete, delgado, no inflado, no ornamentado, 17-20 mm de largo. **Sépalos** libres, acuminados, 5-nervados, margen entero, extendido, 13 x 2-3 mm; el **dorsal** extendido, oblongo, apiculado; los **laterales** entreabiertos, angostamente lanceolados, oblicuos, con una quilla dorsal erosa. **Pétalos** extendidos, libres, linear filiformes, obtusos, 3-nervados, ligeramente oblicuos, margen crenulado, extendido, 12 x 1 mm. **Labelo** unido a la columna, trilobado, base cordada, 8 x 5 mm; bicalloso, los callos carnosos, laminares, alargados hasta cerca de la base del lóbulo medio; disco bicuniculado, con un par de carnosidades al lado de cada cuniculo, con 5 quillas cortas ubicadas justo al frente de los callos; lóbulos laterales dolabriformes, margen eroso-crenulado, 2 x 3 mm; lóbulo medio ensiforme, agudo, margen entero, 5.5 x 1 mm. **Columna** ligeramente arqueada, delgada en la base y gradualmente más amplia en el ápice, 6 mm de largo. **Clinandrio** reducido, con el margen entero. **Antera** reniforme, 4-ocular. **Polinios** 4, obovoides, algo lateralmente aplanados. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** pequeños, ocupando 1/3 del largo de la cavidad estigmática. **Nectario** apenas penetrando el ovario, justo detrás del perianto, delgado, no ornamentado. **Cápsula** no vista.

Sympodial, caespitose, erect **herb.** **Roots** basal, thin. **Stems** thickened, without forming a pseudobulb, erect, single-leaved, covered by 3 tubular, minutely striate, scarious sheaths. **Leaf** single, apical, articulate, erect; sheath tubular, laterally compressed, minutely striate; blade lanceolate, obtuse, margin entire. **Spathaceous bracts** 2, tubular, conduplicate, ancipitose, acute. **Inflorescence** apical, racemose, erect, flowering only once, densely many-flowered, tall and showy; peduncle elongate, laterally compressed, ancipitose, erect, straight. **Floral bracts** much shorter than the ovary, linear-lanceolate, acuminate, amplexicaul. **Flowers** ca. 130, simultaneous, resupinate, without information on color or fragrance. **Ovary** terete, thin, not inflated, unornamented. **Sepals** free, acuminate, 5-veined, margin entire, spreading; the dorsal sepal spreading, oblong, apiculate; the lateral sepals partly spreading, narrowly lanceolate, oblique, with an erose dorsal keel. **Petals** spreading, free, linear-filiform, obtuse, 3-veined, slightly oblique, margin crenulate, spreading. **Lip** united to the column, 3-lobed, base cordate; bicallose, the calli fleshy, laminar, elongate, nearly reaching the base of the midlobe; disc bicuniculate, with a pair of callosities on the side of each cuniculum, and 5 short keels just in front of the calli; lateral lobes of the lip dolabriform, margin erose-crenate; midlobe ensiform, acute, margin entire. **Column** slightly arching, thin at the base, and gradually higher towards the apex. **Clinandrium-hood** reduced, margin entire. **Anther** reniform, 4-celled. **Pollinia** 4, obovoid, somewhat laterally compressed. **Rostellum** apical, slit. **Nectary** barely penetrating the ovary, just behind the perianth, thin, smooth.

OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: Known only from the type, from the province of Loja, southern Ecuador.

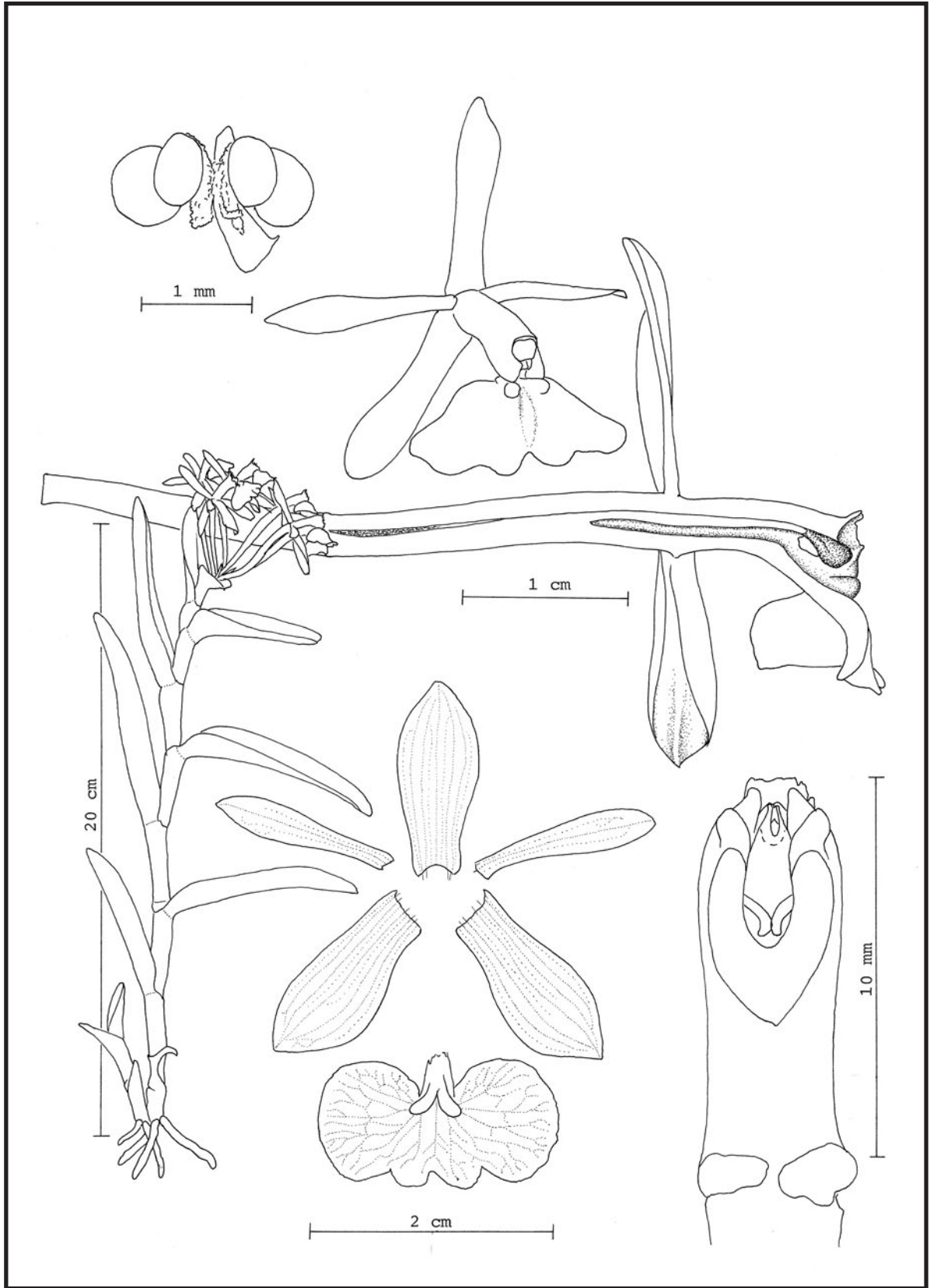
RECOGNITION: *Epidendrum chiquiribambense* belongs to the Moritzii Subgroup characterized by the one-leaved stem, single parallel-sided spathaceous bract, a 3 lobed, membranaceous lip with 2 calli, the margin of the lateral lobes more or less erose to dentate. The species is recognized by the very tall inflorescence, relatively large flowers (for the group), sepals



13 mm long, 2 calli, and several parallel to radiating, short, keels. *Epidendrum uribei* A.D.Hawkes (basionym: *Epidendrum cebolleta* Schltr.) has semi-terete, fleshy leaves, and smaller flowers, sepals 10 mm long, the midlobe of the lip proportionately shorter and wider. *Epidendrum moritzii* Rchb.f. has oblong, coriaceous, flat leaves, similar sized flowers, sepals 13 mm long, but column is straight, and the disc of the lip only has the 2 calli and a single short thickened keel in the middle, without the radiating, short thickened keels.

CONSERVATION STATUS: DD. Known only from the type; such a showy species would have turned up in cultivation if were still found somewhere near Loja.

ETYMOLOGY: In reference to the village of Chiquiribamba, near Loja, in southern Ecuador, where the type was collected.



EPIDENDRUM CHLOROCORYMBOS Schltr.

EPIDENDRUM CHLOROCORYMBOS Schltr., Repert. Spec. Nov. Regni Veg., Beih. 17: 30-31. 1922.

Type: PANAMA: Am Gatun-See, unweit Panama-City, C. W. Powell 82. Holotype: B (destroyed). Lectotype designated by Christenson 1991, AMES 23950! Isolectotypes: AMES 26780! (Illustration) K-L!, MO 955935!

Hierba epífita, simpodial, cespitosa, 20-45 cm de alto incluyendo la inflorescencia. **Raíces** basales, carnosas, delgadas, 1.5-2 mm de grosor. **Tallos** sencillos, tipo caña, teretes, ligeramente flexuosos, en su parte basal forman un rizoma a partir del cual se originan los tallos nuevos a 1 cm de distancia entre uno y otro, 18-40 x 0.2-0.4 cm. **Hojas** 6-10, distribuidas a lo largo del tallo; vaina foliar tubular, lisa, 2-3.5 cm de largo; lámina elíptica, ápice obtuso a retuso, generalmente bilobado, coriácea, sin carina dorsal, margen extendido, entero, 3-10 x 1-2.5 cm. **Inflorescencia** apical en el tallo maduro, subumbelada, densa, el pedúnculo inconspicuo; sin brácteas. **Bráctea floral** mucho más corta que el ovario, ovada elíptica, raramente obovada, aguda, 10-15 x 4.5-6 mm. **Flores** 5-20 o más, simultáneas, resupinadas, verdes a amarillo verdosas, fragancia nocturna similar a levadura de pan. **Ovario** no inflado, terete, no ornamentado, 25-43 x 1-1.3 mm. **Sépalos** extendidos, libres, obovados, la base cortamente espatulada, redondeados, subcoriáceos, glabros, 5-nervados, en ocasiones con un par de nervaduras secundarias intermedias, margen revoluta, entero, 13-19.3 mm de largo; el **dorsal** 3.2-6.2 mm de ancho; los **laterales** ligeramente oblicuos, 4.7-6.5 mm de ancho. **Pétalos** extendidos, angostamente obovados, ápice redondeado, 3-nervados, margen extendido, entero, 13-18.5 x 1.8-4 mm. **Labelo** unido a la columna, trilobado, 9-12 x 15-20 mm; bicalloso, los callos subglobosos, divergentes; carina una central, poco evidente, a manera de vena engrosada; lóbulos laterales suborbiculares, margen entero, 3.7-6.5 x 4-9.4 mm; lóbulo medio formado por dos lóbulos pequeños semiorbiculares, separados por un seno profundo, margen entero, 1.3-2.3 x 5.5-7.5 mm. **Columna** recta a ligeramente arqueada hacia la mitad, delgada, 9.5-12.5 x 1.5-2.5 mm. **Clinandrium** corto, ligeramente sobrepasando el ápice de la columna, margen eroso. **Antera** subesférica, 4-locular. **Polinios** 4, obovoides, lateralmente comprimidos; caudículas suaves y granuladas, semejantes al largo de los polinios, viscidio viscoso, translúcido. **Rostelo** hacia el ápice de la columna, hendido. **Lóbulos laterales del estigma** prominentes, penetrando hasta la mitad de la cavidad estigmática. **Nectario** penetrando hasta cerca de la mitad de la longitud del ovario, liso. **Cápsula** elipsoide, pedicelo de 25-30 mm de largo, cuerpo de 25-35 x 12-14 mm, cuello corto de 1.5-2 mm de largo.

Epiphytic, sympodial, caespitose **herb.** **Roots** basal, fleshy, thin. **Stems** simple, cane-like, terete, slightly flexuose. **Leaves** 6-10, distributed throughout the stems; foliar sheaths tubular, smooth; blade elliptic, apex obtuse to retuse, unequally bilobed, coriaceous, margin spreading, entire. **Inflorescence** apical from the mature stem, sub-umbellate, dense, with an inconspicuous peduncle. **Floral bracts** much shorter than the ovary, ovate-elliptic, rarely obovate, acute. **Flowers** 5-20 or more, simultaneous, resupinate, green to greenish-yellow; nocturnal fragrance of leavened fresh bread. **Ovary** not inflated, terete, smooth. **Sepals** spreading, free, obovate, the base short spatulate, rounded, sub-coriaceous, glabrous, 5-veined, sometimes with an additional pair of intermediate secondary veins, margin revolute, entire. **Petals** spreading, narrowly obovate, rounded, margin spreading, entire, 3-veined. **Lip** united to the column, 3-lobed; bicallose, the calli sub-globose, divergent, with a slightly thickened central keel; lateral lobes, sub-orbicular, margin entire; midlobe formed by a pair of semicircular separated by a deep sinus, margin entire. **Column** straight to slightly arching towards the middle, thin. **Clinandrium-hood** short, margin erose. **Anther** sub-spherical, 4-celled. **Pollinia** 4, obovoid, laterally compressed; caudicles soft and granule, about as long as the pollinia, viscidium viscous, translucent. **Rostellum** apical, slit. **Nectary** penetrating about half the length of the ovary, smooth. **Capsule** ellipsoid, with a short apical neck.

OTHER SPECIMENS AND RECORDS: See appendix.

DISTRIBUTION AND ECOLOGY: Widespread in Gulf Coastal Plain of Mexico and the Soconusco (San Luis Potosí, Veracruz, Oaxaca, Tabasco, Chiapas, Campeche, Yucatan and Quintana Roo) and in Belize, Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, Panama, Colombia and probably Venezuela. Epiphytic in several types of lowland and mid-elevation tropical formations (Quercus and Pinus forest, tropical rainforest, sub-deciduous tropical forest, elfin forest, lower mountain rain forest) savannas, and in secondary vegetation; from sea level to 1200 (- 1950) m altitude. Flowering from June to August. Fruiting from October to March.

RECOGNITION: *Epidendrum chlorocorymbos* belongs to the Difforme Group which is characterized by the caespitose, sympodial plants, fleshy, pale green to glaucous leaves, apical inflorescence, sessile, rarely with a short peduncle, one-flowered to corymbose, without spatheous bracts, fleshy, green to yellowish-green rarely white flowers. The species can be recognized by the terete stems, inflorescence with 5-20 or more, green to greenish-yellow flowers, with a nocturnal fragrance of leavened bread, lip 3-lobed with lateral lobes semi-orbicular, midlobe short and wide, deeply emarginate, forming two small, semi-orbicular lobes, clinandrium-hood prominent, erose. It is similar to *Epidendrum melistagum* Hágsater which has laterally compressed stems, flowers with a strong rancid nocturnal fragrance, and the reniform lip with only one wide callus



at the base and a drop of honey in front of it in fresh flowers. *Epidendrum carnevalii* Hágsater & L. Sánchez, endemic from Venezuela, has somewhat laterally compressed stems, prominent, divergent calli, emarginate midlobe with acute divaricate lobes and papillose ovary and column, erose-fimbriate clinandrium-hood. *Epidendrum citrosimum* Hágsater endemic from Mexican Pacific Coastal Plain, in Jalisco, Guerrero, Oaxaca and Chiapas has smaller plants, 8-20 cm long, 2-10 flowers, with nocturnal odor reminiscent to that of lemon tea (*Cymbopogon citratus*), clinandrium-hood reduced.

CONSERVATION STATUS: Not threatened. This species thrives in disturbed areas and second growth forests, it is frequent on trees along river banks and other places where trees tend to be conserved. Widespread, common and of no horticultural interest.

ETYMOLOGY: From the Latin *chloro-* green, and *corymbus*, a cluster of flowers, in reference the inflorescence with is a cluster of green flowers.

REFERENCES: Christenson, E. A. 1991. Mesoamerican Orchid Studies II: Powell's Panamanian Orchidaceae. *Lindleyana* 6(3): 124-132. García Cruz, C. J. & L. Sánchez. 1999. *Flora de Veracruz* 112: Orchidaceae II: *Epidendrum*: 23-27. Hágsater, E. 1989. *Epidendra novae et criticae* 4: Nuevas especies del complejo *Epidendrum difforme* de México y Centroamérica. *Orquídea (Mexico City)* 11: 23-50. Hágsater, E. 1990. *Epidendrum melistagum* Hágsater. *Orchids of Mexico, Icon. Orchid. (Mexico)* 1, pl. 35. Sánchez, L. 2002. *Epidendrum chlorocorymbos* Schltr. *Orchids of Mexico, Icon. Orchid. (Mexico)* 5-6: pl. 570. Mansfield, R. 1930. Blütenanalysen neuer Orchideen von R. Schlechter. *Repert. Spec. Nov. Regni Veg.* 59: t. 48, nr. 190. Misas, G. 2005. as "*Epidendrum difforme*, in *Orquídeas de la Serranía del Baudó*, pp. 178-179, fig. 41, Bogotá.

Authors: L. Sánchez S. & E. Hágsater

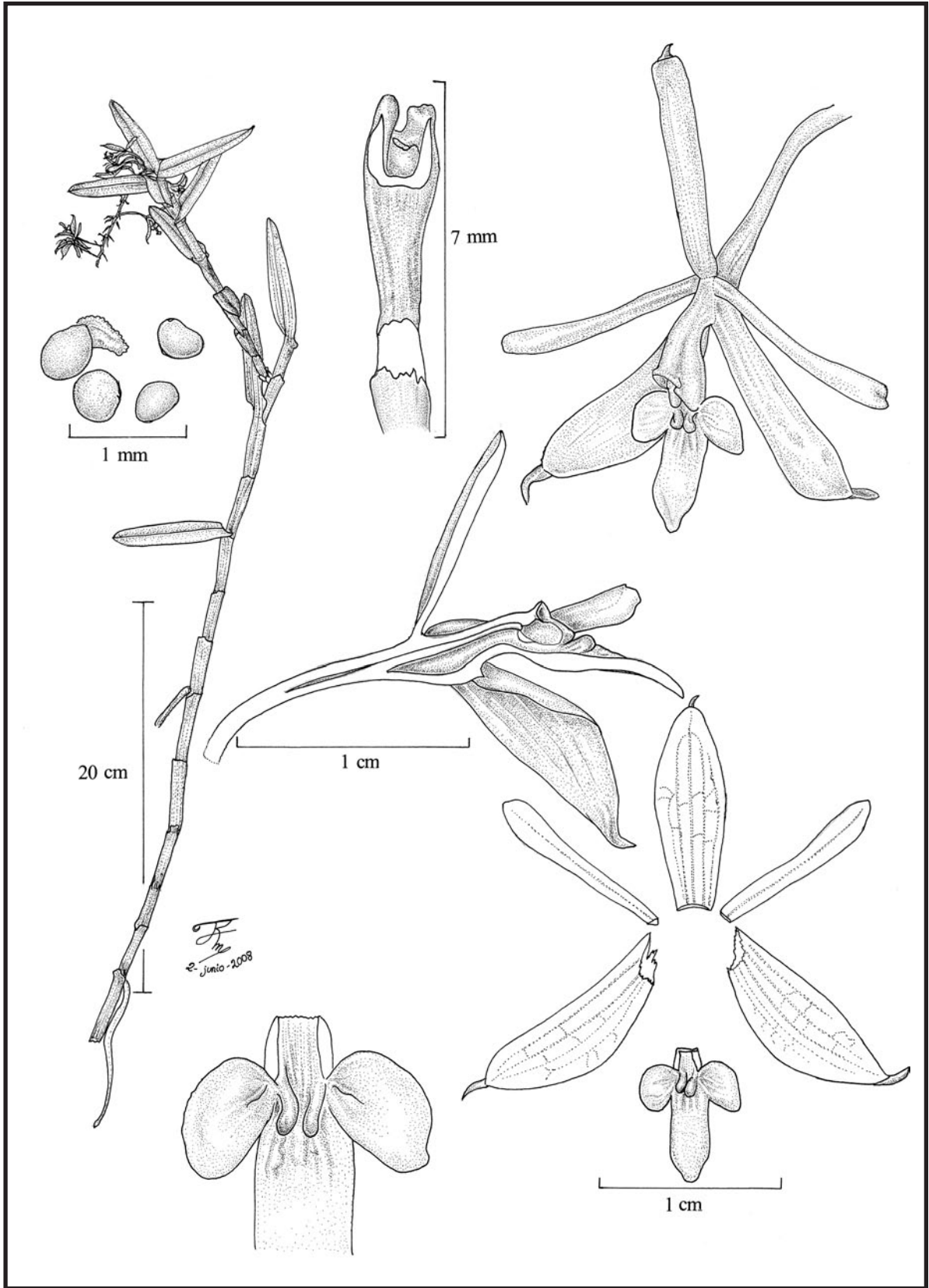
Illustrator: E. Hágsater

Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009. Plate 1223



EPIDENDRUM CLEEFII Hágsater & E.Santiago

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

Type: COLOMBIA: Magdalena: Sierra Nevada de Santa Marta, Transecto del Alto Río Buritaca, 3100 m, 7 agosto 1977, **Roberto Jaramillo M., Thomas van der Hammen, Orlando Rangel, Antoine M. Cleef 5397**. Holotype: COL! Isotype: U! (Illustration voucher).

Epidendro cernui Kunth simile sed inflorescencia laxa, floribus dilute brunneis, labelli lobulo medio valde angusto obtuso non apiculato, distinguitur.

Hierba epífita o terrestre, monopodial, ramificada, ramas menores que el tallo principal, de más de 40 cm de alto. **Raíces** en el tallo principal no vistas; muy escasas en algunas ramificaciones, carnosas, gruesas, blancas, 2-3 mm de grosor. **Tallos** tipo caña, subteretes, erectos, rectos, ramificados subapicalmente; el principal, de más de 40 x 0.5-0.6 cm; las ramas, 7-26 x 0.4-0.5 cm. **Hojas** numerosas en el tallo principal; 6-10 en las ramas, distribuidas a lo largo de los tallos, alternas, articuladas, desiguales en tamaño (las basales más pequeñas); vainas tubulares, finamente estriadas, rugosas, 1.4-3.2 cm de largo; lámina oblongo-lanceolada, ápice redondeado, diminutamente apiculado, margen apical crenulado, coriácea, lisa, verde, 1.7-10 x 0.9-1.1 cm. **Bráctea espátacea** ausente. **Inflorescencia** apical, florece una sola vez, racemosa, arqueado nutante, laxa, 6.5-9 cm de largo; pedúnculo corto, terete, delgado, recto; la base provista con una bráctea, linear lanceolada, aguda, abrazadora, 8 mm de largo. **Bráctea floral** mucho más cortas que el ovario, linear lanceoladas, acuminadas, abrazadoras, 3-5 mm de largo. **Flores** 25, simultáneas, resupinadas, membranáceas, carmelita muy claro; sin datos de fragancia. **Ovario** terete, delgado, liso, ligeramente engrosado justo detrás del perianto, 15-16 mm de largo. **Sépalos** extendidos, libres, angostamente obovados, ápice redondeado, con una arista prominente, 3-nervados, las nervaduras laterales ramificadas desde la base dando la apariencia de ser 5-nervados, margen entero, ligeramente revoluto en posición natural, membranáceos, glabros, 10-12 x 3.8-4.3 mm; los **laterales** ligeramente oblicuos. **Pétalos** extendidos, libres, linear oblanceolados, ápice redondeado, 1-nervados, margen entero y ligeramente revoluto, 10 x 1.7 mm. **Labelo** unido a la columna, trilobado, cordado en la base, margen entero, 6.5 x 6.5 mm; bicalloso, los callos subglobosos; disco con tres quillas bajas y cortas; lóbulos laterales pequeños, oblicuamente ovados, la base con algunas venas engrosadas cortas, 2 x 3 mm; lóbulo medio oblongo, ápice obtuso, 4.5 x 2.0 mm. **Columna** ligeramente arqueada, delgada en la base, más ancha en el ápice, 7 mm de largo. **Clinandrio** corto, margen entero, dirigido ligeramente hacia arriba. **Antera** no vista. **Polinios** 4, obovoides, lateralmente comprimidos; caudículas suaves y granulosas, casi tan largas como los polinios. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** pequeños, de 1/3 del largo de la cavidad estigmática. **Nectario** poco profundo, penetrando justo detrás del perianto, delgado, ligeramente inflado, no ornamentado. **Cápsula** no vista.

Epiphytic or terrestrial, monopodial **herb**, branching sub-apically from the main stem. **Roots** scarce from some of the branches, fleshy, thick, white. **Stem** cane-like, sub-terete, erect, straight, branching sub-apically. **Leaves** numerous on the main stem, 6-10 on the branches, distributed throughout the stems, alternate, articulate, unequal in size, the basal ones smaller; sheaths tubular, minutely striated, rugose; blade oblong-lanceolate, apex rounded, minutely apiculate, coriaceous, smooth, green, apical margin crenulate. **Inflorescence** apical, flowering only once, racemose, arching-nutnant, lax-flowered; peduncle short, terete, thin, straight; base provided with a single bract, linear-lanceolate, acute, amplexicaul. **Floral bracts** much shorter than the ovary, linear-lanceolate, acuminate, amplexicaul. **Flowers** 25, simultaneous, resupinate, membranaceous, light brown. **Ovary** terete, thin, smooth, slightly thickened just behind the perianth. **Sepals** spreading, free, narrowly obovate, apex rounded, with prominently awned, 3-veined, the lateral veins branching from the base and thus appearing 5-veined, margin entire, slightly revolute in natural position, membranaceous, glabrous; the lateral sepals slightly oblique. **Petals** spreading, free, linear-oblanceolate, apex rounded, 1-veined, margin entire, slightly revolute. **Lip** united to the column, 3-lobed, base cordate, margin entire; bicallose, the calli sub-globose; disc with 3 low, short keels; lateral lobes small, about half the size of the midlobe, obliquely ovate, with a few short, thickened veins at base; midlobe oblong, apex obtuse. **Column** slightly arching, thin at the base, thickened towards the apex. **Clinandrium-hood** reduced, margin entire, directed slightly upwards. **Pollinia** 4, obovoid, laterally compressed, caudicles soft and granulose, nearly as long as the pollinia. **Rostellum** sub-apical, slit. **Nectary** shallow, barely penetrating the ovary, thin, slightly inflated, smooth.

OTHER SPECIMENS: COLOMBIA: Magdalena: Sierra Nevada de Sta. Marta; Transecto del Alto Buritaca, 3300 m, 9 VIII 1977, *Jaramillo 5510*, COL!

DISTRIBUTION AND ECOLOGY: Known only from the Sierra de Santa Martha in northern Colombia, terrestrial or epiphytic, at 3100-3300 m altitude. Flowering in August.

RECOGNITION: *Epidendrum cleefii* belongs to the Andean Group, and Cernuum Subgroup, characterized by the long, erect, cane-like stems with sub-apical branching, leaves oblong, sub-coriaceous, with the apex obtuse and the 3-lobed lip and the prominent clinandrium funnel-shaped. The species is recognized by the oblong-lanceolate leaves, lax-flowered

inflorescence with light brown flowers, the sepals prominently awned, and the midlobe narrowly oblong, obtuse. It is very similar to *E. cernuum*, but that species has a very dense inflorescence with greenish yellow flowers, and the midlobe sub-rectangular, truncate and minutely apiculate. *Epidendrum brevicernuum* Hágsater has a much shorter inflorescence, green to greenish white flowers, and the midlobe sub-quadrate (nearly as wide as it is long) and emarginate.

CONSERVATION STATUS: DD. Data deficient. Apparently highly endemic.

ETYMOLOGY: In honor Antoine Marie Cleef, (1941-), Professor of tropical vegetation ecology at the University of Amsterdam, Holland. He has collected extensively in Colombia, especially in transects that traverse the country, and participated in the collection of the type.



Authors: E. Hágsater & E. Santiago

Illustrator: R. Jiménez M.

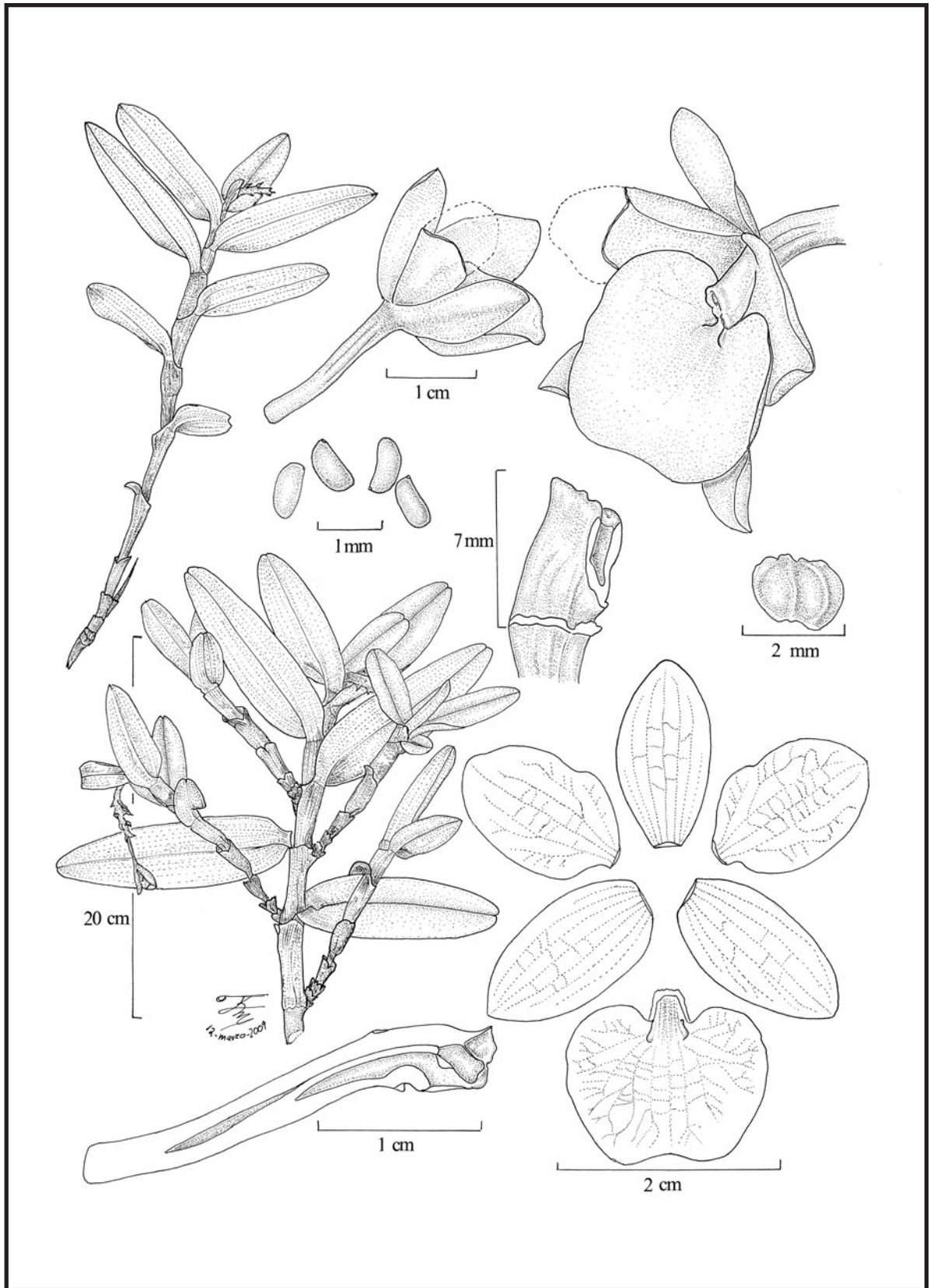
Editors: E. Hágsater & L. Sánchez S.

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México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009.

Plate 1224



EPIDENDRUM COLOMBIANUM A.D.Hawkes

EPIDENDRUM COLOMBIANUM A.D.Hawkes, Orquídea (Río de Janeiro) 18(5): 170. 1956.

Basionym: *Epidendrum brachystele* Schltr., Repert. Spec. Nov. Regni Veg., Beih. 27: 63. 1924. [not Schltr. 1916.]

Type: COLOMBIA: [Putumayo:] Ostkordillere zwischen Pasto und Mocoa, 3300 m, Mai 1921, **W. Hopp 57**.

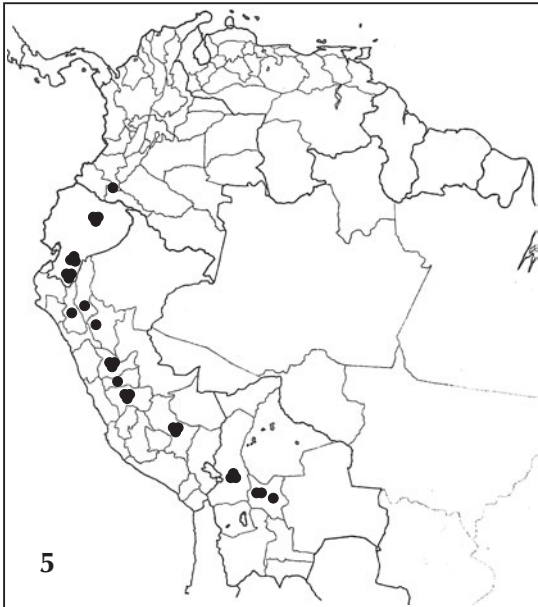
Holotype: B, destroyed. Neotype [here designated]: COLOMBIA: Putumayo: Cordillera Portachuelo vertiente oriental, carretera entre Sibundoy y Mocoa, Cadena "El Mirador", 2200 m, 5 enero 1957, **M. Ospina-Hernández & J. M. Idrobo 106**. AMES! (Illustration voucher).

Synonyms: *Epidendrum brachysteloides* Hágsater, Orquídea (Mexico City) 12(2): 296. 1992.

Epidendrum anderssonii Hágsater & Dodson, Icon. Orchid. (Mexico) 2: pl. 107. 1993. Basionym: *Epidendrum inamoenum* Kraenzl. var. *robustum* C. Schweinf., Bot. Mus. Leaflet. 16(1): 11. 1953. Type: PERU: Cuzco; Prov. Urubamba, km 97-108 FCCSA, 2200 m, 16 May 1943, **C. Vargas 3408**. Holotype: AMES! Isotype: CUZ! [not *Epidendrum robustum* Cogn.]

Hierba terrestre, monopodial, ramificada subapicalmente, de 100-200 cm de alto. **Raíces** de la base del tallo principal, carnosas, gruesas, blancas, 3-4 mm de grosor. **Tallos** tipo caña, ramificados cerca del ápice cuando maduros, teretes en la base y lateralmente comprimidos hacia el ápice, erectos, rectos; el principal 60-100 x 0.4-1.6 cm; las ramas más cortas, 10-30 x 0.8-1.4 cm. **Hojas** 15-18 en el tallo principal; 5-10 en las ramificaciones, distribuidas a lo largo de los tallos, erecto extendidas, alternas, articuladas, coriáceas; vaina tubular, estriada y rugosa, 1.5-5 x 0.4-1.6 cm; lámina oblonga a oblongo lanceolada, obtusa, ligeramente bilobada, margen entero, extendido, [2.5]4.5-20 x 1.5-4.1 cm. **Inflorescencia** apical, racemosa, nutante, pauciflora, 3-5 cm de largo; pedúnculo lateralmente aplanado, 7-10 mm de largo. **Bráctea espatacea** ausente. **Flores** 12-15, resupinadas, muy carnosas, abriendo de manera sucesiva de la base al ápice de la inflorescencia y llegando a estar casi todas abiertas de manera simultánea; de color verde tornándose amarillo naranja con la edad; sin fragancia. **Brácteas florales** mucho más cortas que el ovario, angostamente triangulares, acuminadas, abrazadoras, 5-8 mm de largo. **Ovario** terete, delgado, no inflado, no ornamentado, 17-30 mm de largo. **Sépalos** entreabiertos, libres, elípticos, obtusos, diminutamente apiculados, 7-nervados, margen entero, extendido, 15-20 x 7-10 mm; los **laterales** ligeramente oblicuos. **Pétalos** entreabiertos, libres, anchamente obovado espatulados, ápice redondeado, 5-nervados, margen entero, extendido, 14-18 x 7-10 mm. **Labelo** unido a la columna, levemente conduplicado en posición natural, reniforme, base ligeramente cordada, margen entero, extendido, 10-12 x 15-19 mm; bicalloso, los callos muy pequeños, laminares, lateralmente aplanados; disco con una quilla ancha, carnosa y baja que se alarga hasta el ápice de la lámina. **Columna** corta, gruesa, recta, 5-6 mm de largo. **Clinandrio** corto, margen entero. **Antera** reniforme, 4-locular. **Polinios** 4, obovoides, lateralmente comprimidos; caudículas cortas, granuladas, casi tan largas como los polinios. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** pequeños, de 1/3 del largo de la cavidad estigmática. **Nectario** poco profundo, penetrando 1/3 del ovario, no inflado, no ornamentado. **Cápsula** elipsoide; pedicelo 7 mm de largo; cuerpo 5 x 2.5 cm; cuello apical 9 mm de largo.

Terrestrial, monopodial, tall **herb**, branching sub-apically. **Roots** from the base of the main stem, fleshy, thick, white. **Stems** cane-like, branching near the apex of the mature stems, terete at the base, laterally compressed towards the apex, erect, straight, the main stem much taller than branches. **Leaves** 15-18 on the main stem, 5-10 on the branches, distributed throughout the stems, erect-spreading, alternate, articulate, coriaceous; sheath tubular, striated, rugose; blade oblong to oblong-lanceolate, obtuse, slightly bilobed, coriaceous, margin entire, spreading. **Inflorescence** apical, racemose, nutant, few-flowered; peduncle short, laterally compressed. **Flowers** 12-15, resupinate, very fleshy, opening in succession from the base to the apex of the inflorescence, nearly all eventually open at one time; green turning orange-yellow with age; without fragrance. **Floral bracts** much shorter than the ovary, narrowly triangular, acuminate, amplexicaul. **Ovary** terete, thin, not inflated, smooth. **Sepals** partly spreading, free, elliptic, obtuse, minutely apiculate, 7-veined, margin entire, spreading; lateral sepals slightly oblique. **Petals** partly spreading, free, widely obovate-spatulate, apex rounded, 5-veined, margin entire, spreading. **Lip** united to the column, slightly conduplicate in natural position, reniform, base slightly cordate, margin entire, spreading; bicallose, the calli laminar, very small; disc with a wide, fleshy, low keel that runs to the apex of the lip. **Column** short, thick, straight. **Clinandrium-hood** short, margin entire. **Anther** reniform, 4-celled. **Pollinia** 4, obovoid, laterally compressed; caudicles short and granulate, nearly as long as the pollinia. **Rostellum** apical, slit. **Nectary** shallow, penetrating 1/3 the ovary, not inflated, smooth. **Capsule** ellipsoid, pedicel and apical neck short.



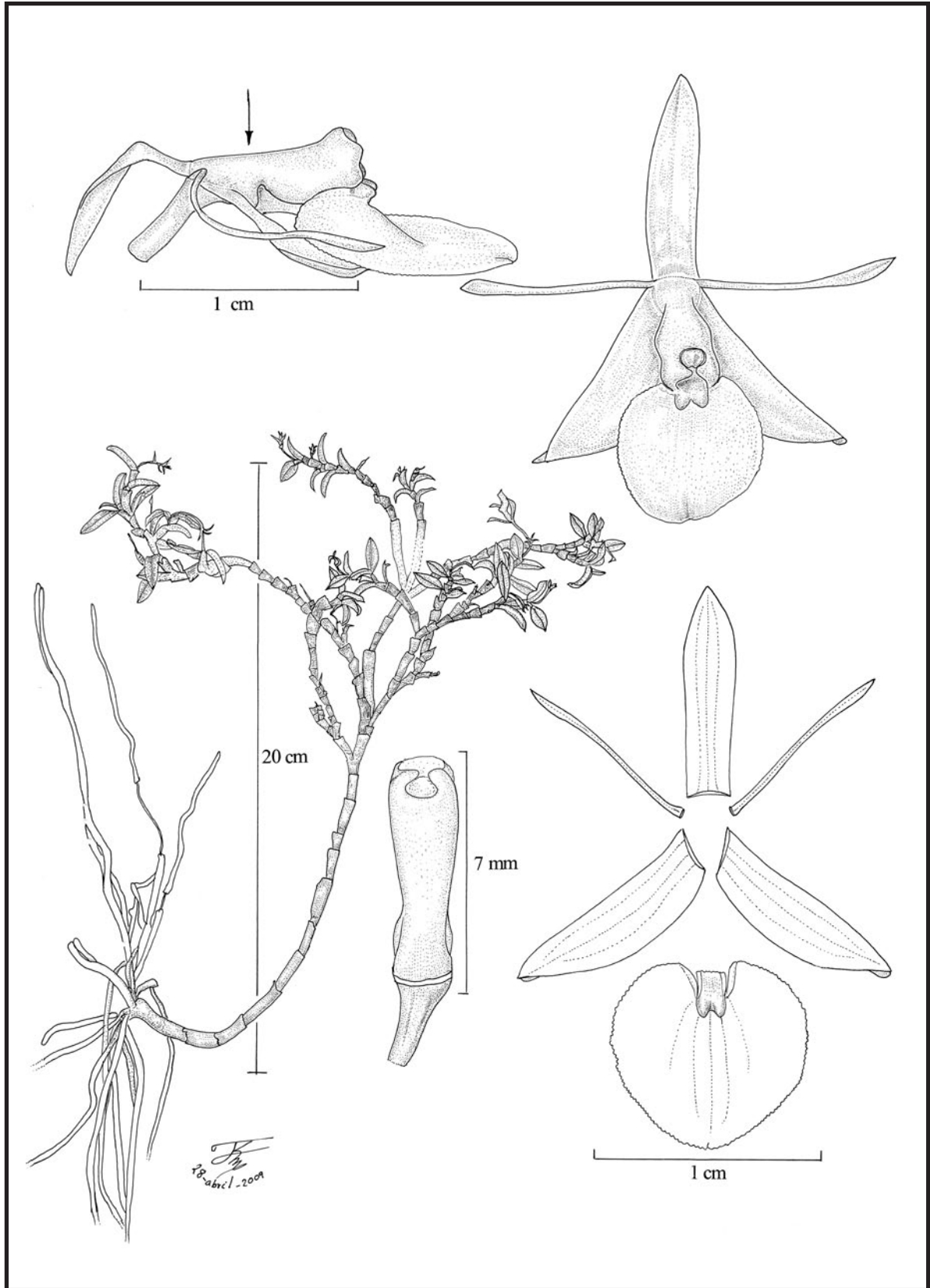
OTHER SPECIMENS AND RECORDS: See appendix.

DISTRIBUTION AND ECOLOGY: Ranging from southern Colombia to Bolivia, along the upper eastern slopes of the Andes, terrestrial at 1350-3150 m altitude. Flowering throughout the year.

RECOGNITION: *Epidendrum colombianum* belongs to the Andean Group, Renilabium Subgroup which is characterized by the tall plants, monopodial habit, generally large, bilobed leaves, racemose inflorescence, entire to 3-lobed lip with a channel at the base between the calli. The species is recognized by the oblong to oblong-lanceolate leaves up to 20 cm long, nutant, short inflorescence (to 5 cm long), fleshy, hanging, green to yellow-orange, non-fragrant flowers, partly spreading sepals and petals 14-20 mm long, reniform lip with a pair of laminar small calli. *Epidendrum pazii* Hágsater has elliptic leaves up to 9 cm long, fragrant flowers, the lip with a pair of well-separated, parallel, laminar calli. *Epidendrum renilabioides* Hágsater & Dodson, which is found up to the northern border of Ecuador, has externally purplish brown flowers, petals and lip greenish, the calli and the column white, petals are elliptic-spatulate, the apex obtuse, and the callus of the lip is "Y" shaped, with the lip apiculate, not emarginate.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In reference to the country of Colombia, where the type was collected.



EPIDENDRUM CONSTRICOLUMNA Hágsater, Chocce & E.Santiago

Plate 1226

EPIDENDRUM CONSTRICOLUMNA Hágsater, Chocce et E.Santiago, *sp. nov.*

Type: PERU: Amazonas: Prov. Bongará: Corosha, En los matorrales de la Jalca de Beirut, cerca al Área de Conservación Privada HierbaBuena-Allpayacu, 2720 m, 24 septiembre 2008, **M. Chocce, N. Vega y G. Gómez 4782**. Holotype: USM! (Illustration voucher).

Epidendro soratae Rchb.f. simile sed foliis ovato-lanceolatis, inflorescencia brevior et pauciflora, floribus majoribus, labello orbiculari, columna recta ventraliter circa basem abrupte constricta, discrepat.

Hierba monopodial, ramificada, de hasta 21 cm de alto. **Raíces** basales, delgadas, sencillas. **Tallos** tipo caña, lateralmente comprimidos, ramificados a partir de la mitad apical del tallo principal; el principal con ramificaciones cortas; 2.4-20 x 0.25-0.3 cm. **Hojas** en el tallo principal caducas, no vistas; 5-6 en las ramificaciones, distribuidas a lo largo de las mismas, alternas, articuladas, erecto extendidas, conduplicadas en la base; vaina infundibuliforme, estriada, rugosa, amoratado rojiza, 4-6 x 2-3 mm; lámina ovado lanceolada, aguda, coriácea, margen entero, verde con el margen amoratado, 0.7-1 x 0.25-0.3 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, corta, florece una sola vez, pauciflora, laxa, ca. 10 mm de largo; pedúnculo terete, delgado, 4 mm de largo. **Bráctea floral** más cortas que el ovario, triangular lanceoladas, agudas, abrazadoras, 2-3 mm de largo. **Flores** 3, simultáneas, resupinadas, ocráceas algo teñidas de rojizo, los sépalos y pétalos translúcidos, la columna rojiza y el labelo difuminado de rojizo, sin datos de fragancia. **Ovario** terete, delgado, inflado ventralmente justo detrás del perianto, 6 mm de largo. **Sépalos** oblongo elípticos, subobtusos, 3-nervados, margen entero, extendido, 8 x 2-3 mm; el **dorsal** libre, algo reflexo; los **laterales** unidos de manera oblicua a la columna, extendidos, oblicuos, diminutamente apiculados. **Pétalos** extendidos, libres, filiformes, ligeramente arqueados, subobtusos, 1-nervados, margen entero, extendido, 8.5 x 0.3 mm. **Labelo** unido a la columna, entero, orbicular, ligeramente cordado en la base, algo convexo en posición natural, margen diminutamente eroso, 7-8 x 6 mm (parte libre); bicalloso, los callos carnosos, algo lateralmente aplanados, cortos, paralelos, muy juntos entre sí; desprovisto de quillas. **Columna** recta, arqueada hacia arriba hacia el ápice, ventralmente abruptamente constricta cerca de la base, formando una vesícula prominente y corta ubicada a la altura del perianto, 6 mm de largo. **Clinandrio** reducido, margen subentero. **Antera** reniforme, con una quilla baja en la superficie dorsal. **Polinios** no vistos. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** no vistos. **Nectario** penetrando detrás del perianto, formando una vesícula corta y prominente. **Cápsula** no vista.

Short, monopodial **herb**, branching sub-apically. **Stems** cane-like, laterally compressed, branched above the middle of the main stem, the branches short. **Leaves** on the main stem fallen, not seen, 5-6 per branch, distributed throughout, alternate, articulate, erect-spreading; sheath infundibuliform, striated, rugose, reddish purple; blade ovate-lanceolate, acute, coriaceous, margin entire, green with the margin purple. **Inflorescence** apical, racemose, short, flowering only once, lax, few-flowered; peduncle short, terete, thin. **Floral bracts** much shorter than the ovary, triangular-lanceolate, acute, amplexicaul. **Flowers** 3, simultaneous, resupinate, ochre, tinged reddish, sepals and petals translucent, column reddish, lip tinged reddish. **Ovary** terete, thin, ventrally inflated just behind the perianth. **Sepals** oblong-elliptic, sub-obtuse, 3-veined, margin entire, spreading; dorsal sepal free, somewhat reflexed; the lateral sepals obliquely united to the column, spreading, narrowly ovate, oblique, minutely apiculate. **Petals** spreading, free, filiform, slightly arched, sub-obtuse, 1-veined, margin entire, spreading. **Lip** united to the column, entire, orbicular, base slightly cordate, somewhat convex in natural position, margin minutely erose; bicallose, the calli fleshy, somewhat laterally flattened, parallel, very near to each other; disc without keels. **Column** straight, apically arched upwards, ventrally abruptly constricted near the base, forming a prominent vesicle at the height of the perianth. **Clinandrium-hood** reduced, margin sub-entire. **Anther** reniform, with a low keel on the dorsal surface. **Rostellum** apical, slit. **Nectary** penetrating behind the perianth, forming a short, prominent vesicle.

OTHER SPECIMENS: PERU: **La Libertad:** Pataz, 3250 m, 23 V 1961, López 3471, AMES! (specimen mounted on the right side).

DISTRIBUTION AND ECOLOGY: Along the upper eastern slope of the Andes in north eastern Peru, epiphytic at 2000-3250 m altitude. Flowering in September, fruiting in May.



RECOGNITION: *Epidendrum constrictolumna* belongs to the Soratae 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 sub-capitate inflorescence on a short, thin peduncle, and the bicallose lip. The species is recognized by the plants with short branches, ovate-lanceolate leaves 0.7-1 cm long, a very short inflorescence, 3, translucent, ochre colored flowers tinged reddish, dorsal sepal reflexed, lateral sepals spreading, 8 mm long, orbicular lip and the column straight, apex somewhat upturned and ventrally abruptly constricted near the base. *Epidendrum retrosepalum* Hágsater, R.Fernández & E.Santiago is vegetatively similar, but the flowers are much smaller, the lateral sepals strongly reflexed (6-7 mm long), lip orbicular and the column arched at the basal half. *Epidendrum soratae* Rchb.f. has lanceolate leaves to 4.7 cm long, inflorescence with up to 13, greenish yellow flowers, partly spreading sepals 7 mm long, a reniform lip with the margin entire.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Latin *constrictus* narrow, and *columna*, the fused sexual structure in orchids, in reference to the abruptly narrowed column.

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

Illustrator: R. Jiménez M.

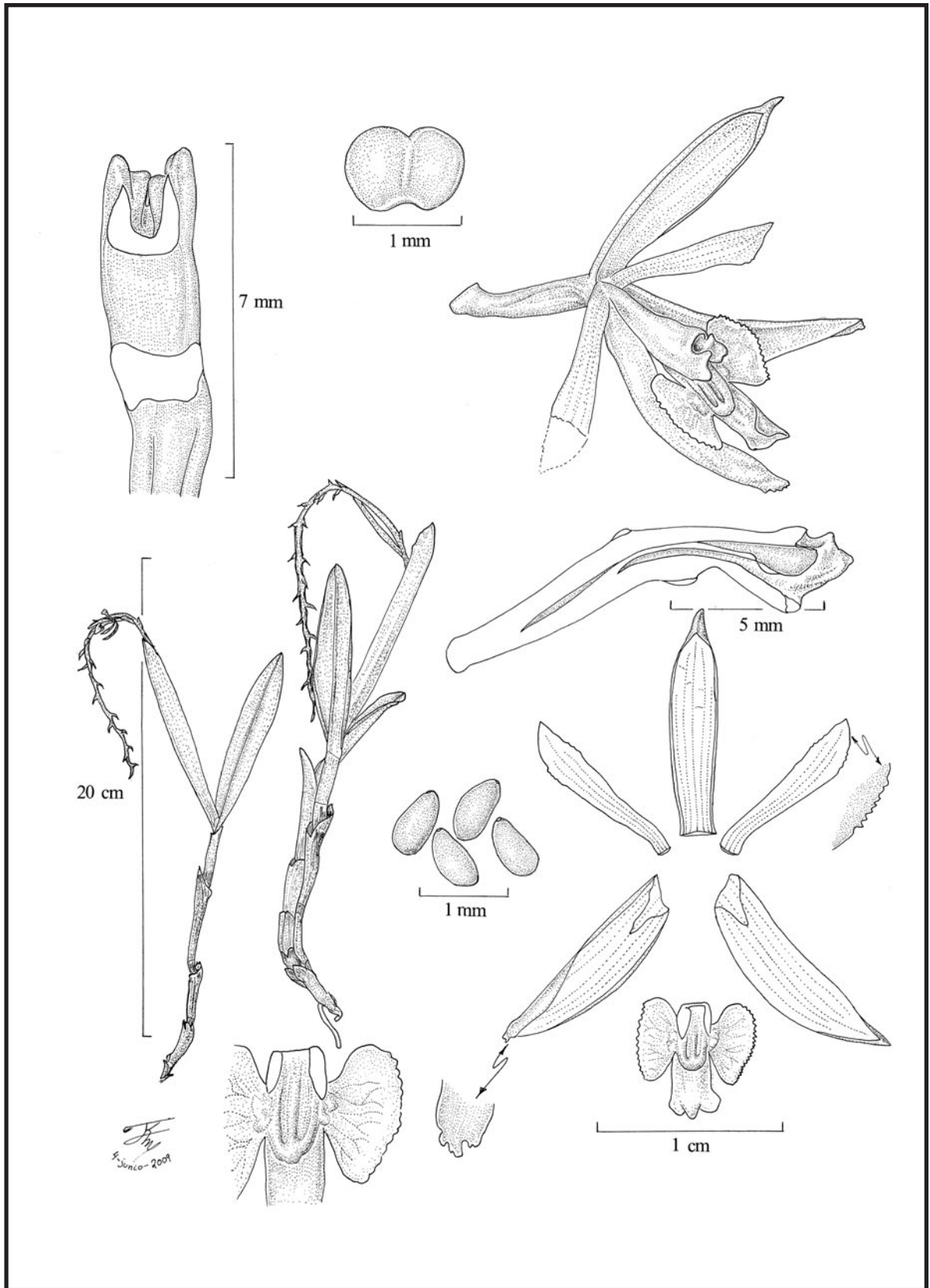
Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009.

Plate 1226



EPIDENDRUM CORALLINUM Hágsater

EPIDENDRUM CORALLINUM Hágsater, *sp. nov.*

Type: COLOMBIA: Antioquia: [Tolima: Nevado de] Ruiz, 3000 m, *G. Schmidtchen s.n.* Holotype: W-R 11166! (Illustration voucher)

Epidendro cyclostylosi Hágsater simile sed caulibus unifoliolatis, floribus corallinis, petalis 3-nervatis margine apicali denticulatis, labello cum callis basalibus binis angustis longis parallelis et cum disco magno carnosio semicirculari, marginibus lateralibus toruloso-carnosis, labelli lobulo medio transverse pentagonalis, apice carnosio, distinguendum.

Herb simpodial, caespitosa, erecta, 28-31 cm de alto. **Raíces** basales, delgadas, blancas, 1.5 mm de grosor. **Tallo** algo engrosado, sin formar un pseudobulbo, tipo caña, erecto, 10 x 0.3-0.5 cm; cubierto por 3 vainas no foliares, tubulares, obtusas, finamente estriadas, escariosas, 1.6-4 cm de largo. **Hoja** 1, ubicada en el ápice del tallo, articulada, erecta, coriácea; vaina tubular, lateralmente aplanada, estriada, 1.4-2.5 x 0.4-0.5 cm; lámina angostamente elíptica, obtusa, margen entero, 7.5-8 x 1.4-1.6 cm. **Bráctea espatácea** 1, tubular, lateralmente aplanada, ancipitosa, aguda, 8.5-9.5 cm de largo. **Inflorescencia** apical, racemosa, arqueada, florece una sola vez, laxa, 18-21 cm de largo; pedúnculo alargado, lateralmente aplanado, erecto, recto, oculto casi en su totalidad por la bráctea espatácea, 9-12 cm de largo; en ocasiones el ápice provisto de 2 brácteas muy prominentes, oblongo lanceoladas, agudas, abrazadoras, 4.2 cm de largo. **Brácteas florales** más cortas que el ovario, angostamente triangulares, cortamente acuminadas, abrazadoras, 3-5 mm de largo. **Flores** [9]24-26, simultáneas, resupinadas, rojo coral; sin datos de fragancia. **Ovario** terete, delgado, no inflado, estriado, 5-6 mm de largo. **Sépalos** entreabiertos, libres, carnosos, oblongo oblanceolados, agudos, 5-nervados, margen entero, extendido, 12- x 2.7-3 mm; el **dorsal** apiculado; los **laterales** oblicuos, con una quilla dorsal prominente, erosa. **Pétalos** entreabiertos, libres, oblicuamente linear oblanceolados, agudos, 3-nervados, margen apical denticulado, extendido, 10 x 1.8 mm. **Labelo** unido a la columna, trilobado, base cordada, 6.3 x 6.3 mm; ecalloso; disco con una masa carnososa, semicircular, con 2 surcos paralelos en la base y el borde formado por carnosidades subglobosas; lóbulos laterales transversalmente ovados, margen crenado, 2.3 x 4.5 mm; lóbulo medio transversalmente pentagonal, el ápice carnosio, 3.6 x 2.7 mm. **Columna** recta, delgada, el ápice bidentado, con un par de alas redondeadas, 6 mm de largo. **Clinandrio** reducido, con el margen entero. **Antera** 4-locular, reniforme, con una quilla baja en la superficie dorsal. **Polinios** 4, obovoides, algo lateralmente aplanados. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** pequeños, ocupando 1/3 del largo de la cavidad estigmática. **Nectario** apenas penetrando el ovario, justo detrás del perianto, delgado, no ornamentado. **Cápsula** no vista.

Sympodial, caespitose, erect **herb**. **Roots** basal, thin, white. **Stems** somewhat thickened, without forming a pseudobulb, cane-like, erect, covered by 3, non-foliar, tubular, obtuse, minutely striated, scarios sheaths. **Leaf** single, apical, articulate, erect, coriaceous; sheath tubular, laterally compressed, striated; blade narrowly elliptic, obtuse, margin entire. **Spathaceous bracts** 1, tubular, laterally compressed, ancipitose, acute, slightly longer than the leaf. **Inflorescence** apical, racemose, arching, flowering only once, lax-flowered; peduncle elongate, laterally compressed, erect, straight, nearly totally hidden by the spathaceous bract; sometimes provided with 2 very prominent, oblong-lanceolate, acute, amplexicaul bracts. **Floral bracts** shorter than the ovary, narrowly triangular, short-acuminate, amplexicaul. **Flowers** [9]24-26, simultaneous, coral-red. **Ovary** terete, thin, not inflated, striated, short. **Sepals** partly spreading, free, fleshy, oblong-oblanceolate, acute, 5-veined, margin entire, spreading; dorsal sepal apiculate; lateral sepals oblique, with a prominent dorsal, erose keel. **Petals** partly spreading, free, obliquely linear-oblanceolate, acute, 3-veined, apical margin denticulate, spreading. **Lip** united to the column, 3-lobed, base cordate; with a pair of parallel, narrow calli, disc with a fleshy, semicircular fleshy mass, with 2 parallel channels at the base and the border formed by sub-globose, fleshy knobs at the base of the lateral lobes; lateral lobes transversely ovate, margin crenate; midlobe transversely rectangular, ending in a fleshy apicule; margin entire, apically somewhat involute. **Column** straight, thin, apex bidentate, with a pair of rounded wings. **Clinandrium-hood** reduced, margin entire. **Anther** 4-celled, reniform, with a dorsal low keel **Pollinia** 4, obovoid, somewhat laterally compressed. **Rostellum** apical, slit. **Nectary** shortly penetrating the ovary behind the perianth, thin, smooth.

OTHER SPECIMENS: COLOMBIA: Antioquia: en los páramos de Belmira y San José de la Montaña, 2500-3400 m, *JT 4788*, AMO! (Illustration, AMO!)

OTHER RECORDS: COLOMBIA: Antioquia: San Diego, Llanadas, 2500 m, XI 1974, *R. Escobar 1320*, 2 color slides, AMO! one of them published in Escobar, 1994.

DISTRIBUTION AND ECOLOGY: Known only from central Colombia, on the Cordillera Central, at about 3000 m altitude; probably epiphytic. Time of flowering unknown.

RECOGNITION: *Epidendrum corallinum* belongs to the *Cyclotylosum* Subgroup characterized by the caespitose habit, 1-2 leaved stem, racemose inflorescence with narrow, parallel-sided spathaceous bracts, and flowers with a wide midlobe, and a large fleshy-thickened, rounded disc. The species is recognized by the single, leathery, flat leaf, coral-red flowers, 3-veined petals, the apical margin denticulate, and the fleshy rounded disc of the lip, with a pair of elongate, low, parallel calli at the base of the lip, the three lobes about equal in size, margin of the lateral lobes crenate, with the midlobe relatively wide, pentagonal, the apex thickened. *Epidendrum cyclostylosum* has pale brown-red flowers, a somewhat similar, fleshy thickened, circular disc, but the stems are bifoliate, petals 1-veined, margin entire, and the margin of the lateral lobes of the lip entire. *Epidendrum moritzii* Rchb.f. has longer, wider leaves, greenish flowers, a bicallous lip with a short, fleshy keel running to the middle of the disc, without radiating keels, and the midlobe of the lip is rectangular-oblong, with an acute apex.



NOTE: The photograph published in *Orquídeas Nativas de Colombia* 5: #911 seems to belong to this species. We have been wondering about the identity of that plant for the last 15 years, and finally, upon preparing an illustration of the *Schmidtchen* specimen, it seems we have found it. Both agree in most aspects, though the details of the disc of the lip are unclear: is the disc bisulcate or widely channeled with a pair of elongate calli? The quality of the photograph does not permit a clear view. On the other hand, we have no information on the plant architecture corresponding to the plant photographed.

CONSERVATION STATUS: DD. Data deficient.

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

REFERENCES: Escobar, R. 1994. *Orquídeas Nativas de Colombia* 5: photo 911. Editorial Colina, Medellín, Colombia.

Author: E. Hágsater

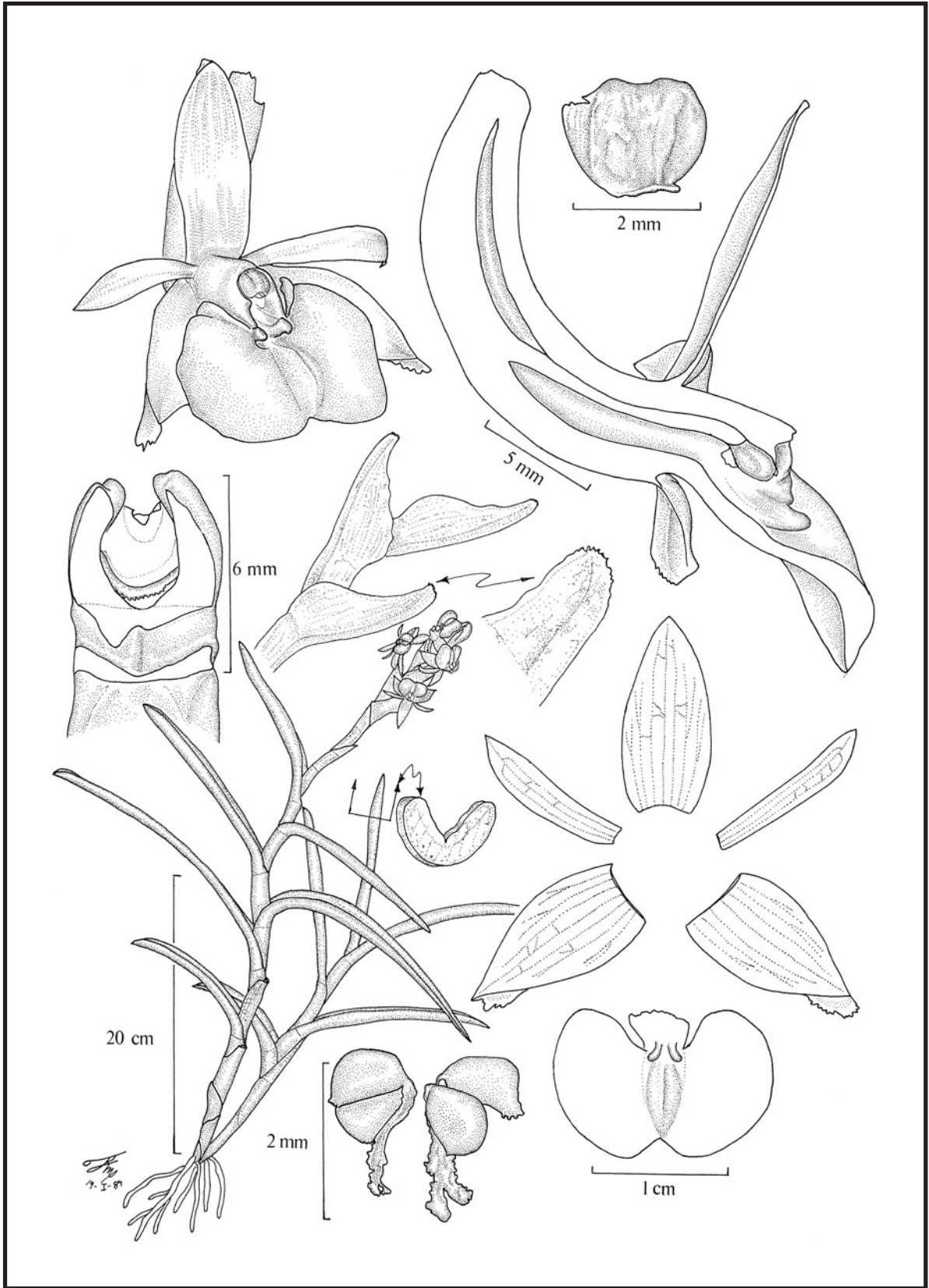
Illustrator: R. Jiménez M.

Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009. Plate 1227



EPIDENDRUM CORIIFOLIUM Lindl.

Plate 1228

EPIDENDRUM CORIIFOLIUM Lindl., J. Hort. Soc. London, 6: 218. 1851.

Type: Central America, **George Ure Skinner**. Holotype: K-L!

Synonyms: *Epidendrum fuscopurpureum* Schltr., Repert. Sp. Nov. Regni Veg., Beih. 17: 32-33. 1922. Type: PANAMA: Chiriquí, 4500 ft, **C.W. Powell 257**. Holotype: B (destroyed). Lectotype (designated by Christenson, 1991): photo of holotype: AMES 39206!
Epidendrum subviolascens Schltr., Repert. Sp. Nov. Regni Veg., Beih. 19: 219. 1923. Type: COSTA RICA: Alajuela: San Pedro de San Ramón, 900 m, November 1921, **A. M. Brenes 174**. Holotype: B (destroyed). Lectotype: CR 25770! drawings, AMES!
(Designated by Barringer, Fieldiana Bot. 17: 7. 1986.)

Hierba epífita o litófito, simpodial, cespitosa, 20-40 cm de alto. **Raíces** basales, carnosas, gruesas, 1.5-2.5 mm de grosor. **Tallos** sencillos, tipo caña, lateralmente comprimidos hacia el ápice, rectos o ligeramente flexuosos, 12-25 x 0.4-0.8 cm; cubiertos totalmente por las vainas, las 2 o 3 de la base no foliosas. **Hojas** 4-9, dísticas, distribuidas en las ¼ partes apicales del tallo, la primera y la última generalmente más pequeñas; vainas tubulares, las de la base cilíndricas, las del ápice lateralmente comprimidas, estriadas en seco, 1.5-4 cm de largo; lámina foliar articulada, angostamente ensiforme, semiterete, acanalada, en forma de V en corte transversal, aguda, diminutamente aristada, carnosa, lisa, lustrosa, verdes teñidas de morado, margen entero, 7-19 x 0.5-1.3(1.5) cm. **Bráctea espátacea** ausente. **Inflorescencia** apical, racemosa, del tallo maduro, florece una sola vez, dística, secundiflora, erecta, 11-19 cm de largo; pedúnculo ancipitoso, bi-alado, sinuoso, con 1 ó 2 brácteas conduplicadas, espaciadas, sin cubrir el pedúnculo, semejantes a las florales, 2-3.5 cm de largo; raquis, ancipitoso en la base y lateralmente comprimido en el ápice. **Brácteas florales** prominentes, más largas que el ovario, ampliamente ovado-acuminadas, el ápice angostamente redondeado, dentado, conduplicadas, falcadas en posición natural, persistentes, 1.5-3.5 x 0.5-1.1 cm. **Flores** 4-10, sucesivas, 3-6(8) abiertas a la vez, el labelo siempre orientado hacia el raquis, pardas con tintes verdes a amarotados, que se tornan más pardo amarotados al envejecer, la columna verde manzana con difuminaciones rojas, la antera amarotada; fragancia nocturna. **Ovario** dilatado hacia el ápice, terete, no ornamentado, 15-17 mm de largo. **Sépalos** libres, glabros, coriáceos, 5-7 nervados, margen entero, extendido; el **dorsal** extendido o reflexo, oblongo ovado, aristado, 12-16 x 5.0-7.0 mm; los **laterales** extendidos, ovados, agudos, carina dorsal prominente y dentada, 14-20 x 7.5-8.5 mm. **Pétalos** recurvados, angostamente oblanceolados, agudos, 1-nervados, margen entero, extendido, 13-16 x 2.0-2.5 mm. **Labelo** unido a la columna, bilobado, subcuadrado a reniforme, cordado en la base, ápice emarginado, mucronado; bicallose, callos pequeños, ligeramente recurvados, con una carina central roma, margen entero y revoluta, 10-12 x 15-18 mm. **Columna** recta, gruesa, 9-10 mm de largo. **Clinandrio** reducido, entero. **Antera** ovoide a subsférica, con una quilla gruesa y roma al frente, 4-locular. **Polinios** 4, obovoides, lateralmente comprimidos, subiguales; caudículas suaves y granuladas, más largas que los polinios; viscidio semiliquido, transparente. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** reducidos. **Nectario** penetrando ½ del ovario, no ornamentado. **Cápsula** ovoide a elipsoide, 3-5 x 1.0-1.2 cm, con un cuello apical largo, de 0.7-1.0 cm de largo y pedicelo corto, de 5 mm de largo.

Epiphytic or lithophytic, sympodial, caespitose **herb.** **Roots** basal, fleshy, thick. **Stems** simple, cane-like, laterally compressed above, straight or somewhat flexuous; totally covered by sheaths, the lower ones non foliaceous. **Leaves** 4-9, distichous, distributed throughout the upper ¼ of the stems, the lower and upper leaf generally smaller; sheaths tubular, laterally compressed towards the apex, striated when dry; blade articulate, narrowly ensiform, semi-terete, canaliculate, fleshy, smooth, lustrous, apex minutely aristate, green tinged with purple, margin entire. **Inflorescence** apical, racemose, from the mature stem, flowering only once, distichous, secund, erect, equal to somewhat longer than the apical leaf; peduncle ancipitose, two-winged, sinuose, with 1-2 conduplicate sheaths similar to the floral bracts; rachis ancipitose, two winged. **Floral bracts** prominent, longer than the ovary, conduplicate, falcate in natural position, ovate, persistent, the apex narrowly rounded. **Flowers** 4-10, successive, 3-6(8) open at one time, lip always facing the rachis, flowers greenish brown to purple, the column green somewhat purplish tinged; fragrance nocturnal. **Ovary** dilated towards the apex, terete, smooth. **Sepals** free, glabrous, coriaceous, 5-7-veined, margin spreading, entire; the **dorsal** spreading or reflexed, ovate-oblong, aristate; the **laterals** spreading, ovate, acute, with a prominent, dentate, dorsal keel. **Petals** recurved, narrowly oblanceolate, acute, 1-veined, margin entire, spreading. **Lip** united to the column, bilobed, sub-quadrate to reniform, base cordate, apex emarginate, mucronate; bicallose, calli small, slightly recurved, with a central, low, rounded keel, margin entire, revolute. **Column** straight, thick. **Clinandrium** reduced, entire. **Anther** ovoid to sub-spherical, with a thick, low keel in front, 4-celled. **Pollinia** 4, obovoid, laterally compressed, sub-equal; caudicles soft and granulose, longer than the pollinia; viscidium semi-liquid, transparent. **Rostellum** sub-apical, slit. **Nectary** penetrating ½ the ovary, smooth. **Capsule** ovoid to ellipsoid, with a short pedicel and a long apical neck.

OTHER SPECIMENS: COSTA RICA: Alajuela: La Palma de San Ramón, 1150 m, 10 XI 1927, *Brenes 2652* (94), CR! **Puntarenas:** San Vito, 1000 m, *Dodson 4473*, SEL! Ujarrás, Quebrada Dorora, camino a Río Lori, 1500 m, 10 III 1993, *Herrera 5849*, AMO! **San José:** Without locality, *Endres 502*, W-R! *Ibid.* *Endres s. n.*, W-R! San José, *Carmoli*, W-R! La Palma de San Isidro y El Alto de San Juan, 900 m, 12 III 1983, *Hágsater 7126*, pressed 14 II 1988, SEL! *Ibid.*, pressed 10 XII 1995, AMO! INBIO! USJ! *Ibid.*, *Hágsater 7127*, pressed 20 I 1989, AMO! MO! Sabanillas de Acosta, VIII 1927, *Lankester 7229*, AMES! PANAMA: Chiriquí: Lava flow ca. 3 km NE of El Hato del Volcán, 1500-1800 m, 22 XI 1975, *Davidse 10373*, AAU! MO! SEL! US! Hort., purchased from H. A. Dunn, *Dresslers s. n.*, MO!

OTHER RECORDS: COSTA RICA: San Ramón, 7 I 1969, illustration by R. L. Rodríguez 654 (slide and xerox AMO!)

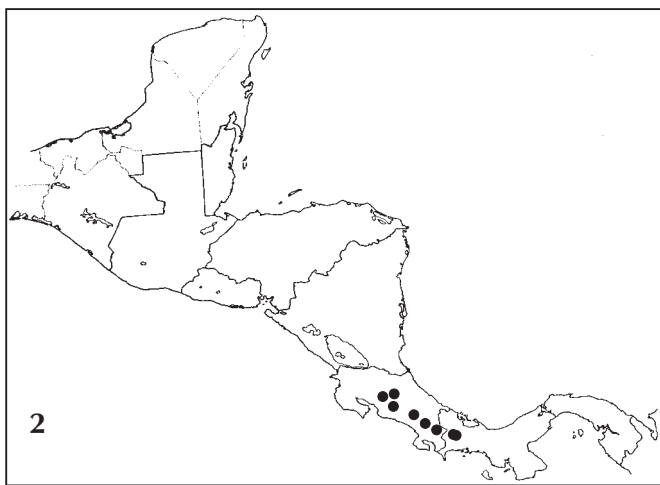
DISTRIBUTION AND ECOLOGY: Pacific slopes of the Cordilleras Central and Talamanca, in Costa Rica and western Panama. In seasonally wet forest, on lava flows and in partial shade on rocks in grasslands, 900-1800 m altitude. Flowering from November to March.

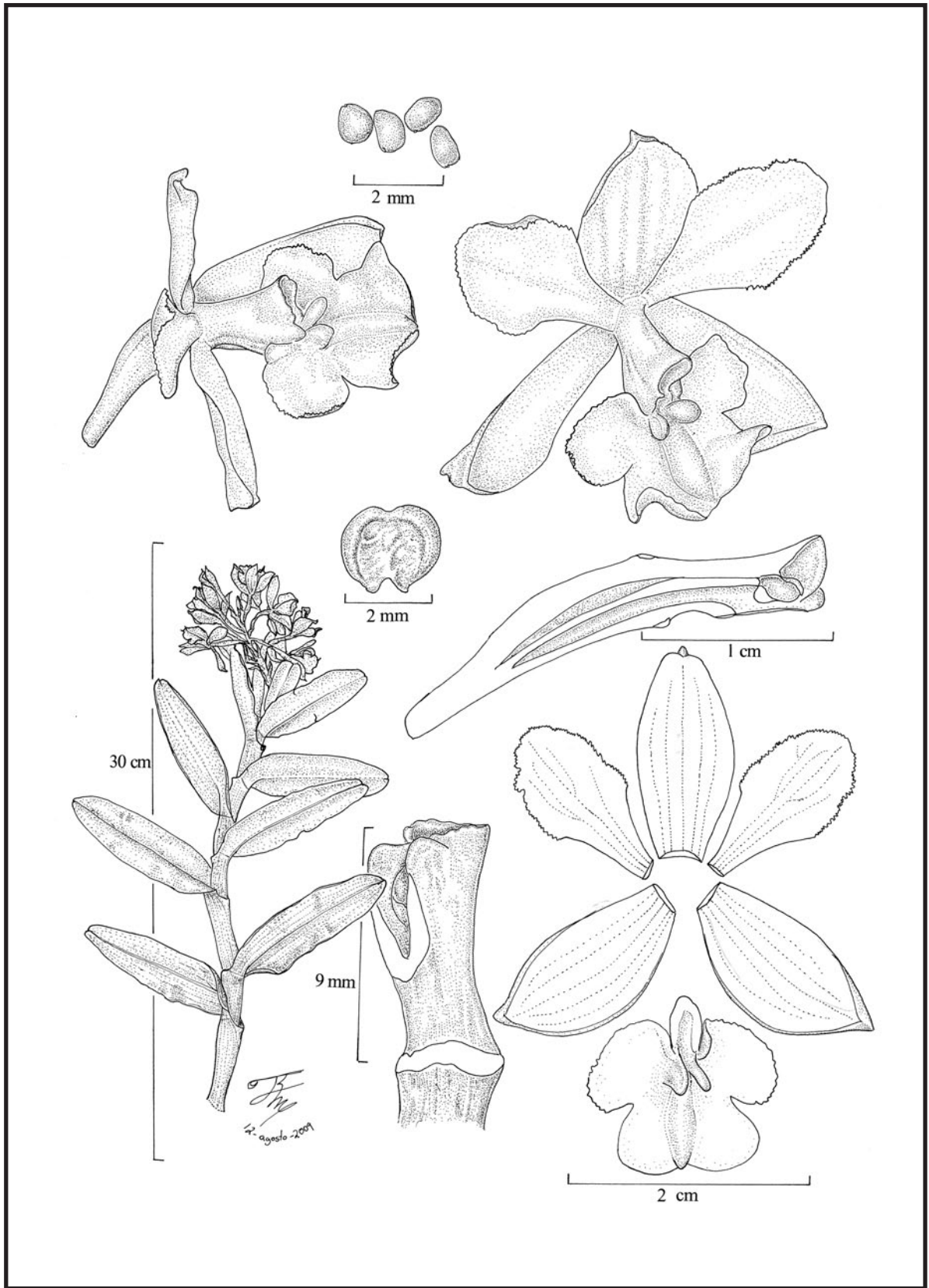
RECOGNITION: *Epidendrum coriifolium* belongs to the Spathiger Group which is characterized by the sympodial growth habit, distichous, secund inflorescence with large, conduplicate bracts, fleshy green flowers with narrow petals and reniform lip; the flowers of most of this group are very similar, but the species are recognized by the shape of the floral bracts, and sequence of flowering. The species is the only one to have 4-9 very rigid, coriaceous, semi-terete leaves and in addition has non-imbricating floral bracts that are somewhat incurved and apically narrowly rounded and successive greenish brown to purplish colored flowers. It has been confused with other species of the group, which all have flat leaves, and thus the name has been used to designate nearly all the large-flowered species including *Epidendrum alvarezdeltoroi* Hágsater from Mexico and Guatemala which has, simultaneous flowers with the inflorescence barely longer than the apical leaf. *Epidendrum summerhayesii* Hágsater has short, imbricating, wide, rounded floral bracts. *Epidendrum allochronum* Hágsater has narrow, straight, narrowly rounded bracts; flowers produced one at a time and very narrow, linear, acuminate petals. *Epidendrum beharorum* Hágsater, from Guatemala and Mexico has a much longer inflorescence with spreading, straight floral bracts, and flowers, though successive, show several open at one time.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek χοριον, leather, in reference to all the parts of the species, which were described by Lindley as of a tough, thick, leathery texture.

REFERENCES: Christenson, E. A. 1991. Mesoamerican orchid studies II: Powell's Panamanian Orchidaceae. *Lindleyana* 6(3): 124-132.





EPIDENDRUM CORNICALLOSUM Foldats

EPIDENDRUM CORNICALLOSUM Foldats, Bol. Soc. Venez. Ci. Nat. 28: 234. 1969.

Type: VENEZUELA: Táchira: entre Las Copas y alto de Fila de Tierra Negra (hacia el Cerro Segueta y Fundación Bélgica), 2870-2880 m, 16 enero 1968, **Julián A. Steyermark, G. C. Ky E. Dunsterville 101008**. Holotype: AMES!

Hierba terrestre, monopodial, ramificada arriba, hasta de 2.5 m de alto. **Raíces** no vistas. **Tallos** ramificados arriba, tipo caña, teretes, el principal 200-250 x 1.2-1.5 cm, las ramificaciones ca. 20 cm de largo; cubiertos en la base por vainas tubulares no foliáceas, estriadas, rugosas. **Hojas** numerosas en el tallo principal, 6-8 en las ramas, distribuidas a lo largo de los 2/3 apicales de los tallos, dísticas, articuladas, erecto extendidas, coriáceas; vainas tubulares, finamente rugosas, 5 x 1.5 cm de largo; lámina oblongo-elíptica a elíptica, redondeada a ligeramente bilobada en el ápice, margen entero, extendido; las del tallo principal mayores, 5.5-12 x 2.4-4 cm, las de las ramas generalmente más pequeñas. **Bráctea espatácea** ausente. **Inflorescencia** apical, tanto del tallo principal como de las ramas, racemosa, florece una sola vez, arqueado nutante, pluriflora, densa, 8-15 cm de largo; pedúnculo muy corto, ligeramente lateralmente aplanado. **Brácteas florales** mucho más cortas que el ovario, triangular ovadas, acuminadas, 5-10 mm de largo. **Flores** 12-15, simultáneas, resupinadas, carnosas, pardo amarillentas con la superficie dorsal pardo intenso, la columna verde olivo; sin datos de fragancia. **Ovario** subterete, no inflado, estriado, 25-35 mm de largo. **Sépalos** extendidos, libres, glabros, elíptico obovados, diminutamente apiculados, 3-nervados, ligeramente cóncavos, margen entero, extendido; el **dorsal** obtuso a subagudo, 21-26 x 1-1.2 mm; los **laterales** agudos, oblicuos, 24-26 x 1.1-1.3 mm. **Pétalos** extendidos, libres, angostamente espatulado-obovados a obovados, redondeados, 5-nervados, las nervaduras laterales ramificadas desde la base dando la apariencia de ser 7-nervados, margen apical crenulado, 19-21 x 8.5-1.2 mm. **Labelo** unido a la columna, trilobado, base ligeramente cordada, margen revoluto, 14-16 x 18-22 mm; bicalloso, los callos prominentes, corniformes; disco con una quilla intercallosa, engrosada y alargada hasta el ápice de la lámina; lóbulos laterales transversalmente elípticos, margen crenulado, 7 x 10 mm; lóbulo medio más grande que los lóbulos laterales, rectangular, más ancho que largo, ápice anchamente emarginado, diminutamente apiculado, margen ondulado, 7-8 x 12-15 mm. **Columna** recta, gruesa, 9-11 mm de largo. **Clinandrio** corto, margen entero. **Antera** reniforme, 4-locular. **Polinios** 4, obovoides, lateralmente comprimidos, desiguales; caudículas tan largas como los polinios. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** prominentes, ocupando más de la mitad de la cavidad estigmática. **Nectario** penetrando 1/2 del ovario, no inflado, liso. **Cápsula** no vista.

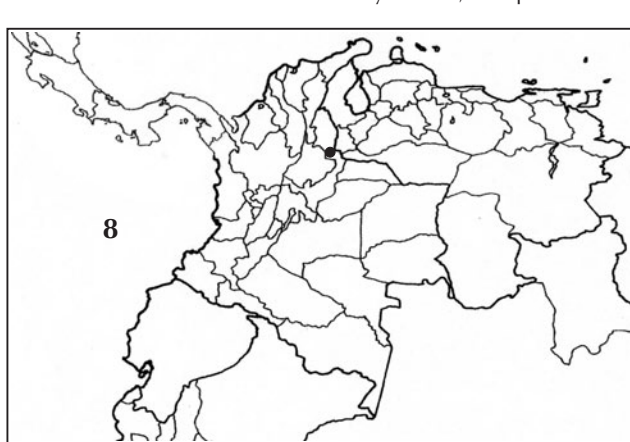
Terrestrial, monopodial **herb**. **Stems** cane-like, terete, main stem branching above, branches much shorter than the main stem, covered towards the base by tubular, non-foliar, striated, rugose sheaths. **Leaves** numerous on the main stem, 6-8 on the branches, distributed along the apical 2/3 of the stems, distichous, articulate, erect-spreading, coriaceous; sheaths tubular, minutely rugose; blade oblong-elliptic to elliptic, apex rounded to slightly bilobed, margin entire, spreading; the leaves on the branches smaller than those on the main stem. **Inflorescence** apical, from both the main stem and branches, racemose, flowering only once, arching-nutant, densely many-flowered; peduncle very short, slightly laterally compressed. **Floral bracts** much shorter than the ovary, triangular-ovate, acuminate. **Flowers** 12-15, simultaneous, resupinate, fleshy, yellowish brown, dorsally deep brown, column olive green. **Ovary** sub-terete, not inflated, striated, long. **Sepals** spreading, free, glabrous, elliptic-obovate, minutely apiculate, 3-veined, slightly concave, margin entire, spreading, the **dorsal** obtuse to subacute, the **laterals** acute, oblique. **Petals** spreading, free, narrowly obovate-spatulate to obovate, rounded, 5-veined, the lateral veins branching from the base so as to appear 7-veined, apical margin crenulate. **Lip** united to the column, 3-lobed, base slightly cordate, margin revolute; bicallose, the calli prominent, horn-like; disc with a single, thickened keel reaching the apex of the lip; lateral lobes transversely elliptic, margin crenulate; midlobe larger than the lateral lobes, rectangular, wider than long, apex widely emarginate, minutely apiculate, margin undulate. **Column** straight, thick. **Clinandrium-hood** short, margin entire. **Anther** reniform, 4-celled. **Pollinia** 4, obovoid, laterally compressed, unequal; caudicles as long as the pollinia. **Rostellum** apical, slit.

OTHER SPECIMENS: COLOMBIA: Norte de Santander: Parque Natural Nacional Tamá, 2650-3020 m, 2 IV 1987, **Lozano 5564**, COL! MA! (Illustration voucher).

OTHER RECORDS: VENEZUELA: Táchira: Entre Las Copas y Alto de Fila de Tierra Negra (hacia el Cerro Segueta y Fundación Bélgica), 2870-2880 m, 16 I 1968, **Dunsterville 1049**, illustration published as *E. suaveolens* in Dunsterville & Garay (1972).

DISTRIBUTION AND ECOLOGY: Known from Venezuela to Colombia, on the Amazon side of the Andes, at 2870 m altitude, terrestrial. Flowering from January to April.

RECOGNITION: *Epidendrum cornicallosum* belongs to the Andean Group, Cernuum Subgroup, characterized by the monopodial branching habit, cane-like stems, branching sub-apically, the branches shorter than the main stem, leaves coriaceous to sub-coriaceous and fleshy flowers, the lip 3-lobed. The species is recognized by the tall plants (to 2.5 m tall), the densely flowered raceme, the flowers very fleshy, yellowish brown, sepals 21-26 mm long, and the lip 14-16 x 18-22 mm, its margins revolute. *Epidendrum pastoense* Schltr. has a few-flowered raceme, the inflorescence 2-7 cm long, white to yellowish flowers, sepals 11-12 [16] mm long with a very prominent dorsal keel, and the lip 7-9 x 8-10 mm, with margins spreading.



CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Latin *cornicullum* small horn, and *callus*, the protuberances found at the base of the lip.

REFERENCES: Dunsterville, G.C.K., & L.A. Garay. 1972. *Epidendrum suaveolens*, **Venezuelan Orchids Illustrated**, 5: 108; Foldats, E. 1970. *Epidendrum cornicallosum*, **Flora de Venezuela**, 15(3): 217-218.

Authors: E. Santiago & E. Hágater

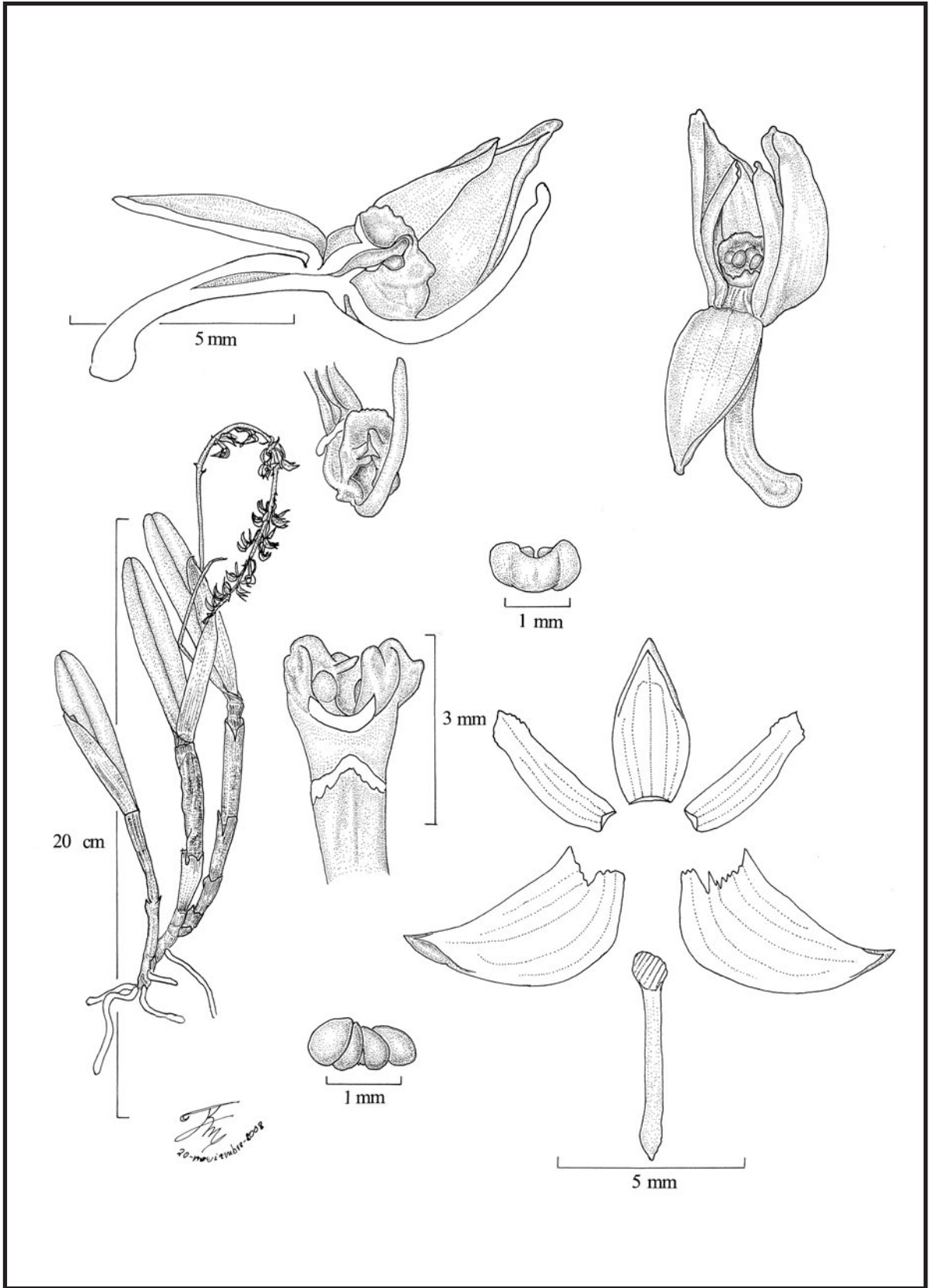
Illustrator: R. Jiménez M.

Editors: E. Hágater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009. Plate 1229



EPIDENDRUM CORYOPHORUM (Kunth) Rchb.f.

Plate 1230

EPIDENDRUM CORYOPHORUM (Kunth) Rchb.f., Bonplandia 2(2): 20. 1854. (as *Epidendrum coriophorum*)

Basionym: *Stenoglossum coryophorum* Kunth, Nov. Gen. & Sp. 1: 356, tab. 87. 1815. Type: COLOMBIA: [Cauca:] Crescit in convallibus humidis, vestitis Andium Novogranatensium juxta urbem Almaguer in radicibus Parami Cuyurcuensis, alt. 1080 hex. Floret. Novembri. **Humboldt & Bonpland s.n.** Holotype: P! Isotypes: Px3! drawing of the type P! Sketch of the type: AMES 17798! P! W-R 52161!

Stenoglossum subulatum Lindl., Hooker's Icon. Pl. 1: tab. 51. 1837. Type: ECUADOR: On trees near Pichilagua, on the western declivity of Pichincha, **W. Jameson s.n.** Holotype: not seen, K-L? Plate 51: MO 2156051! Sketch of the plate 51: [drawing on the left side] W-R 52159! Possible isotypes: [Ecuador:] Crescit in declivitate occidentale, montes Pichincha, 8000 ped. Ad arborum... Floret. Novembri, Decembri, **Jameson 465**: AMES 73121! FI! G! P!

Epidendrum linearilingue Rchb.f. Linnaea 41(7): 114. 1877. Type: COLOMBIA: [Antioquia:] Medellín, **Wallis s.n.** Holotype: W-R 52158!

Epidendrum bolbophylloides F.Lehm. & Kraenzl., Engler Bot. Jahrb. 26: 463. 1899. Type: COLOMBIA: [Cauca:] In silvis haud ita densis circa Chiribio et Paniquita prope Popayán, 800-1400 m [1800-2400 m], **F. C. Lehmann 8186**. Holotype: B (destroyed). Lectotype (here designated): US 814201! (Illustration voucher). Isolectotypes: AMES 10566! AMES 22573! AMES 74063! L 914120-148! LE! NY!

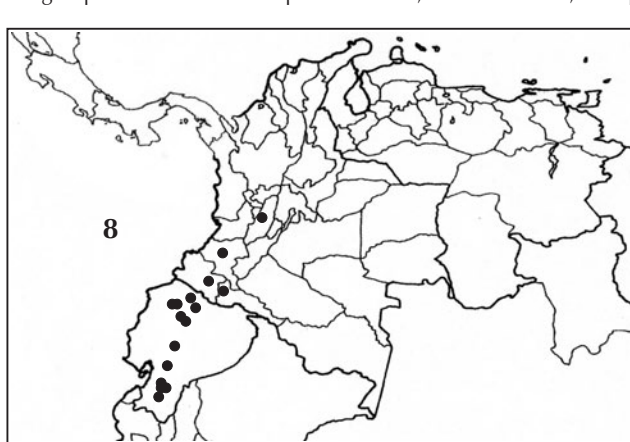
Hierba simpodial, cespitosa a rastrera, epífita, 15-30 cm de alto incluyendo la inflorescencia. **Raíces** de la base de cada tallo, delgadas, carnosas, 0.6-1.7 mm de grosor. **Tallo** base cubierta por 1-2 vainas estriadas y finamente rugosas; erectos, rectos, teretes en la base, lateralmente aplanados hacia el ápice, 3.0-10.5 x 0.15-0.23 cm, producido de los nudos inferiores del tallo anterior, a 1-2 cm arriba de la base, cubierto en la base por 1-2 vainas no foliosas, escariosas, iguales a las foliares. **Hojas** 1-2, distribuidas en el tercio apical del tallo; vainas tubulares, estriadas, lisas a finamente rugosas en seco, 7-20 mm de largo; lámina angostamente elíptica lanceolada a oblonga, ápice obtuso, aristado, margen entero, 4-13 x 0.8-1.7 cm. **Bráctea espatácea** 1(2), ancipitosa, oblonga, aguda, aristada, 3-6 x 0.6-1.0 cm. **Inflorescencia** apical, racemosa, alargada, tipo cola de rata, generalmente densa, 8-23 cm de largo; el pedúnculo erecto, 3.0-9.5 cm de largo, cubierto 3/4 por la espata, el raquis ligera a completamente arqueado, 5.0-12.5 cm de largo. **Flores** 10-34, simultáneas, no resupinadas, segmentos florales rojo púrpura generalmente con el tercio apical blanco a blanco verdoso, fragancia no registrada. **Bráctea floral**es mucho más cortas que el ovario, triangulares, agudas, 0.5-1.3 mm de largo. **Ovario** corto, no inflado, 4-6 mm de largo. **Sépalos** elípticos, agudos a acuminados, margen entero, extendido, 4.5-5.7 x 1.7-2.7 mm; el **dorsal** erecto a reflexo, 3-nervado; los **laterales** paralelos a la columna, 3-4 nervados. **Pétalos** paralelos a la columna, lineares, agudos, 1-nervados, margen entero, extendido, 4.3-5.3 x 0.5-0.6 mm. **Labelo** unido a la columna, entero, linear, 4-7 x 1-2 mm; escalo. **Columna** muy corta, gruesa, 1.7-2.0 mm de largo. **Clinandrio** corto, entero, margen ondulado. **Antera** cordiforme, 4-locular. **Polinios** 4, obovoides, lateralmente comprimidos; caudiculas suaves y granuladas; viscidio viscoso, translúcido. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** prominentes, penetrando 1/2 de la cavidad estigmática. **Nectario** muy amplio y corto, redondeado, sin traspasar el perianto, no ornamentado. **Cápsula** elipsoide, con superficie rugosa, pedúnculo 1.2-2.0 x 0.5-0.7 mm, cuerpo 6.3-7.0 x 7.8-9.2 mm, cuello apical reducido.

Sympodial, caespitose, creeping, epiphytic **herb.** **Roots** from the base of each stem, thin, fleshy. **Stems** erect, straight, terete at the base, laterally compressed towards the apex, produced from the lower internodes of the previous stem, base covered by 1-2 non-foliar, scarious sheaths, striated, minutely rugose. **Leaves** 1-2, distributed along the apical 1/3 of the stem; sheaths tubular, striated, minutely rugose when dry; blade narrowly lanceolate-elliptic to oblong, apex obtuse, aristate, margin entire. **Spathaceous bracts** 1(2), ancipitose, oblong, acute, aristate. **Inflorescence** apical, racemose, elongate, rat-tail like, generally densely flowered; peduncle erect, 3/4 covered by the spathaceous bracts, rachis somewhat to completely arching. **Flowers** 10-34, simultaneous, non-resupinate, floral segments purple-red, the apical third generally white to greenish white. **Floral bracts** much shorter than the ovary, triangular, acute. **Ovary** short, not inflated. **Sepals** elliptic, acute-acuminate, margin entire, the dorsal sepals erect to reflexed, 3-veined, the lateral sepals parallel to the column, 3-4-veined. **Petals** parallel to the column, linear, acute, 1-veined, margin entire, spreading. **Lip** united to the column, entire, linear; ecallose. **Column** very short, thick. **Clinandrium-hood** short, entire, margin undulate. **Anther** cordiform, 4-celled. **Pollinia** 4, obovoid, laterally compressed; caudicles soft and granulose; viscidium viscous, translucent. **Rostellum** apical, slit. **Nectary** very wide and short, rounded, without penetrating the ovary, smooth. **Capsule** ellipsoid, surface rugose, with a short pedicel, and a reduced apical neck.

OTHER SPECIMENS AND RECORDS: See appendix.

DISTRIBUTION AND ECOLOGY: Distributed along the Cordillera Central in Colombia, and along the Cordillera Oriental in Ecuador; epiphytic in wet montane and pre-montane forests, wet primary forests and dry montane forest, from 1400 to 3800 m altitude. Flowering throughout the year. Fruiting from May to August.

RECOGNITION: *Epidendrum coryophorum* belongs to the Mancun group which is characterized by the sympodial habit, few-leaved stems, racemose inflorescence with 1-2 ancipitose, long, spathaceous bracts with parallel sides, and *Stenoglossum* Subgroup which has non-resupinate flowers, a short column, the lip entire, linear, or 3-lobed and then the midlobe linear. The species can be recognized by the 1-2 leaved stems, lanceolate-elliptic to oblong leaves, flowers purple-red, the apical third of the segments white to greenish white, lip entire, linear, ecallose. It is similar to *Epidendrum hamatum* (Garay) Dressler, a species endemic to northern Colombia, which has creamy white to greenish white flowers dotted with purple red, the apex of the petals is dilated, spatulate, the lip 3-lobed and bicallose.



CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek χωριον, hamlet, village, probably referring to the formation of colonies. Mayr (1998) interpreted it as helmet-carrying.

REFERENCES: Dressler, R. L. 1967. The Genera Amblostoma, Lanium and Stenoglossum (Orchidaceae). **Brittonia** 19: 243. Hubert, M. 1998. **Orchid Names and their Meanings**, A.R.G. Gantner Verlag K.-G., Vaduz, pg. 258.

Authors: L. Sánchez S. & E. Hágsater

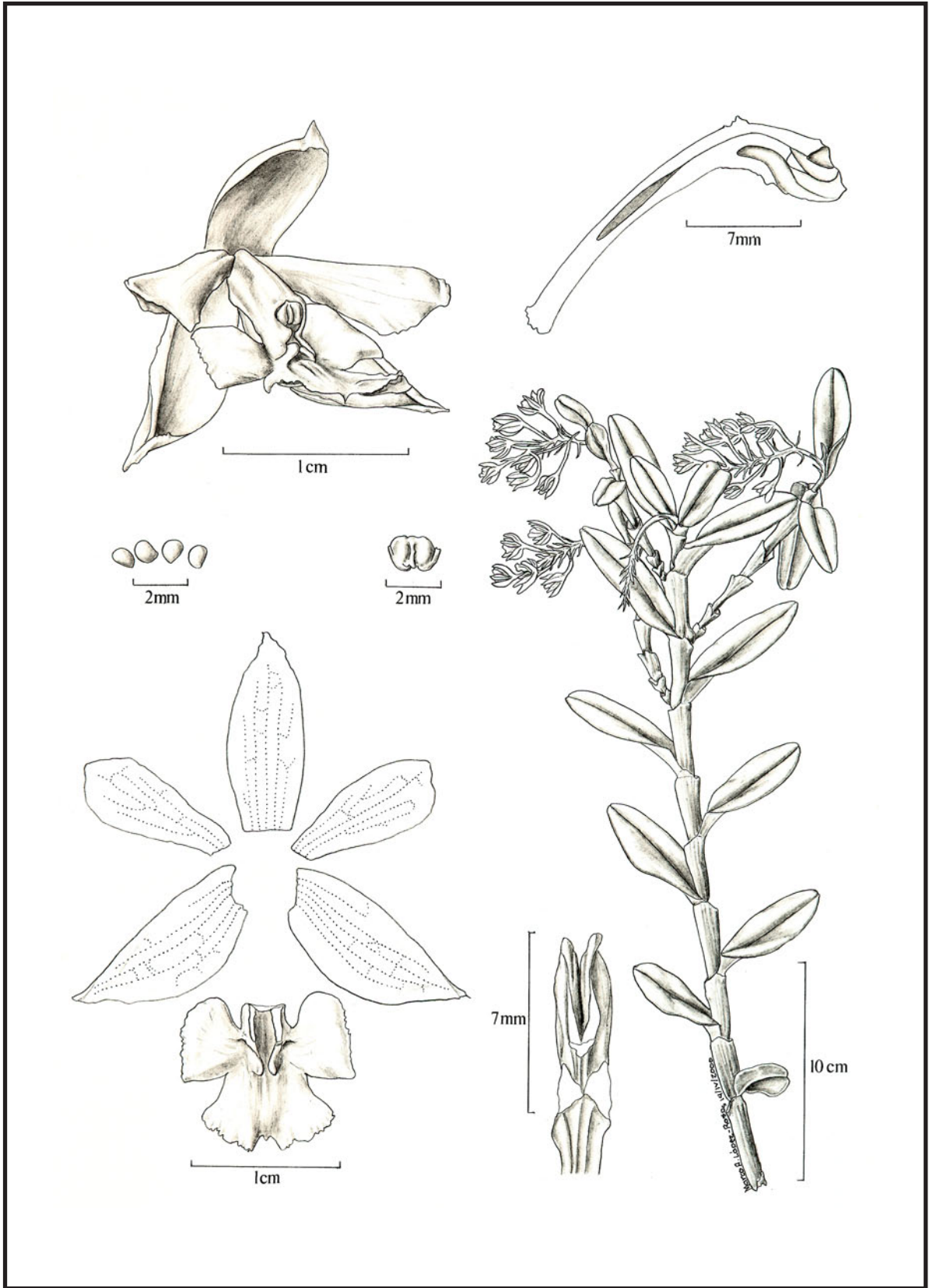
Illustrator: R. Jiménez M.

Editors: E. Hágsater & L. Sánchez S.

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ICONES ORCHIDACEARUM 12. 2009. Plate 1230



EPIDENDRUM COTACACHIENSE Hágsater & Dodson

Plate 1231

EPIDENDRUM COTACACHIENSE Hágsater et Dodson, sp. nov.

Type: ECUADOR: Imbabura: W rim of the Cuicocha Crater, 3150 m, 4 marzo 1980, **L. B. Holm Nielsen 23253**. Holotype: AAU! (Illustration voucher).

Epidendro mojandae Schltr. simile sed petalis obovato-spathulatis, labelli lobulis lateralibus dolabriformibus, lobulo medio ad basem lato, subdeltoideo cum apice emarginato duos lobos oblique rectangulares facienti, separabile.

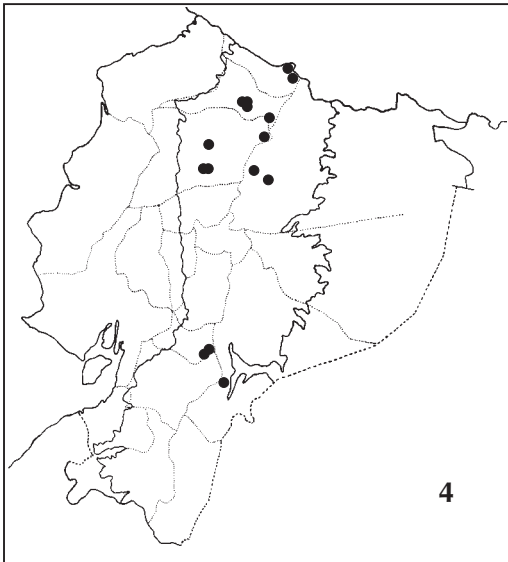
Herba terrestre o raramente epífita, monopodial, erecta ramificada, 60-150 cm de alto. **Raíces** basales en el tallo principal, carnosas, blancas, 2-4 mm de grosor. **Tallos** ramificados arriba, tipo caña, teretes, rectos; el principal 30-55 x 0.5-1.2 cm; las ramas que a su vez se ramifican, 4.5-11 x 0.2-0.6 cm. **Hojas** 11-21 en el tallo principal y distribuidas a lo largo del mismo; 3-7 en las ramas, distribuidas en la mitad apical de las mismas; dísticas, articuladas, coriáceas; vaina tubular, ligeramente inflada sin llegar a ser infundibuliforme, estriada, finamente rugosa, 0.5-4.5 cm de largo; lámina oblongo elíptica, ápice redondeado, incipientemente bilobado, margen entero, extendido; las del tallo principal, 7-9 x 2.2-3 cm; las de las ramas, 1-5 x 1-1.9 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, florece una sola vez, racemosa, arqueada, pluriflora, subdensa, 2.5-6 cm de largo; pedúnculo corto, subterete, 11 mm de largo. **Bráctees florales** más corta que el ovario, linear lanceoladas, acuminadas, 5-8 mm de largo. **Flores** 15-20, simultáneas, resupinadas, amarillo verdosas a blanco cremosas con la parte dorsal de los sépalos algo teñida de pardo purpúreo, fragantes. **Ovario** terete, delgado, no inflado, 11-15 mm de largo. **Sépalos** entreabiertos, libres, oblongo elípticos, 5-nervados, carnosos, margen extendido, entero, 13.5-16 x 5-6 mm; el **dorsal** agudo, con una quilla dorsal baja en el ápice; los **laterales** ligeramente oblicuos, con una arista dorsal prominente, muy carnosa. **Pétalos** entreabiertos, libres, obovado espatulados, ápice redondeado, diminutamente apiculado, 3-nervados, margen extendido y entero, 11-13 x 3-4 mm. **Labelo** unido a la columna, trilobado, profundamente cordado en la base, margen eroso crenado, 8-10 x 10-11.5 mm; bicalloso, los callos prominentes, laminares; disco con un par de cuniculos ubicados en la parte externa de los callos; incipientemente tricarinado; lóbulos laterales dolabriformes, 4-4.5 x 5-6 mm; lóbulo medio anchamente subdeltado, incipientemente emarginado, formando un par de lóbulos oblicuamente subrectangulares, 5.5-7 x 8-9 mm. **Columna** recta, delgada, 7-8 mm de largo. **Clinandrio** reducido, margen entero. **Antera** reniforme, 4-locular. **Polinios** 4, obovoides, lateralmente comprimidos; caudículas no vistas. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** prominentes ocupando la mitad del largo de la cavidad estigmática. **Nectario** muy corto, sin traspasar el perianto, no inflado, no ornamentado. **Cápsula** no vista.

Terrestrial or rarely epiphytic, monopodial, erect **herb**. **Roots** from the base of the main stem, fleshy, white. **Stems** branching above, cane-like, terete, erect, straight, the main stem much longer than the branches, the branches themselves branched. **Leaves** 11-21 on the main stem, distributed throughout, distichous, articulate, coriaceous; sheath tubular, slightly inflated without being infundibuliform, striated, minutely rugose; blade oblong-elliptic, apex rounded, slightly bilobed, margin entire, spreading; the leaves of the main stem larger than those of the branches. **Inflorescence** apical, flowering only once, racemose, arching, many-flowered, sub-dense; peduncle short, sub-terete. **Floral bracts** shorter than the ovary, linear-lanceolate, acuminate. **Flowers** 15-20, simultaneous, resupinate, greenish yellow to creamy white, the dorsal side of the sepals somewhat tinged with purple-brown; fragrant. **Ovary** terete, thin, not inflated. **Sepals** partly spreading, free, oblong-elliptic, 5-veined, fleshy, margin entire, spreading; the dorsal sepal acute, with a low dorsal keel towards the apex, the lateral sepals slightly oblique, with a prominent, fleshy awn. **Petals** partly spreading, free, obovate-spatulate, apex rounded, minutely apiculate, 3-veined, margin entire, spreading. **Lip** united to the column, 3-lobed, base deeply cordate, margin erose-crenate; bicallose, the calli prominent, laminar; disc with a pair of cunicula outside of the calli, incipiently 3-keeled; lateral lobes dolabriform; midlobe widely sub-deltoid, apex emarginate, forming a pair of obliquely rectangular lobes, midlobe somewhat larger than the lateral lobes. **Column** straight, thin, short. **Clinandrium-hood** reduced, margin entire. **Anther** reniform, 4-celled. **Pollinia** 4, obovoid, laterally compressed. **Rostellum** apical, slit. **Nectary** very short, without penetrating the ovary, thin, not inflated, smooth.

OTHER SPECIMENS: ECUADOR: Cañar: at pass on road Pindilig-Rivera (La Virgen), 3200 m, 9 III 1985, *Harling 22991*, AMES! GB! QCA! Cerro Yanguán NE of Pindilig, 3000 m, 13 XII 1980, *Holm-Nielsen 29330*, AAU! N slopes of Cerro del Gatel, 2600-2700 m, 2 II 1988, *Molau 2872*, GB! **Carchí:** Tulcán-Maldonado highway km 45, 3335 m, 24 I 1977, *Boeke 811*, NY! QCA! SEL! above El Pun, 3 I 1953, *Prescott 604*, NY! **Imbabura:** Carretera Quiroga-Cuicocha, km 10, 2800 m, 10 I 2000, *Álvarez 2576*, MO! NY! QCNE! Cerro Muenala above Río Asabí, 10,000 ft, 12 III 1943, *Drew E-42*, AMES! 10 km W of Otavalo, 3300 m, 25 IV 1991, *Neill 9864*, AMO! QCNE! Otavalo to Selva Alegre, 2400-2700 m, 5 II 1986, *Dodson 16318*, MO! Lago Cuicocha to Selva Alegre, 3600 m, 20 III 1986, *Dodson 16394*, MO! QCNE! SEL! Naranjito, E of Volcán de Cayambe, 5 VIII 1944, *Drew E-248*, AMES! E of Volcán de Cayambe, 14 VII 1944, *Drew E-326*, AMES x! Pasando el lago Cuicocha, 3190 m, 2 V 1993, *Hágsater 11298*, AAU! AMO! **Napo:** Papallacta, ca. 3100-3300 m, 15 VI 1968, *Harling 10381*, AMES! GB! Cerro Sumaco, 3100-3300 m, 3 V 1979, *Holm-Nielsen 17762*, AAU! MO! QCA! **Pichincha:** below San Juan towards Chiriboga, ca. 3250 m, 29 IV 1955, *Asplund 16121*, S! *Ibid.* ca. 3200 m, 31 XII 1955, *Asplund 18964*, AMES! K-L! NY! Yanasacha, respaldos NO del Volcán Pichincha, 3000-3500 m, 8 IV 1970, *Jaramillo 215*, AAU! NY! QCA! carretera Quito-San Juan-San José de la Victoria, 2900-3400 m, 24 XII 1987, *Zak 3270*, NY! MO!

OTHER RECORDS: ECUADOR: Morona-Santiago: near the Río Negro, between Gualaquiza and Gualaceo, 11 IV 2005, *Yong 3680*, digital photo, AMO!

DISTRIBUTION AND ECOLOGY: Known only from Ecuador (expected into neighboring Colombia), from the interandean valley and spilling over into both the Pacific and Amazon slopes of the Andes; terrestrial and rarely epiphytic, growing at 2700-3600 m altitude. Flowering from December to July.



RECOGNITION: *Epidendrum cotacachiense* belongs to the Andean Group, Cernuum Subgroup, characterized by the monopodial habit, cane-like stems with sub-apical branches which are considerably shorter than the main stem, coriaceous to sub-coriaceous leaves, apex bilobed, and fleshy flowers, the lip 3-lobed. The species is recognized by the by the creamy white to greenish yellow colored flowers, the sepals somewhat dorsally tinged with brownish purple, sepals 13.5-16 mm long, petals obovate spatulate, lateral lobes of the lip dolabriform (nearly as wide as the midlobe), and the midlobe widely sub-deltoid, emarginate and forming a pair of apical, obliquely sub-rectangular lobes. *Epidendrum mojandae* Schltr. has nearly the same geographic distribution, and same color flowers, but in the species the petals are oblong-oblancheolate, and the lateral lobes of the lip are flabelliform, and the midlobe cuneate, with a very narrow base. In *Epidendrum torquatum* Lindl. the petals are oblancheolate-spatulate, the lateral lobes of the lip obliquely flabelliform, and the midlobe is cuneate with the apex tridentate, not emarginate. *Epidendrum pastoense* Schltr., found in northern Ecuador and southern Colombia, has the sepals dorsally aristate, the petals obliquely elliptic, and the lip with the dolabriform lateral lobes of the lip much wider than the sub-rectangular oblong midlobe, which is narrow and tridentate.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In reference to the town on Cotacachi, north of Otavalo, Imbabura, Ecuador, near where the type specimen and many other specimens have been collected.

Authors: E. Hágsater & E. Santiago

Illustrator: M. López R.

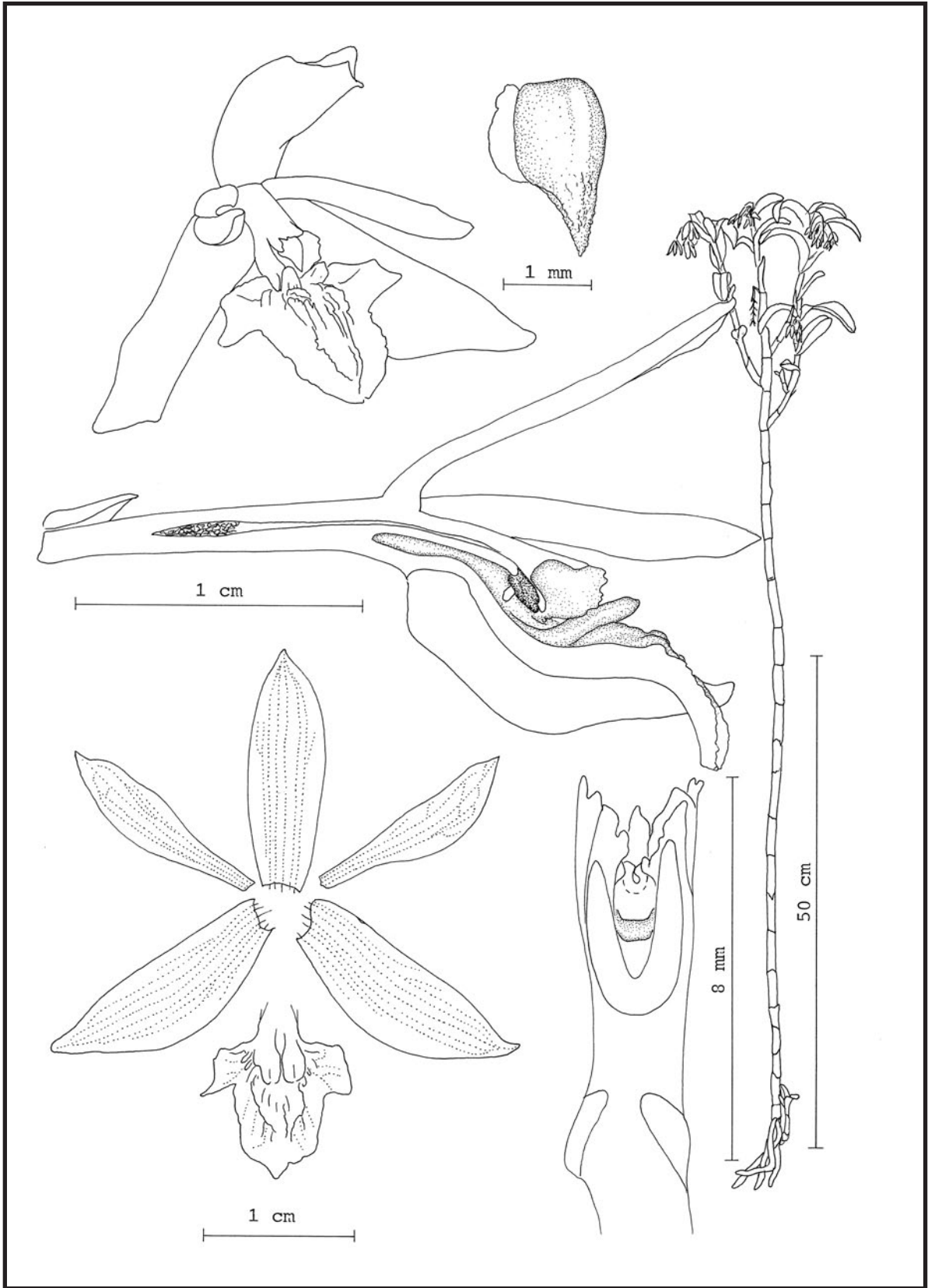
Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009.

Plate 1231



EPIDENDRUM CUICHAENSE Hágsater & Dodson

Plate 1232

EPIDENDRUM CUICOCHAËNSE Hágsater et Dodson, *sp. nov.*

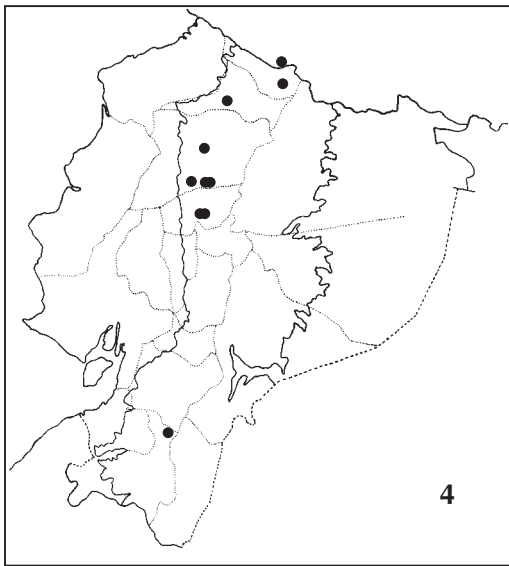
Type: ECUADOR: Pichincha: km 13 Quito-Baños, ca. 10000 ft, 11 September 1983, *Beatrice & William R. Thurston sub E. Hágsater 7502*. Holotype: 25 September 1983, QCNE! Flowers spirit, AMO! (Illustration voucher). Clonotypes: 7 May 1985, AMO! MO!

Epidendrum pallatangae Schltr. simile sed inflorescentia breviora pauciflora cum rhachide recta et floribus resupinatis pomaceo-viridibus, sepalis glabris et petalis lineari-lanceolatis, discrepans.

Herb terrestre, cespitosa, ramificada arriba, de 70-200 cm de alto. **Raíces** basales, tanto en el tallo principal como en las ramificaciones, carnosas, gruesas, 2-5 mm de grosor. **Tallos** ramificados cuando maduros, tipo caña, teretes, erectos, el tallo principal de 50 x 0.5-1.3 cm; las ramificaciones 4-18 x 0.3-0.6 cm; todos cubiertos en la base por vainas tubulares, no foliares, finamente estriadas y rugosas, 5-14 mm de largo. **Hojas** 12 o más en el tallo principal, distribuidas a lo largo del mismo; 4-5 en la mitad apical de las ramificaciones; articuladas, erecto extendidas, subcoriáceas; vaina tubular finamente rugosa y estriada, 8-40 mm de largo; lámina oblonga, subobtusada, con quilla dorsal baja, margen extendido, entero, 2.5-12 x 1-2.4 cm. **Inflorescencia** apical, florece una sola vez, racemosa, raramente con una rama corta y entonces incipientemente paniculada, arqueada nutante, pauciflora, laxa, corta, 2.5-3.5 [6-10] cm de largo; pedúnculo muy corto, terete, delgado, desprovisto de brácteas, 5-9 mm de largo; raquis recto. **Flores** 7-13 [30], sucesivas (aunque 3 a 5 abiertas de manera simultánea), carnosas, resupinadas, verdes con los sépalos ligeramente teñidos de pardo amoratado; sin datos de fragancia. **Brácteas florales** pequeñas, ca. de ¼ del largo del ovario, triangular lanceoladas, acuminadas, 4-11 mm de largo. **Ovario** terete, delgado, no inflado, no ornamentado, 9-27 mm de largo. **Sépalos** entreabiertos, libres, 5-nervados, glabros, margen entero, extendido, 15-19 x 5-6 mm; el **dorsal** ligeramente convexo, angostamente elíptico, obtuso, con una arista diminuta; los **laterales** oblongo elípticos, obtusos, prominentemente aristados, oblicuos. **Pétalos** entreabiertos, libres, linear-oblancoeados, oblicuos, ápice subagudo, 3-nervados, las nervaduras laterales ramificadas dando la apariencia de ser 5-nervados, margen entero, fuertemente revoluto, 13-15 x 3-4.5 mm. **Labelo** unido a la columna, trilobado, base ligeramente cordada, margen extendido, entero, algo convexo en posición natural, 8-10 x 7-9 mm; bicallose, los callos delgados, sublaminares, alargados hasta la base del lóbulo medio; disco provisto de 7 quillas evidentes, las tres centrales alargadas hasta el ápice de la lámina y múltiples venas engrosadas cortas y radiantes en la base de los lóbulos laterales; lóbulos laterales subtriangulares, agudos, oblicuos, 2-3 x 3-5 mm; lóbulo medio subrectangular-oblongo, ápice truncado-redondeado, con un apículo diminuto, 5-6 x 5-6 mm. **Columna** delgada, ligeramente arqueada, 7-8 mm de largo. **Clinandrio** prominente, margen eroso denticulado. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** prominentes, de un tercio del largo de la cavidad estigmática. **Nectario** poco profundo, sin traspasar el perianto, no inflado, no ornamentado. **Antera** ovoide, ápice agudo y papiloso, 4-locular. **Polinios** 4, subovoideos, desiguales; caudículas suaves y granuladas casi del mismo largo que los polinios. **Cápsula** elipsoide, 6 cm de largo; cuerpo 35-40 x 22-30 mm; pedicelo 10-15 mm de largo; cuello apical, 10-15 mm de largo.

Terrestrial, caespitose, **herb**, branching above. **Roots** basal, from the base of the main stem and the branches, fleshy, thick. **Stems** cane-like, terete, erect, straight, branching above, the branches shorter than the main stem, all covered towards the base by tubular, non-foliar, striated, rugose sheaths. **Leaves** 12 or more on the main stem, distributed throughout, 4-5 on the branches, distributed along the upper half; articulate, erect-spreading, sub-coriaceous; sheath tubular, minute rugose and striated; blade oblong, sub-obtuse, with a short, low keel, margin spreading, entire. **Inflorescence** apical, flowering only once, racemose, rarely with a short branch and then paniculate, arching-nutant, lax, few-flowered; peduncle very short, terete, thin, without bracts; rachis straight. **Flowers** 7-13 [30], successive (though 3-5 are open at one time), fleshy, resupinate, apple-green, sepals slightly tinged with purple. **Floral bracts** small, about ¼ the length of the ovary, triangular-lanceolate, acuminate. **Ovary** terete, thin, not inflated, smooth. **Sepals** partly spreading, free, 5-veined, glabrous, margin entire, spreading; dorsal sepal slightly convex, narrowly elliptic, obtuse, minutely aristate, lateral sepals oblong-elliptic, obtuse, prominently aristate, oblique. **Petals** partly spreading, free, linear-oblancoeolate, oblique, apex subacute, 3-veined, the lateral veins branching so as to appear 5-veined, margin entire, strongly revoluted. **Lip** united to the column, 3-lobed, base slightly cordate, margin spreading, entire, somewhat convex in natural position; bicallose, the calli thin, sub-laminar, elongate to the base of the midlobe, disc provided with 7 evident keels, the 3 central keels elongate to the apex of the blade, with multiple short, thickened, radiating keels at the base of the lateral lobes; lateral lobes subtriangular, acute, oblique, much smaller than the midlobe, midlobe subrectangular-oblong, apex truncate-rounded, with a minute apiculate. **Column** thin, slightly arched, short. **Clinandrium-hood** prominent, margin erose-denticulate. **Rostellum** subapical, slit. **Nectary** shallow, without penetrating the ovary, not inflated, smooth. **Anther** ovoid, apex acute and papillose, 4-celled. **Pollinia** 4, subovoid, unequal; caudicles soft and granulate, nearly as long as the pollinia. **Capsule** ellipsoid, pedicel and apical neck short.

OTHER SPECIMENS: ECUADOR: Carchí: 5 km S de San Gabriel, 2610 m, 28 IV 1993, *Hágsater 11244*, AMO! **Pichincha:** W de Chilligallo, 3100 m, 8 XII 1986, *Hágsater 8998*, AMO x3! **Imbabura:** Laguna de Cuicocha, 3200-3300 m, 29 X 1992, *Álvarez 730*, QCNE! Carretera Quiroga-Cuicocha, 2800 m, 10 I 2000, *Álvarez 2574*, MO! NY! QCNE! Otavalo to Selva Alegre, 2400-2700 m, 5 II 1986, *Dodson 16321*, MO! SEL! between El Hospital and Tambo San Miguel, slopes of Volcán Cotacachi, 10000 ft, 3 VII 1944, *Drew E-68*, AMES x2! Lago Cuicocha, 2500 m, IX 1948, *Espinosa E-2419*, LOJA! NY! Ibid. XI 1952, *Fagerlind 1541*, S x3! Tablachupa, 2500-3000 m, *Gudiño 1961*, QCNE! carretera San José de Minas-Otavalo, 19 I 1980, *Jaramillo 1958*, AAU! NY! QCA! QCNE! Vía Sur de Otavalo, 3109-3659 m, 26 I 1980, *Jaramillo 2050*, AAU! QCA! Lago Cuicocha, 3083 m, 31 X 1971, *MacBryde 910*, AMES! SEL! Ibid. 3000 m, 30 VIII 1991, *Peñañiel 271*, AMO! Ibid. 3100-3300 m, 30 VIII 1991, *Peñañiel 283*, AMO! Ibid. 3100-3400 m, 31 VIII 1991, *Peñañiel 425*, AMO! Ibid. 3100-3300 m, 14 IX 1991, *Peñañiel 449*, AMO! Ibid. 3300-3350 m, 2 III 1992, *Peñañiel 1124*, MO! Ibid. 2900-3000 m, 10 XII 1966, *Sparre 13398*, F! MO! QCA! S! **COLOMBIA: Nariño:** entre las dos carreteras del bosque de Daza, 3100 m, *Guzmán 80*, COL!



OTHER RECORDS: ECUADOR: Azuay: Oña, La Paz, (Hort. Ecuagenera) *Hágsater 14014*, spirit and digital photo, AMO! **Imbabura:** pasando Lago Cuicocha, abajo de páramo, 3190 m, 2 V 1993, *Hágsater 11298*, spirit (with a flower of *E. brevicernuum* Hágsater & Dodson), AMO!

DISTRIBUTION AND ECOLOGY: Known from Ecuador and Colombia, in the interandean valley and overflowing onto the Pacific slope of the Andes, at 2400-3600 m altitude. This species is sympatric with *E. pichincha* Schltr., *E. mojanidae* Schltr., *E. pallatangae* Schltr. and *E. angeloglossum* Hágsater & Dodson, and there may be hybrids between one or the other. Flowering throughout the year.

RECOGNITION: *Epidendrum cuicochaense* belongs to the Andean Group, Cernuum Subgroup, characterized by the cane-like, sub-apically branched stems, the branches much shorter than the main stem, coriaceous to sub-coriaceous leaves and fleshy flowers. The species is recognized by the short, lax, few-flowered inflorescence, resupinate, green flowers, prominently aristate, glabrous sepals 15-19 mm long, linear-oblancoeolate petals, and the 3-lobed lip with small triangular lateral lobes and multiple thickened keels on the whole surface of the lip. *Epidendrum pallatangae* Schltr. has an elongate, generally paniculate inflorescence, with a sinuous rachis, yellow or greenish yellow flowers, dorsally pubescent sepals, and narrowly obovate petals, with an evident single, much thickened keel that runs to the apex of the lip. *Epidendrum megaloclinium* Hágsater & Dodson has a dense inflorescence, simultaneous flowers, a very long ovary (17-40 mm long), dorsally pubescent sepals, a very prominent clinandrium-hood, and with 3 evident keels running to the apex of the lip.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In reference to Lake Cuicocha near Otavalo, in northern Ecuador, where numerous specimens of this species have been collected.

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Illustrator: E. Hágsater

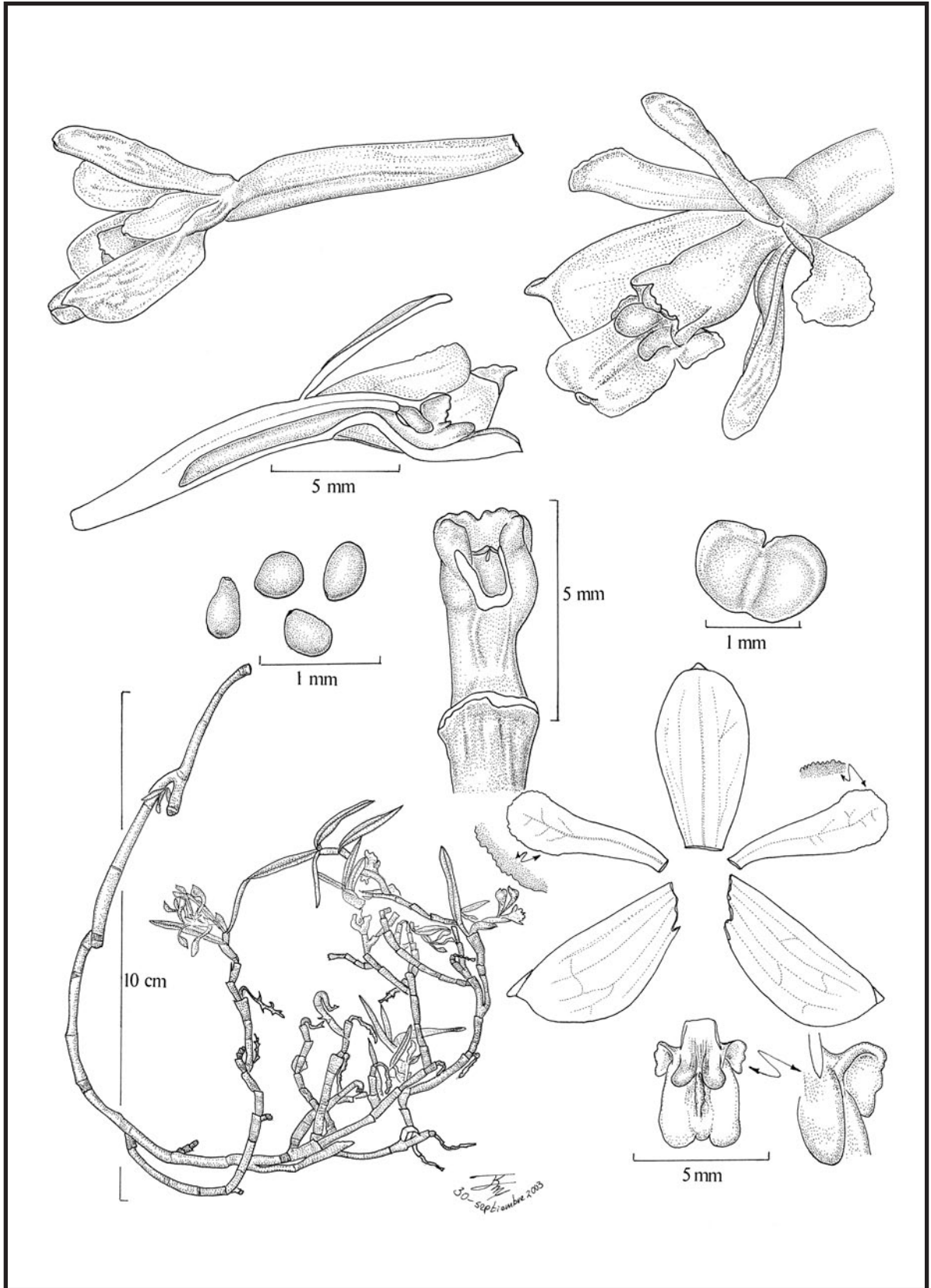
Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009.

Plate 1232



EPIDENDRUM CUNICULATUM Schltr.

EPIDENDRUM CUNICULATUM Schltr., Fedde Repert. Spec. Nov., Beih. 8: 71. 1921.

Type: ECUADOR: Chimborazo: [Pichincha] in regione subandina prope Pifo, epiphyta, 3000 m, **Mille 8**. Holotype: B, (destroyed). Lectotype: QPLS! (Illustration voucher). Designated by Dodson in Jørgensen, P. M., & S. León Yáñez, Eds. Catalogue of the Vascular Plants of Ecuador, Monog. Syst. Bot. Missouri Bot. Gard. 75: 663. 1999. Isolectotype: AMO!

Hierba epífita, erecta, ramificada, ca. 40 cm de alto. **Raíces** no vistas. **Tallos** ramificados, tipo caña, teretes; el basal no visto; los subsecuentes originándose de los entrenudos apicales del tallo anterior; éstos a su vez produciendo ramificaciones más cortas 3.8-7.6 x 0.3-0.57 cm. **Hojas** 2-4 distribuidas en la mitad apical de los tallos, articuladas, caedizas; vainas tubulares, estriadas, rugosas, 6-28 x 3.8-5.7 mm; lámina linear a linear lanceolada, ápice agudo, mucronada, margen crenado, 2.8-4.8 x 0.38-0.5 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, arqueado nutante, sublaxa, corta, 2-2.5 cm de largo, pedúnculo terete, delgado, corto, desprovisto de brácteas, 5 mm de largo; raquis terete, delgado, cubierto casi en su totalidad por las brácteas florales, 15-20 mm de largo. **Flores** 6-10, resupinadas, simultáneas, de color verde rojizas (según el colector), sin datos de fragancia. **Brácteas florales** más cortas que el ovario, lanceoladas, agudas a acuminadas, 2-4 mm de largo. **Ovario** terete, algo engrosado, ligeramente inflado ventralmente, no ornamentado, 8-10 mm de largo. **Sépalos** entreabiertos, carnosos, con una quilla dorsal, margen entero, 6.7-8 x 3.2-3.3 mm; el **dorsal** libre, obovado, redondeado, 3-nervado, las nervaduras laterales bifurcadas desde la base; los **laterales** connados en la base, obovados elípticos, obtusos, oblicuos, 4-nervados. **Pétalos** entreabiertos, libres, carnosos, oblanceolado ligulados, redondeados, 1-nervados, margen apical eroso, 6 x 2 mm. **Labelo** unido a la columna, trilobado, base cordada, 3.7 x 3.5 mm; bicallose, los callos gruesos, alargados hasta la base el lóbulo medio, disco provisto de 1 quilla baja, aguda; lóbulos laterales muy pequeños, flabeliformes, margen apical eroso, formando tres lobos subiguales, 0.7 x 1.2 mm; lóbulo medio cuadrado, ápice truncado, retuso, bilobado, margen entero, 2.6 x 2.6 mm. **Columna** ligeramente arqueada, delgada, obcónica en el ápice, 5 mm de largo. **Clinandrio** prominente, en forma de embudo, corto, margen crenulado. **Rostelo** apical, hendido. **Antera** reniforme, con una quilla roma y baja en la parte media, 4 locular. **Polinios** 4, obovoides, lateralmente comprimidos. **Nectario** profundo, penetrando más de la mitad del ovario, algo inflado, no ornamentado. **Cápsula** no vista.

Epiphytic, erect, branching **herb**. **Stems** branching, cane-like, terete, the branches produced from subapical internodes of the previous stem, progressively shorter. **Leaves** 2-4 from the apical half of the stems, articulate; sheaths tubular, striated, rugose; blade linear to linear-lanceolate, apex acute, mucronate, margin crenate. **Inflorescence** apical, arching-nutant, somewhat lax-flowered, short, peduncle terete, thin, short. **Flowers** 6-10, resupinate, simultaneous, reddish green (according to the collector). **Floral bracts** shorter than the ovary, lanceolate, acute to acuminate. **Ovary** terete, somewhat thickened, and inflated ventrally, smooth. **Sepals** partly spreading, fleshy, with a dorsal keel, margin entire; **dorsal** free, obovate, rounded, 3-veined, the lateral veins bifurcate at the base; **laterals** connate at the base, obovate-elliptic, obtuse, oblique, 4-veined. **Petals** partly spreading, free, fleshy, oblanceolate-ligulate, rounded, 1-veined, apical margin erose. **Lip** united to the column, 3-lobed, base cordate; bicallose, the calli thick, elongate to the base of the midlobe, produced with 1 low, rounded, acute keel; lateral lobes very small, flabellate, the apical margin sinuous forming three sub-equal lobes; midlobe square, apex truncate, retuse, bilobed, margin entire. **Column** slightly arching, thin. **Clinandrium-hood** prominent, funnel-shaped, short, margin crenulate. **Rostellum** apical, slit. **Anther** reniform, with a low, rounded keel in front, 4-celled. **Pollinia** 4, obovoid, laterally compressed. **Nectary** deep, penetrating more than half the ovary, somewhat inflated, smooth.

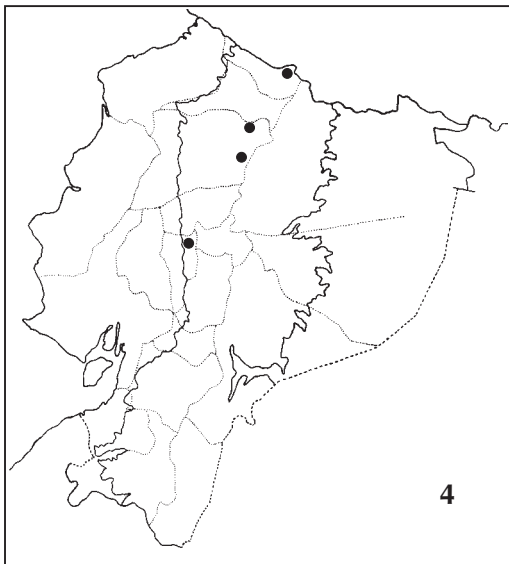
OTHER SPECIMENS: COLOMBIA: Nariño: Pasto, 3200 m, 20 II 1881, W-R! (only mounted specimen) ECUADOR: without locality, *Sodiro s.n.*, QPLS! Carchi: Tulcán, Nudo de Boliche Voladero, 3800 m, 13 VI 1939, *Pendland & Summers* 922, AMES x2! QCNE! Imbabura: Mojanda, III 1903, *Sodiro* 169, QPLS!

DISTRIBUTION AND ECOLOGY: From northern Ecuador to Southern Colombia, from the provinces of Bolivar north to Nariño, mostly within the interandean valley, between 3000-3800 m altitude. Flowering from March to July.

RECOGNITION: *Epidendrum cuniculatum* belongs to Andean Group, Cuniculatum Subgroup, which is characterized by the monopodial, branching habit, adpressed leaf-sheaths, acute or obtuse leaves, margin crenate and usually a 3-lobed lip. The species is recognized by the deep nectary, penetrating more than half the ovary, a large, funnel-shaped clinandrium with the margin sinuous, and very short, flabellate, lateral lobes of the lip, with a sinuous margin. It is very similar to *Epidendrum tenuicaule* Lindl. (syn. *Epidendrum ochricolor* A. D. Hawkes) which has bushy, branching, short plants, narrow leaves, mostly less than 5 mm wide (but with wider leaves on the main stem in younger plants), the arching small inflorescence with greenish yellow, simultaneous flowers, the lateral lobes of the lip well-developed, dolabriform, and a short ovary. In Ecuador it has been confused with the Peruvian *Epidendrum scabrum* Ruiz & Pav. that has very tall monopodial stems, with a large, paniculate, arching-nutant, many-flowered inflorescence, and much larger, wider leaves, to 13 mm in width. *Epidendrum cuniculatum* grows in the same region as *Epidendrum angustissimum* Lindl. (syn. *chortophyllum* Schltr., *E. acuminatum* of Lindley, not Ruiz & Pavón) which forms a more open bush, and has linear-lanceolate, acuminate leaves to 3.5 mm wide, the rachis of the inflorescence longer, to 5.3 cm long and the lateral lobes of the lip semi-orbicular to forming a quarter circle, with a right angle at the apex. *Epidendrum cuniculatum* somewhat resembles *E. soratae* Rchb.f. which has infundibuliform leaf-sheaths, short stems produced from the sub-apical internodes of the previous stem, narrow, linear petals with an entire margin and a reniform lip, with a very small, emarginate midlobe and the margins entire. *Epidendrum tetragonum* Hágsater & Dodson has thinner stems, narrower floral segments and a rectangular entire lip, nearly twice as long as it is wide.

CONSERVATIONS STATUS: DD. Data deficient.

ETYMOLOGY: From the Latin *cuniculus*, a hare, and therefore *cuniculatus* in the shape of an underground gallery, like the den of a hare, in reference to the deep nectary which distinguishes this species from the closely related *E. tenuicaule*.



4

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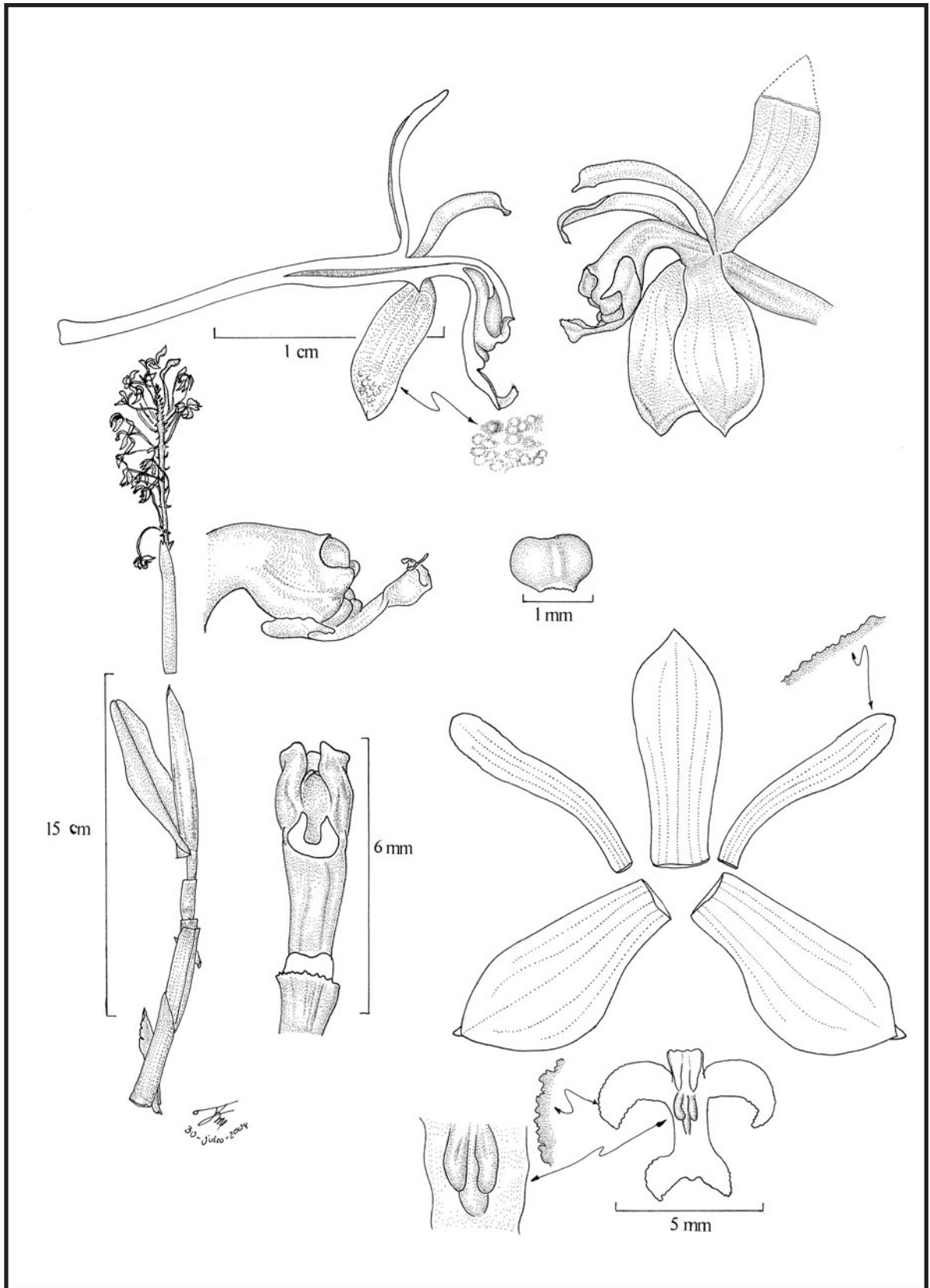
Editors: E. Hágsater & L. Sánchez S.

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México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009.

Plate 1233



EPIDENDRUM CYLINDRACEUM Lindl.

Plate 1234

EPIDENDRUM CYLINDRACEUM Lindl., Edward's Bot. Reg. 30: misc. 86, no. 15 (1844).

Type: Colombia: [Cauca]: Popayan: In the woods of Pitayo, at the height of 10,500 ft., **Hartweg s.n.** Holotype: K-L!

Herb epífita, simpodial, subcespitosa, 25-40 cm de alto. **Raíces** basales, carnosas, 1.0-1.5 mm de grosor. **Tallos** sencillos, tipo caña, teretes en los dos tercios basales, lateralmente aplanados hacia el ápice, 11-17 cm de largo, con 2-4 vainas, parcialmente imbricadas, conduplicadas, tubulares, agudas, papiráceas, 2-6 cm de largo. **Hojas** 2-3, distribuidas en el tercio apical, vaina tubular, estriada en seco, lámina elíptica ovada, ápice desigualmente bilobado, margen entero, coriácea, 6-10 x 2.5-3.5 cm. **Bráctea espátácea** 1-2, de lados casi paralelos, aguda, 6-10 x 0.7-1.3 cm. **Inflorescencia** apical, racemosa, 18-28 cm de largo; pedúnculo lateralmente comprimido, 10-16 cm de largo; raquis algo lateralmente comprimido, no ornamentado, racimo compacto, corto, cilíndrico. **Brácteas florales** mucho más cortas que el ovario, más pequeñas hacia el ápice, triangulares, acuminadas, agudas, 2-4 mm de largo. **Ovario** terete, ligeramente verrugoso hacia el ápice, los ovarios de las flores basales son los más largos, 12-22 mm de largo. **Flores** 20-60, simultáneas, resupinadas, distribuidas en la mitad apical de la inflorescencia, formando un racimo compacto, color amarillo a blanco cremoso, tornándose marrón rojas, con puntos púrpura hacia la base de los segmentos; fragancia a jabón perfumado. **Sépalos** extendidos, libres, agudos, 5-nervados, margen entero, dorsalmente verrugosos en el tercio apical, 10-12 mm de largo; el **dorsal** cuneado ligulado, 2.5-3.0 mm de ancho, los **laterales** semielípticos, falcados, aristados, 3.0-4.5 mm de ancho. **Pétalos** extendidos, lineares, obtusos, 3-nervados, margen entero a ligeramente serrulado, 10-11 x 1.0-1.2 mm. **Labelo** unido a la columna, cordado, trilobado, 6.5-7.0 x 4.5-5.0 mm; bicalloso, los callos carnosos, con una quilla intermedia engrosada, alargada, la cual se prolonga hasta la mitad del lóbulo medio; lóbulos laterales falcados, angostos, margen serrulado; lóbulo medio subrectangular, carnoso, dilatado hacia el ápice y formando dos pequeños lóbulos, serrulados. **Columna** arqueada, terminando en un par de alas cortas, angulares, carnosas, 4.5-6.0 mm de largo. **Clinandrio** reducido, entero. **Antera** 4-locular, obovoidea con una quilla al frente, apiculada. **Polinios** 4, obovoides, lateralmente comprimidos. **Rostelo** no visto. **Lóbulos laterales del estigma** de la mitad del largo de la cavidad. **Nectario** corto, sin traspasar el perianto. **Cápsula** no vista.

Epiphytic, sympodial, sub-caespitose **herb**. **Roots** basal, fleshy. **Stems** simple, cane-like, terete below, laterally compressed above, enveloped by tubular, conduplicate, acute, papery sheaths. **Leaves** 2-3, distributed along the upper third of the stem, sheaths tubular, striated when dry, blade elliptic-ovate, apex unequally bilobed, margin entire, coriaceous. **Spathaceous bract** 1-2, the sides nearly parallel, acute. **Inflorescence** apical, racemose, peduncle laterally compressed raceme compact, short, and cylindrical. **Floral bracts** much shorter than the ovary, triangular, acuminate. **Ovary** terete, slightly verrucose towards the apex. **Flowers** 20-60, simultaneous, resupinate, distributed throughout the apical half of the inflorescence forming a compact raceme, yellow to creamy white, turning brown-red, with purple dots towards the base of the segments; fragrant of perfumed soap. **Sepals** spreading, free, acute, margin entire, dorsally verrucose through the apical third, 5-veined; **dorsal** cuneate-ligulate, the **laterals** semi-elliptic, falcate, aristate. **Petals** spreading, linear, obtuse, margin entire to serrulate, 3-veined. **Lip** united to the column, cordate, 3-lobed; bicallose, the calli fleshy, with a median thickened, elongate, keel; lateral lobes falcate, narrow, margin serrulate, midlobe sub-rectangular, fleshy, dilated towards the apex forming two small serrulate lobes. **Column** arching, ending in two short, fleshy angular wings. **Clinandrium-hood** reduced, entire. **Anther** 4-celled, obovoid with a keel in front, apiculate. **Nectary** short, without penetrating the ovary.

OTHER SPECIMENS: COLOMBIA: Without locality, cult. ex Jardín Botánico, Madrid, *Mutis 1740*, AMES x2! Without locality, *Triana 1371*, W-R 4526! OSR, Delicias, *Lehmann B.T. 281*, L! NY! **Boyacá:** Vado Hondo, Siberia, páramo entre Peña de Arnica y Alto de Mogotes, al NW del Alto, 3200 m, 04 IV 1973, *Cleef 9358*, COL! U! Sierra Nevada de Cocuy, 16 VIII 1957, *Grubb 527*, COL! K-L, US! Ibid. Near Laguna Seca along path from Cobrigan, 18 VIII 1957, *Grubb 528*, COL! K-L. Ventaquemada, km 106 carretera Bogotá-Tunjá, 2920 m, 1 XII 1972, *Valdivieso 601*, HPUJ! **Cauca:** Paletará and Coronuco, 2900-3200 m, 6 II 1884, *Lehmann 3525*, AMES! C! LE! US! Popayan, *Lehmann 7602*, K-L, NY! (Illustration voucher). **Cundinamarca:** region del Sumapaz. Municipio de Usme, después de Pasquilla, 3075 m, 12 III 1997, *Betancur 7068*, MO! Boquerón de Chipaque, 3100-3200 m, 31 XII 1939, *Cuatrecasas 7908*, COL x2! US! Fomeque. Páramo de Chingaza, La Laja y alrededores, 2700-3250 m, 11-23 XII 1963, *Huertas 5728*, AMES! COL! Bogotá, *Karsten s.n.*, W-R! Boca del Monte, Cabrera, *Valdivieso 319*, HPUJ! Monserrate, above Bogotá, 26 III 1944, 3200 m, *Schneider 107*, AMES! Represa de Sigsa, ca. 9000 ft., 2 III 1953, *Schultes 18798*, AMES! Bogotá, *Triana 573*, P! Ibid *Triana 578*, P! Near Bogotá; páramo de Palacio, near Calera, 3200 m, 10 III 1975, *Zarucchi 1085*, AMES! **Nariño:** South slopes of Volcan Doña Juana, 3200 m, 16 XII 1944, *Ewan 16630*, US! Tabanel above La Cocha, 11000 ft., 31 X 1946, *Foster 2019*, AMES! Andes of Pasto, VII 1846, *Jameson 465*, C! Pasto, Bosque de Botána, 2800-3200 m, 17 VII 1964, *Soejarto 990*, AMES! **Norte de Santander:** Ocaña, Páramos, VII 1846, *Schlim 733*, G x3! P W-R! **ECUADOR: Carchí:** Julio Andrade to El Carmelo, 3200 m, 16 V 1982, *Luteyn 8420*, MO! NY! QCA! QCNE! **Imbabura:** Naranjito, E. of Volcán Cayambe, 9600 ft., *Drew E-217*, AMES x2! La Floresta, Near Sigsipampa, 10 VI 1944, 9300 ft., *Drew E-260*, AMES x2! **Sucumbios:** Tulcán to La Bonita, km 65.4, 1990 m, 13 V 1990, *Dodson 18484*, MO! Above Playón de San Francisco, 3200 m, 20 III 1991, *Luer 5275*, QCNE!

OTHER RECORDS: COLOMBIA: Cundinamarca: Boca del Monte, Cabrera, *Valdivieso 319*, HPUJ! (illustration, slide AMO!)

DISTRIBUTION AND ECOLOGY: Known from the eastern slope of the Andes in northern Ecuador and the Cordillera Oriental of Colombia up to Boyacá. Epiphyte, 2700-3200 m altitude. Flowering throughout the year.

RECOGNITION: *Epidendrum cylindraceum* belongs to the Mancum group which is characterized by the sympodial habit, few-leaved stems, racemose inflorescence with 1-2 acnicipitose, long, spathaceous bracts with parallel sides and *Cylindraceum* subgroup which has resupinate, generally non-reduced and membranaceous flowers. This species can be recognized by its short and wide leaves, 6-10 x 2.5-3.5 cm, short, compact, cylindrical raceme, the flowers distributed along the apical half of the inflorescence, sepals and petals 10-12 mm long, verrucose ovary, lateral lobes and midlobe of the lip with a crenulate margin, apex of midlobe

bilobed. It is very similar to *Epidendrum löjtnantii* Hágsater & Dodson, but that species has narrower leaves 1.8-2.0 cm wide, an unornamented, 12-15 mm long ovary, and the midlobe of the lip 3-lobed. *Epidendrum parvilabre* Lindl. from southern Ecuador and Peru has unornamented sepals and an unornamented, 7-10 mm long ovary, and the midlobe of the lip erose. *Epidendrum diphyllum* Schltr., has narrower leaves 7-11 x 2.3-2.8 cm, sepals dorsally spiculate, petals minutely and irregularly crenulate, smooth, long ovary (23-27 mm long), lateral lobes of the lip falcate-ligulate, acute, the margin crenulate, isthmus of the midlobe oblong, bilobed midlobe, the lobes long an narrow, and the apical margin crenulate-dentate.

CONSERVATION STATUS: DD: Data deficient.

ETYMOLOGY: From the Latin *cylindrus*, cylindrical, in reference to the densely-flowered, compact, cylindrical inflorescence characteristic of this species.



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Illustrator: R. Jiménez M.

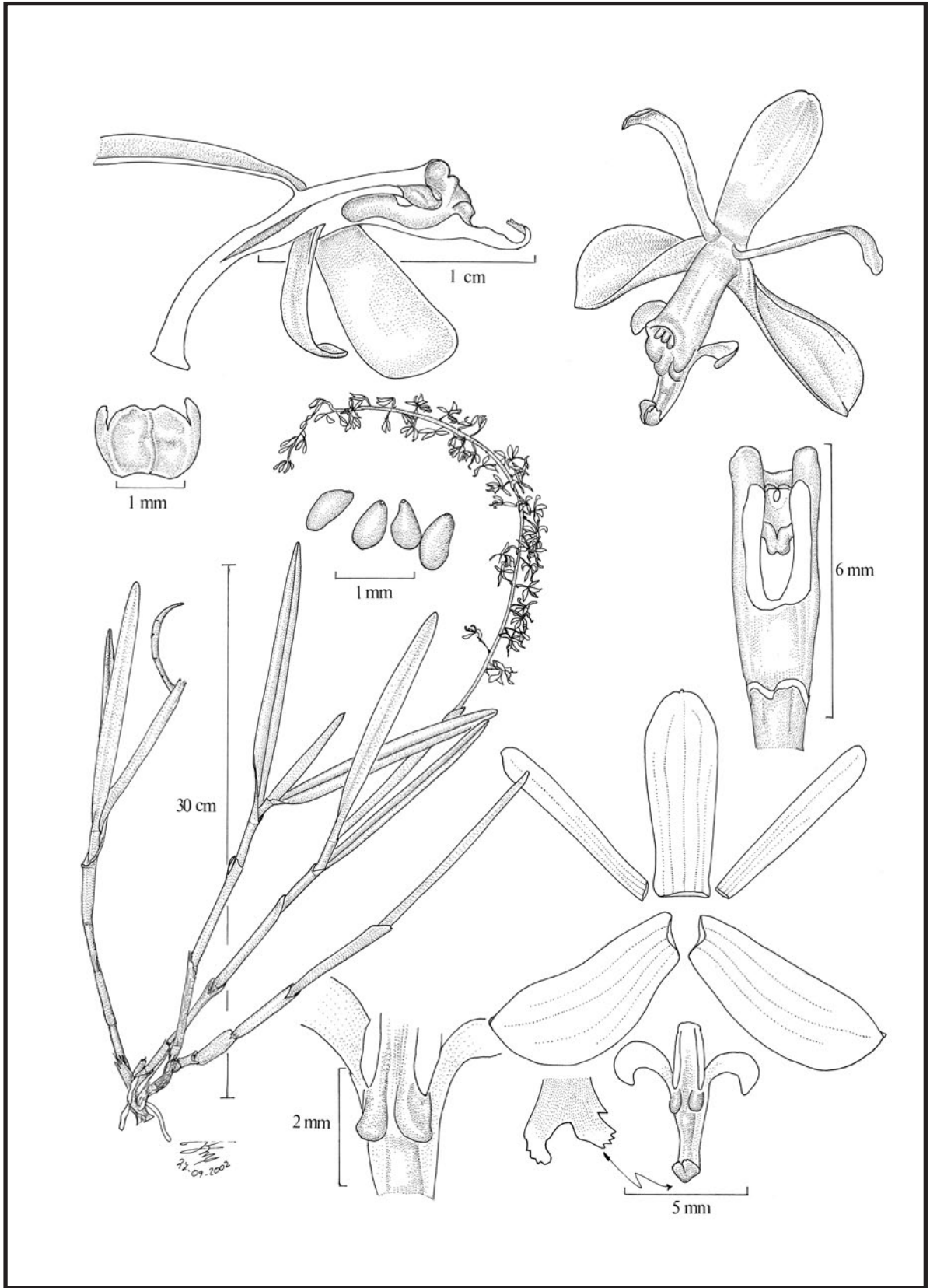
Editors: E. Hágsater & L. Sánchez S.

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ICONES ORCHIDACEARUM 12. 2009.

Plate 1234



EPIDENDRUM CYLINDROSTACHYS Rchb.f. & Warsc.

Plate 1235

EPIDENDRUM CYLINDROSTACHYS Rchb.f. & Warsc., Bonpl. 2: 110. 1854.

Type: Colombia: without locality, *Warszewicz s.n.* Holotype: W-R 4776!

Synonym: *Epidendrum trifidum* Schltr. Repert. Spec. Nov. Regni Veg. Beih. 7: 153. 1920. Type: Colombia: Antioquia, c. 2200 m, *M. Madero s.n.* Holotype: B (destroyed).

Hierba epífita, simpodial, subcespitosa, 30-62 cm de alto. **Raíces** basales, carnosas, 1.5-2.0 mm de grosor. **Tallos** sencillos, tipo caña, lateralmente comprimidos en el tercio apical, teretes en los dos tercios basales, 10-16 cm de largo, con dos vainas, parcialmente imbricadas, lateralmente comprimidas, tubulares, agudas, papiráceas, 2-9 cm de largo. **Hojas** 1-2, distribuidas en el tercio apical; vainas lateralmente comprimidas, tubulares, estriadas en seco, lámina linear ligulada, ápice obtuso, coriácea, margen entero, 12-27 x 0.9-1.4 cm. **Bráctea espatácea** 1, de lados casi paralelos, aguda, 6-12 x 0.5-0.7 cm. **Inflorescencia** apical, racemosa, 20-50 cm de largo; pedúnculo lateralmente comprimido, 8-10 cm de largo; raquis algo lateralmente comprimido, no ornamentado. **Bráctea floral** mucho más cortas que el ovario, más pequeñas hacia el ápice, triangulares, acuminadas, 2-4 mm de largo. **Ovario** terete, no ornamentado, 5-7 mm de largo. **Flores** 20-100, simultáneas, resupinadas, color blanco amarillentas, en ocasiones con tonalidades verdosas, con puntos púrpura; fragancia no registrada. **Sépalos** extendidos, libres, agudos, 5-nervados, margen entero, 3.5-7.0 x 2.0-2.5 mm; el **dorsal** cuneado ligulado, los **laterales** semielípticos, subfalcados. **Pétalos** extendidos, linear oblongos, obtusos, 3-nervados, margen entero, 3.5-6.5 x 0.5-0.8 mm. **Labelo** unido a la columna, base cordada, trilobado, 3.0-4.0 x 3.2-4.7 mm; bicalloso, los callos laminares, con una quilla engrosada a la mitad del lóbulo medio; lóbulos laterales falciformes, agudos, margen entero; lóbulo medio con el istmo angostamente lanceolado ligulado, carnoso, ápice dilatado a truncado, obtuso a retuso, margen entero, en posición natural arqueado hacia arriba, frente a la columna. **Columna** ligeramente arqueada a arqueada, 5.5-6.0 mm de largo. **Clinandrio** corto, margen ondulado. **Antera** 4-locular, reniforme. **Polinios** 4, obovoides, lateralmente comprimidos. **Rostelo** no visto. **Lóbulos laterales del estigma** ocupando 1/3 de la cavidad estigmática. **Nectario** sin traspasar el perianto, no ornamentado. **Cápsula** no vista.

Epiphytic, simpodial, sub-cespitose **herb. Roots** basal, fleshy. **Stems** simple, cane-like, terete below, laterally compressed in the apical third, covered basally by two partially imbricating, laterally compressed, tubular, acute, papiraceous sheaths. **Leaves** 1-2, distributed throughout the apical third, sheath laterally compressed, tubular, striated when dry, blade linear ligulate, apex obtuse, margin entire, coriaceous. **Spathaceous bract** 1, sides nearly parallel, acute. **Inflorescence** apical, racemose, peduncle laterally compressed. **Floral bracts** much shorter than the ovary, triangular, acuminate. **Ovary** terete, smooth. **Flowers** 20-100, simultaneous, resupinate, yellowish white or sometimes greenish, with purple dots. **Sepals** spreading, free, acute, 5-veined, margin entire, **dorsal** cuneate-ligulate, the **laterals** semi-elliptic, sub-falcate. **Petals** spreading, linear-oblong, obtuse, 3-veined, margin entire. **Lip** united to the column, 3-lobed; bicallose, the calli laminar, with a thickened keel in the middle of the midlobe; lateral lobes falciform, acute, margin entire; midlobe with a narrowly lanceolate-ligulate isthmus, fleshy, apex dilated to truncate, obtuse to retuse, margin entire, arching upwards in natural position, in front of the column. **Column** slightly arching to arching. **Clinandrium-hood** short, margin undulate. **Pollinia** 4, obovoid, laterally compressed.

OTHER SPECIMENS: COLOMBIA: Without locality, James Veitch 23, W-R (slide at AMO!) **Antioquia/Choco:** Salgar: At departamental border, km 15 of road Salgar-El Dauro, 2280m, 29 IX 1987, *Zarucchi 5996*, MO! **Antioquia:** Alto de Sta. Helena, 25 Km E of Medellín, 2800 m, 21 VI 1980, *Callejas 1036*, NY! [Cerro del] Padre Amaya, *Escobar s.n.* AMO! Jardín, Quebrada Bonota, 2300-2600 m, 26 V 1983, *Escobar 2723*, SEL! Cocorná, cultivado por Javier Ríos en Guarne, 1800-2000 m, *Escobar 5045*, AMO! Medellín-Boqueron-San Jerónimo, cerro del Padre Amaya, 2380 m, 21 IV 1986, *Hágsater 7242*, AMO! Camino Medellín-San Jerónimo, Cerro del Padre Amaya, camino a la antena, 2400 m, 22 IV 1983, *Hágsater 7286*, AMO! COL! Pueropatan, Río Piedras, hort. Colomborquídeas, *Hágsater 11544*, AMO! HUA! Páramo de Sansón [Sonsón], 2700-3000 m, 1 XII 1891, *Lehmann 7604*, K-L! La Unión, 5 km west of Mesopotamia, 2400 m, 8 IV 1988, *Luer 13068*, MO! La Unión, 23.7 km road from La Unión on road to Sonsón, 2370 m, 14 XI 1988, *McPherson 13101*, MO! El Retiro, Cordillera Central, Hacienda Normandia, 2500 m, 2 XII 1956, *Ospina 71*, AMES! Vertiente hacia el Río Negro, *Ospina 303*, JAUM! Medellín, *Roez s.n.*, W-R! La Ceja, Vda. Pantanillo, El Retiro, 2400 m, 1 VII 1969, *Valdivieso 290*, HPUJ! Herb. P.O.V.! Medellín, *Wallis s.n.*, W-R! (x2) **Valle del Cauca:** Hoya del río Cali, Pichindé, Alto de las Brisas, 2160 m, 26 X 1944, *Cuatrecasas 18211*, AMES! F! US! Cordillera occidental-Los Farallones de Cali, zona de cultivos a lo largo del río Pance aproximadamente 2-4 km abajo del pueblo de Pance, 1500 m, 4 XI 1975, *Hartman 19*, CUVCI! "San Jose", San Antonio, Cordillera Occidental, 2400-2700 m, 1 VII 1922, *Pennell 7585*, AMES! F! US! **ECUADOR: Carchi:** Above Maldonado, 2400 m, 31 VII 1989, *Werff 10787*, MO! **PERU: Amazonas:** Bongará, montane high-rainforest 2-4 km, west-southwest (245°) of Pomacocha, 2200-2400 m, 16 VI 1962, *Wurdack 860*, US! (illustration) Chachapoyas, Moist scrub forest on south side of Molinopampa-Diosan pass, 2700-3100, 8 VIII 1962, *Wurdack 1650*, US!

OTHER RECORDS: COLOMBIA: Orquídeas Nativas de Colombia vol 5, suplemento, pg. 762, foto 882. (Photo at AMO!) Hort. Medellín, *Duque 159*, (Photo AMO!) Cultivado en Colomborquídeas, *Escobar 5150* (flowers in spirit at AMO!) **Antioquia:** Cocorná, cultivado por Javier Ríos en Guarne, 1800-2000 m, *Escobar 5045* (flowers in spirit at AMO!) Medellín, Medellín-Boqueron-San Jerónimo, cerro del Padre Amaya, 2380 m, 21 IV 1986, *Hágsater 7242* (flowers in spirit at AMO) Camino Medellín-San Jerónimo, Cerro del Padre Amaya, camino a la antena, 2400 m, 22 IV 1983, *Hágsater 7286* (Illustration voucher, flowers in spirit at AMO!) La Ceja, Vda. Pantanillo, El Retiro, *Valdivieso 290*, (illustration) slide AMO!



DISTRIBUTION AND ECOLOGY: Known from the eastern side of the Andes, through the Cordillera Central of Colombia from Antioquia to Ecuador and Peru. Epiphyte, 1800-3100 m altitude. Flowering from June to August.

RECOGNITION: *Epidendrum cylindrostachys* Rchb.f. & Warsc. belongs to the Mancum group which is characterized by the sympodial habit, few-leaves stems, racemose inflorescence with 1-2 ancipitose, long, spathaceous bracts with parallel sides, and Cyllindraceum subgroup which has resupinate, generally non-reduced and membranaceous flowers. This species is recognized by its narrow leaves, 0.9-1.4 mm wide, long, many-flowered, dense inflorescence, 20-50 cm long, flowers distributed throughout the inflorescence, short ovary 5-7 mm long, lateral lobes of the lip falcate, isthmus narrowly lanceolate-ligulate, apex truncate to dilated. It is similar to *Epidendrum cylindrostenophyllum* Hágsater & Dodson, which has narrower leaves, ca. 1 cm wide, shorter inflorescence, 15 cm long, small sepals and petals, 3.5-5.0 mm long, lateral lobes of the lip retrorse and narrow at the base, transversely elliptic at the apex. *Epidendrum cylindraceum* Lindl. has wider leaves, 2.0-3.5 cm wide, a shorter inflorescence, flowers distributed throughout the apical half of the inflorescence, a longer ovary, 12-22 mm long, sepals dorsally verrucose, and a smaller midlobe of the lip.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Latin, *cylindrus*, cylindrical, and the Greek *σταχυς*, an ear of corn, in modern botany a spike, in reference to the cylindrical, many flowered inflorescence.

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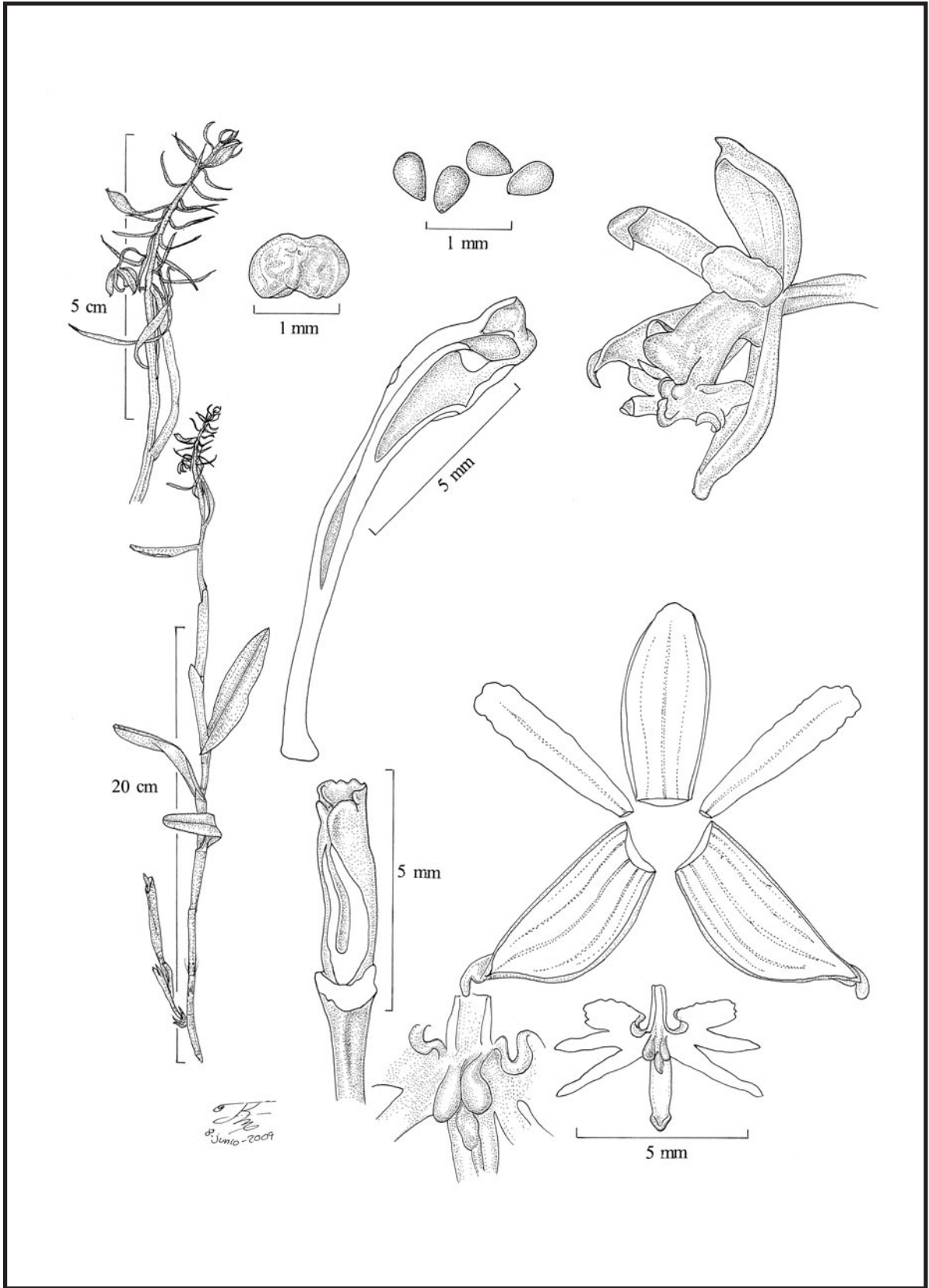
Illustrator: R. Jiménez M.

Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009. Plate 1235



EPIDENDRUM DACTYLODES Rchb.f. ex Hågsäter

Plate 1236

EPIDENDRUM DACTYLODES Rchb.f. ex Hágsater, *sp. nov.*

Type: COLOMBIA: [Nariño: Túquerres], Mai 1853, *Triana 1376*. Holotype: W-R 4734! (Illustration voucher). Isotype: P!
Epidendro brevinervii Lindl. simile sed foliis minus numerosis elliptico-lanceolatis, petalis apicaliter truncatis, labello 7-lobato, lobulo medio simplici oblongo-ensiformi.

Hierba epífita, erecta, simpodial, de más de 30 cm de alto. **Raíces** no vistas. **Tallos** sencillos, tipo caña, teretes en la base y algo lateralmente aplanados hacia el ápice, delgados, erectos, aparentemente producidos de los entrenudos del tallo anterior, 13 x 0.2-0.5 cm; cubiertos en la base por vainas tubulares, no foliares, escariosas y fibrosas con el tiempo, 16-27 mm de largo. **Hojas** 3, distribuidas en la mitad apical del tallo, alternas, articuladas, erecto extendidas, subcoriáceas; vainas tubulares, finamente estriadas, 17-25 x 2-5 mm; lámina elíptico lanceolada, obtusa, margen entero, 4-6.5 x 1-1.4 cm. **Brácteas espatáceas** 2, tubulares, obtusas, parcialmente imbricadas, algo ancipitosas, 4.0-4.3 x 3.5-5.5 cm. **Inflorescencia** apical, racemosa, florece una sola vez, erecta, pauciflora, 16 cm de largo; pedúnculo delgado, lateralmente aplanado, ancipitoso, 12 cm de largo; provisto de 2 brácteas subapicales, angostamente elípticas, obtusas, conduplicadas, muy prominentes, 3.0-3.3 cm de largo; raquis terete, delgado, recto, 4 cm de largo. **Brácteas florales** prominentes, más largas que el ovario, linear lanceoladas, acuminadas, 7-15 mm de largo. **Ovario** terete, delgado, no inflado, no ornamentado, 7-8 mm de largo. **Flores** 25, simultáneas, resupinadas, sin datos de color ni fragancia. **Sépalos** entreabiertos, libres, carnosos, elípticos, margen entero, 6-7 x 2.5 mm; el **dorsal** 3-nervado, subobtusos; los **laterales** 5-nervados, obtusos, oblicuos, con una arista dorsal prominente. **Pétalos** entreabiertos, libres, oblongo espatulados, truncados en el ápice, 1-nervados, margen eroso, 6 x 1.4 mm. **Labelo** unido a la columna, apareciendo 7-lobado, base cordada, 6 x 6 mm; bicalloso, los callos prominentes, subglobosos, alargados hasta la base del lóbulo medio; disco provisto de una quilla intercallosa carnosa, corta, parecida a los callos; lóbulos laterales formados por tres lóbulos profundamente laciniados, 2.5 x 2.8 mm; los pares apicales digitiformes, obtusos, con el margen entero y los basales subrectangulares, con el margen crenado; el lóbulo medio oblongo ensiforme con el margen entero, ligeramente involuto en el ápice, 2.3 x 0.7 mm. **Columna** arqueada, gruesa, 5 mm de largo. **Clinandrio** prominente, petaloide, margen crenado. **Antera** reniforme, con una quilla roma al frente, 4-locular. **Polinios** 4, obovoides. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** prominentes, de la mitad del largo de la cavidad estigmática. **Nectario** poco profundo, penetrando ligeramente el ovario, no ornamentado. **Cápsula** no vista.

Epiphytic, erect, sympodial **herb.** **Stems** simple, cane-like, terete at the base, and somewhat laterally compressed towards the apex, thin, erect, apparently produced from the lower internodes of the previous stem; the base covered by non-foliar, tubular, scarios sheaths, becoming fibrous with time. **Leaves** 3, distributed along the apical half of the stem, alternate, articulate, erect-spreading, sub-coriaceous; sheaths tubular, minutely striated; blade lanceolate-elliptic, obtuse, margin entire. **Spathaceous bracts** 2, tubular, obtuse, partly imbricating, somewhat ancipitose. **Inflorescence** apical, racemose, flowering only once, erect, few-flowered; peduncle thin, laterally compressed, ancipitose; provided with 2 sub-apical bracts, narrowly elliptic, obtuse, conduplicate, very prominent; rachis terete, thin, straight. **Floral bracts** prominent, longer than the ovary, linear-lanceolate, acuminate. **Ovary** terete, thin, not inflated, smooth. **Flowers** 25, simultaneous, resupinate. **Sepals** partly spreading, free, fleshy, elliptic, margin entire; the **dorsal** 3-veined, sub-obtuse; the **lateral** 5-veined, obtuse, oblique, with a prominent dorsal awn. **Petals** partly spreading, free, oblong-spatulate, apex truncate, 1-veined, margin erose. **Lip** united to the column, appearing 7-lobed, base cordate; bicallose, the calli prominent, sub-globose, elongate to the base of the midlobe; disc provided with a fleshy, short mid-keel similar to the calli: lateral lobes of the lip deeply lacinate, each formed by 3 lobes, the apical pair digitiform, obtuse, the margin entire, the basal lobe sub-rectangular, margin crenate; midlobe oblong-ensiform, margin entire, slightly involute at the apex. **Column** arching, thick. **Clinandrium-hood** prominent, petaloid, margin crenate. **Anther** reniform, with a rounded keel in front, 4-celled. **Pollinia** 4, obovoid. **Rostellum** sub-apical, slit. **Nectary** shallow, only slightly penetrating the ovary, smooth.

OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: Known only from the southern tip of the Cordillera Occidental in Colombia. Flowering in May.

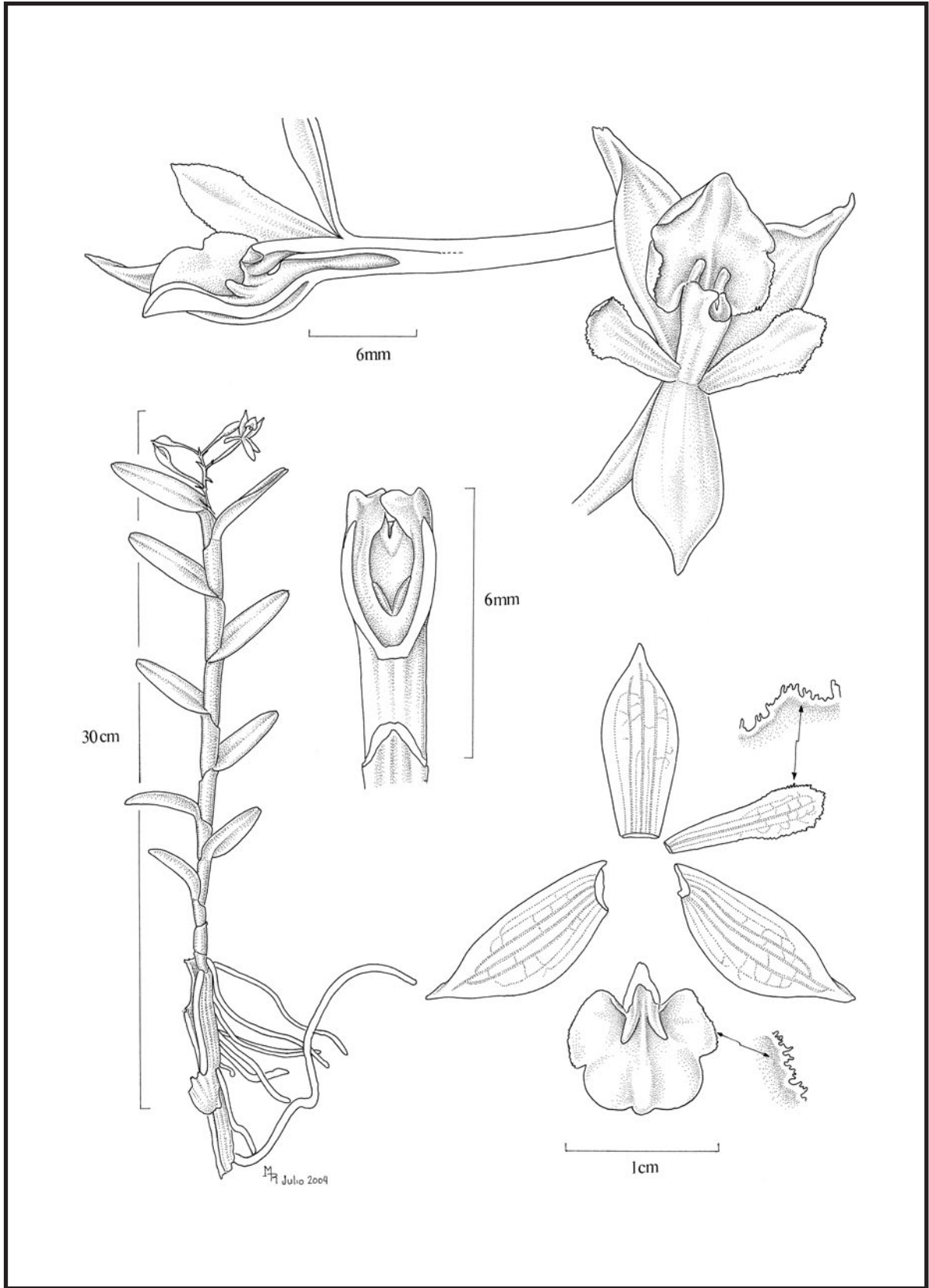
RECOGNITION: *Epidendrum dactyloides* belongs to the Brevivenium subgroup which is characterized by the repent rhizomes with erect, thin, few-leaved stems, and a pair of conduplicate tubular spathaceous bracts at the apex; the inflorescence is erect, with prominent floral bracts; the lip appears 7-lobed. The species is recognized by the 3, lanceolate-elliptic leaves 4-6.5 cm long; small flowers, sepals 6-7 mm long, the lateral sepals with a prominent apical awn, petals truncate at the apex, lateral lobes of the lip finger-like, and the midlobe oblong-ensiform, the margin entire and slightly involute at the apex. The better known *Epidendrum brevivenium* Lindl. is apparently endemic to Ecuador, has more numerous, wider, elliptic leaves, a shorter inflorescence, petals obtuse at the apex, and the midlobe of the lip which expands near the apex into two divergent lobes. *Epidendrum guanacasense* Hágsater & Dodson has up to 18, ovate, leaves on the stem, 1-2 cm long; sepals 4.5 mm long, the lateral lobes of the lip do not form finger-like lobes, and the midlobe is oblong-rectangular, simple, with a sub-entire margin.



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CONSERVATION STATUS: DD. Known only from the type.

ETYMOLOGY: From the Greek δακτυλος, finger, in reference to the finger-like lobes of the lip.



EPIDENDRUM DECURVIFLORUM Schltr.

EPIDENDRUM DECURVIFLORUM Schltr., Repert. Spec. Nov. Regni Veg., Beih. 7: 130. 1920.

Type: COLOMBIA: Cauca: Without locality, *M. Madero s.n.* Holotype: B, destroyed. Neotype [here designated]: km 56 of road from Timbío to Veinte de Julio, 2500 m, 14 October 1974, *Paul J. Maas & Timothy Plowman 2079*. COL! Isoneotype: U! (Illustration voucher).

Hierba terrestre o epífita, monopodial, erecta, de más de 30 cm de alto. **Raíces** de los entrenudos basales, carnosas, gruesas, 2-3 mm de grosor. **Tallos** tipo caña, teretes, gruesos, ramificados subapicalmente cuando maduros, de más de 19 x 0.5-0.6 cm. **Hojas** numerosas en el tallo principal; 5-6 en las ramificaciones, erecto extendidas, articuladas, dísticas; vainas tubulares, finamente estriadas, rugosas, 2.0-2.7 x 0.5-0.7 cm, lámina lanceolada, obtusa, margen entero, extendido, 3-5.5 x 1.0-1.2 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, erecta, subdensa, 3-10 cm de largo; pedúnculo 5-20 mm de largo. **Brácteas florales** pequeñas, linear triangulares, agudas, abrazadoras, 4 mm de largo. **Ovario** terete, delgado, glabro, decurvo y ligeramente inflado justo detrás del perianto, 20-25 mm de largo. **Flores** 8-20, sucesivas, no resupinadas, ligeramente carnosas, de color amarillo, concoloras o ligeramente teñidas de morado, el labelo ocasionalmente con un semicírculo amoratado. **Sépalos** extendidos, libres, glabros, obovado elípticos, subagudos, 5-7-nervados, margen extendido, entero, 13-16 x 5 mm; los **laterales** ligeramente oblicuos, con una quilla dorsal prominente. **Pétalos** extendidos, libres, oblanceolado subespatulados, subobtusos, 3-nervados, margen irregularmente crenado, 11-12 x 3 mm. **Labelo** unido a la columna, trilobado, ligeramente cordado en la base, 6-8 x 6-10 mm; bicalloso, los callos carnosos, delgados, unicarinado, la carina baja, llega al ápice de la lámina; lóbulos laterales transversalmente rectangulares, obtusos, margen subcrenulado, 3.5 x 5.4 mm; lóbulo medio transversalmente rectangular, las esquinas ampliamente redondeadas, el ápice truncado, diminutamente apiculado, 3 x 3-7 mm. **Columna** recta, delgada, 6 mm de largo. **Clinandrio** reducido, margen entero. **Antera y Polinios** no vistos. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** pequeños, de menos de la mitad del largo de la cavidad estigmática. **Nectario** poco profundo, penetrando justo detrás del perianto, ligeramente inflado sin formar una vesícula, no ornamentado. **Cápsula** no vista.

Terrestrial or epiphytic, monopodial, erect, **herb. Roots** from the basal internodes, fleshy, thick. **Stems** cane-like, terete, thick, branching sub-apically when mature. **Leaves** numerous on the main stem, 5-6 on the branches, erect-spreading, articulate, distichous; sheaths tubular, striated, rugose; blade lanceolate, obtuse, margin entire, spreading. **Inflorescence** apical, racemose, erect, sub-dense; peduncle short. **Floral bracts** small, linear-triangular, acute, amplexicaul. **Ovary** terete, thin, glabrous, decurved and slightly inflated just behind the perianth, moderately long. **Flowers** 8-20, successive, non-resupinate, somewhat fleshy, yellow, concolor or slightly tinged with purple, the lip occasionally marked with a purplish semicircle. **Sepals** spreading, free, glabrous, obovate-elliptic, subacute, 5-7-veined, margin entire, spreading; the **lateral** sepals slightly oblique, with a prominent dorsal keel. **Petals** spreading, free, oblanceolate-subspatulate, sub-obtuse, 3-veined, margins irregularly crenate; somewhat smaller than the sepals. **Lip** united to the column, 3-lobed, base slightly cordate; bicallose, the calli fleshy, thin, with a single, low keel reaching the apex of the blade; lateral lobes transversely rectangular, margin sub-crenulate; midlobe transversely rectangular, the corners widely rounded, apex truncate, minutely apiculate. **Column** straight, thin. **Clinandrium-hood** reduced, margin entire. **Rostellum** apical, slit. **Nectary** shallow, barely penetrating the ovary, slightly inflated without forming any vesicle, smooth.

OTHER SPECIMENS: COLOMBIA: Cauca: San José to Popayán, 8000 ft, VIII 1964, *Kapuler 278*, COL! El Tambo, Parque N. N. Munchique, 3 IV 2000, *Salgado 79*, CAUP, digital image, AMO!

OTHER RECORDS: COLOMBIA: Without locality, *Mutis s.n.*, **Flora de la Real Expedición Botánica del Nuevo Reino de Granada (1783-1816)** 9: pl. 14, the illustration, not the specimens cited. Without locality, *Gerlach 221 & 222*, digital photo, AMO!

DISTRIBUTION AND ECOLOGY: Known only from Colombia, province of Cauca, around Popayán and west, terrestrial or epiphytic, growing at around 2500 m altitude. Flowering from April to October.

RECOGNITION: *Epidendrum decurviflorum* to the Andean Group, Vernixium Subgroup which is characterized by the monopodial, sub-apical branching habit, erect, lax inflorescences, non-resupinate flowers, and the lip 3-lobed. The species is recognized by the lanceolate, obtuse leaves, 3-5.5 x 1.0-1.2 cm, yellow, concolor flowers or with purplish semicircle around the disc of the lip, sepals and petals unequal in size, the base of the lip somewhat cordate, the lateral lobes transversely rectangular. *Epidendrum scytocladium* Schltr. is vegetatively very similar, but the flowers are greenish yellow with the apex of the column tinged purplish, sepals and petals similar in size, and the base of the lip deeply cordate,

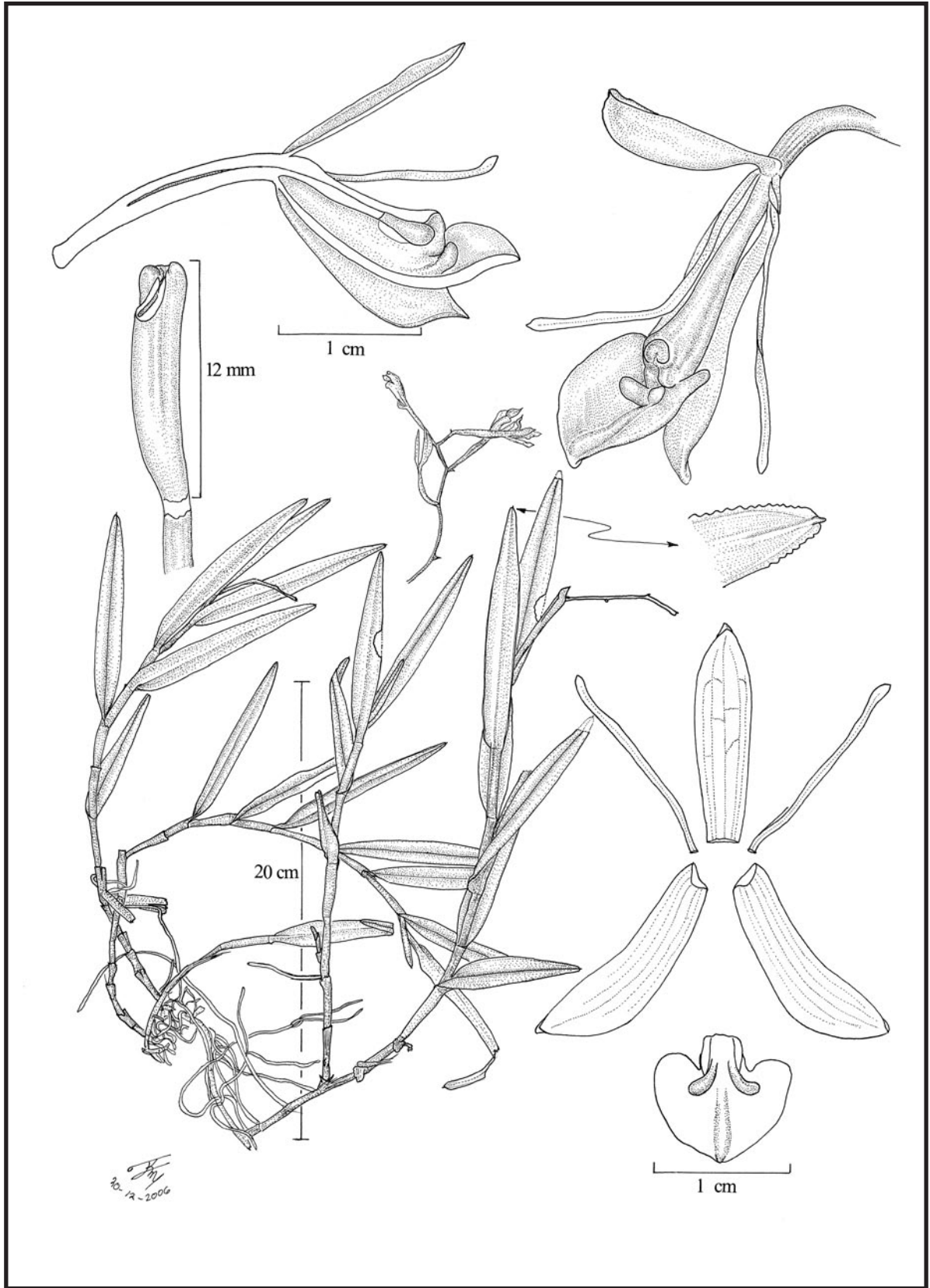


the lateral lobes sub-falcate, and the midlobe with the apical margin somewhat involute. *Epidendrum chioneoides* Carnevali & G.A.Romero has green flowers, apparently concolor, sepals and petals of similar size, and the lip clearly 3-lobed, the lateral lobes dolabriform.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: from the Latin, *decurvatus* bent, in reference to the ovary, which was originally described as recurved.

REFERENCE: Mutis, J. C. 1985. **Flora de la Real Expedición Botánica del Nuevo Reino de Granada (1783-1816)**, 9: Microspermae: Orchidaceae III, Madrid.



EPIDENDRUM DIOMMUM Hágsater & Chocce

Plate 1238

EPIDENDRUM DIOMMUM Hągsater et Chocce, *sp. nov.*

Type: PERU: Cajamarca: EL Pargo, 16 km E of Tunas Pampa, ca. 42 km E of Llama on road to Huambos, 6° 30' S 79° 03' W, 3000 m, epiphyte, flowers wine-colored, **Al Gentry, C. Díaz & R. Ortíz 74898**. Holotype: USM! Isotype: MO 04887701! (Illustration voucher).

Epidendro leimebambensis Hągsater simile sed floribus leviter minoribus vinosis ad magenteis, callis albis majoribus arcuatis et divergentibus, columna longiore, nectario proportione longiore et angusto, discrepans.

Hierba epífita, simpodial, subcaespitosa, de 20-30 cm de alto. **Raíces** basales, delgadas, carnosas, blancas, 0.6 mm de grosor. **Tallos** delgados, tipo caña, suberectos, sencillos, teretes, 6-24 cm de largo; se producen del cuarto basal del tallo anterior, donde está cubierto por vainas no foliosas. **Hojas** 6, distribuidas a lo largo de los dos tercios apicales del tallo, dísticas, articuladas; vaina tubular, lisa, estriada cuando seca, de 1.5-2.7 x 0.2-0.5 cm; lámina angostamente elíptica a lanceolada, ápice obtuso, aplanada, aristada, con el margen apical crenulado, quilla dorsal apical baja, desiguales en tamaño, la inferior más pequeña, subcoriacea, 3-10.5 x 0.7-1.3 cm. **Bráctea espatácea** tubular, lateralmente comprimida, linear oblonga, ápice obtuso, cubriendo totalmente el pedúnculo, 3.4-4.7 x 2-6 mm. **Inflorescencia** apical, del crecimiento maduro, florece una sola vez, racemosa, arqueada, de 5-9 cm de largo; pedúnculo de 2.8-4.5 cm de largo, terete, delgado. **Bráctea floral** triangulares, mucho más cortas que el ovario, de 1-2 x 1-2 mm. **Ovario** delgado, no inflado, de sección circular, no ornamentado, de 9 x 1.5 mm. **Flores** 2-4, simultaneas, resupinadas, "color vino" a magenta, los callos blancos, contrastantes; fragancia no registrada. **Sépalos** entreabiertos, libres, angostamente oblongos, obtusos, cortamente apiculados, 5-nervados, con una quilla prominente en el dorso cerca del ápice, margen entero, extendido; 15.5-19 x 4-6 mm. **Pétalos** entreabiertos, libres, lineares, obtusos, uninervados, margen entero, extendido; 15.5-19 x 0.5-1 mm. **Labelo** unido a la columna, entero, cordiforme, ápice obtuso, 8 x 10 mm; bicalloso, los callos grandes, divergentes, arqueados hacia afuera, de alrededor de 1 mm de grosor; disco con una quilla delgada, intercallosa, alargada a todo lo largo de la lámina. **Columna** arqueada hacia arriba, formando una vesícula con la base del labelo hasta la inserción del perianto; 12-13 mm de largo. **Clinandrio** reducido, margen entero. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** pequeños, de 1/2 del largo de la cavidad estigmática. **Antera** reniforme, 4 locular. **Polinios** no vistos. **Nectario** prominente, formado entre la columna y la uña del labelo, ancho, glabro, poco profundo, sin traspasar el perianto, liso. **Cápsula** no vista.

Epiphytic, sympodial, sub-caespitose **herb.** **Roots** basal, thin, fleshy. **Stems** thin, cane-like, sub-erect, simple, terete, produced from the basal 1/4 of the previous stem, where the stem is covered by non foliar sheaths. **Leaves** 6, distributed along the apical 2/3 of the stem, articulate; sheath tubular, smooth, striated when dry; blade narrowly elliptic to lanceolate, apex obtuse, aristate, with the apical margin crenulate, dorsal keel low, the leaves unequal in size, the lowermost smaller, sub-coriaceous, flat. **Spathaceous bract** tubular, laterally compressed, linear-oblong, apex obtuse, covering the whole of the peduncle. **Inflorescence** apical, from the mature growth, flowering only once, racemose, arching, peduncle terete. **Floral bracts** triangular, much shorter than the ovary, obsolete. **Ovary** pedicellate, thin, not inflated, circular in section, unornamented. **Flowers** 2-4, simultaneous, resupinate "wine-colored" to magenta, the calli bright white. **Sepals** partly spreading, narrowly oblong, obtuse, short-apiculate, 5-veined, with a prominent dorsal keel near the apex, margin entire, spreading. **Petals** partly spreading, linear, obtuse, 1-veined, margin entire, spreading. **Lip** united to the column, entire, cordiform, apex obtuse; bicallose, the calli large, divergent, arching outwards, disc with a narrow keel running the whole length. **Column** arching upwards, forming a vesicle with the base of the lip as far as the insertion of the perianth. **Clinandrium-hood** reduced, margin entire. **Rostellum** apical, slit. **Anther** reniform, 4-celled. **Nectary** prominent, formed by the union of the column and the claw of the lip, wide, glabrous, shallow, without penetrating the ovary.

OTHER SPECIMENS: PERU: **Lambayeque:** Ferreñafe, 3256 m, 22 VIII 2008, Chocce 4446, USM! Ibid. 3427 m, 27 VIII 2008, Chocce 4589, USM!

DISTRIBUTION AND ECOLOGY: Known only from north-western Peru, on the Cordillera Occidental, in the departments of Lambayeque and Cajamarca over 3200 m altitude. Flowering in August and September.

RECOGNITION: *Epidendrum diommum* belongs to the *Ventricosum* group, characterized by the sympodial habit, few, narrow leaves, racemose inflorescence subtended by 1-2 narrow, spathaceous bracts, and the delicate, purple flowers with an inflated nectary on the underside of the column, the lip laminar and more or less cordate. The species is recognized by the sub-caespitose habit, medium sized plants with terete stems, and magenta to wine-colored, non-translucent flowers with the calli bright white, the sepals 15.5-19 mm long, the lip 8 x 10 mm, leaves 3-10.5 x 0.7-1.3 cm. It is close to *Epidendrum leimebambensis* Hągsater, which grows south of Chachapoyas to southern Ecuador is similar, but the leaves are still wider, up to 1.7 cm wide, flowers smaller, sepals 14-16 mm long, pale green marked with purple, the lip cordiform, 8 x 11 mm, and the calli are smaller and shorter.

Epidendrum pachygastrum Kraenzl. has ancipitose stems, narrow spathaceous bract and racemose inflorescence with bright magenta colored, translucent flowers; the leaves are lanceolate, 3-8 x 0.6-1.0 cm, and the lip is triangular, slightly wider than long and with two large, subglobose calli nearly half as long as the lip. *Epidendrum ventricosum* Lindl. is closely related and very similar, but has longer, narrower leaves (4-12 x 0.3-0.8 cm), the lip is as wide as it is long, the calli are smaller, about 1/4 the length of the lip; it is also found north of Chachapoyas, in the hills NW of lake Pomacocha.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek δυο, two, and ομμα, eye, in reference to the white calli of the lip with stand out against the magenta color of the flower.



Authors: E. Hągsater & M. Chocce

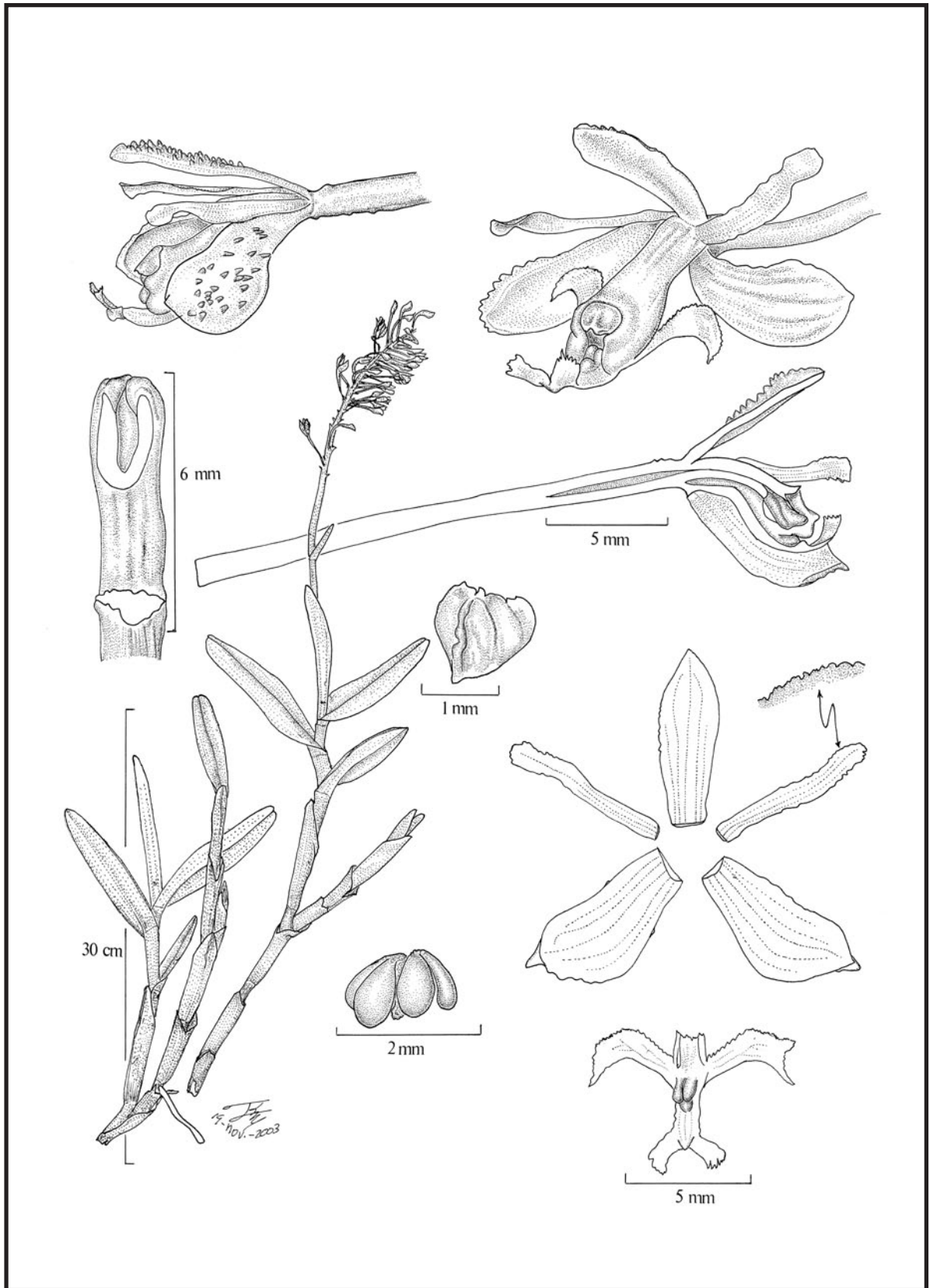
Illustrator: R. Jiménez M.

Editors: E. Hągsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009. Plate 1238



EPIDENDRUM DIPHYLLUM Schltr.

EPIDENDRUM DIPHYLLUM Schltr., Repert. Spec. Nov. Regni Veg. 7: 130-131. 1920.

Type: COLOMBIA: Cauca, c. 3000 m, **M. Madero s.n.** Holotype: B (destroyed). Neotype (here designated): COLOMBIA: Valle del Cauca: Cordillera Occidental, Los Farallones, Quebrada de Las Nieves, lomas parameras sobre la mina El Diamante, 3000-3120 m, 31 July 1946, **José Cuatrecasas 21819**. AMES 69750! Isoneotype: US 2819118! (Illustration voucher).

Hierba epífita, simpodial, subcespitosa, 35-56 cm de alto. **Raíces** basales, carnosas, gruesas, 2-3 mm de grosor. **Tallos** sencillos, tipo caña, lateralmente comprimidos, 9.0-27 x 0.7-0.8 cm cubiertos casi en su totalidad por 2 o 3 vainas, parcialmente imbricadas, lateralmente comprimidas, ovadas, agudas, papiráceas. **Hojas** 2 a 3, agregadas hacia el ápice del tallo; vaina lateralmente comprimida, lámina articulada, elíptica, coriácea, ápice desigualmente bilobado, 7-12 x 2.3-2.8 cm. **Bráctea espátácea** 1, persistente, de lados casi paralelos, aguda, 6-7 cm de largo. **Inflorescencia** apical, racemosa, arqueada, 26-30 cm de largo. **Brácteas florales** mucho más cortas que el ovario, triangulares, agudas, 2-4 mm de largo. **Ovario** no inflado, terete, ligeramente papiloso en el ápice, 23-27 mm de largo. **Flores** más de 20, simultáneas, resupinadas, distribuidas en la mitad apical de la inflorescencia; sépalos y pétalos de color amarillo oliváceo, labelo blanco con puntos violáceos, sin datos de fragancia. **Sépalos** extendidos, libres, elípticos, obtusos, dorsalmente espiculados, 5-nervados, margen entero a ligeramente dentado, 7.5-11 mm de largo; el **dorsal** 2.3-2.5 mm de ancho; los **laterales** oblicuos, 3.2-3.6 mm de ancho. **Pétalos** extendidos, oblongo-oblancoceolados, obtusos, 1-3 nervados, margen diminuta e irregularmente crenulado hacia la mitad apical, 7-11 x 1.0-1.3 mm. **Labelo** unido a la columna, base cordada, profundamente trilobado, 5 x 5 mm; bicalloso, los callos laminares, extendiéndose hasta la mitad del disco, con una quilla muy corta, a la mitad del lóbulo medio, engrosada; lóbulos laterales falcados, ligulados, oblicuamente truncados, agudos, margen posterior crenulado; lóbulo medio con el istmo linear oblongo, el ápice bifido, formando dos lóbulos angostos, oblongos, truncados, el margen apical crenulado dentado. **Columna** arqueada, gruesa hacia el ápice, 5-7 mm de largo. **Clinandrio** corto, entero. **Antera** 4-locular, reniforme. **Polinios** 4, obovoides, caudículas granuladas, más cortas que los polinios. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** de 1/2 de largo de la cavidad estigmática. **Nectario** sin traspasar el perianto, no ornamentado. **Cápsula** no vista.

Epiphytic, sympodial, sub-caespitose **herb.** **Roots** basal, fleshy, thick. **Stems** simple, cane-like, laterally compressed, nearly totally covered by 2-3 partly imbricating, laterally compressed, acute, papery sheaths. **Leaves** 2-3, aggregate towards the apex of the stem; sheath laterally compressed, blade elliptic, coriaceous, apex unequally bilobed. **Spathaceous bract** single, persistent, sides nearly parallel, acute, long. **Inflorescence** apical, racemose, arching. **Floral bracts** much shorter than the ovary, triangular, acute. **Ovary** long, not inflated, terete, somewhat papillose. **Flowers** more than 20, simultaneous, resupinate, distributed along the apical half of the inflorescence; sepals and petals olive-yellow, lip white with violet dots. **Sepals** spreading, free, elliptic, obtuse, dorsally speculate, 5-veined, margin entire to slightly dentate; lateral sepals oblique. **Petals** spreading, oblong-oblancoceolate, obtuse, 1-3-veined, margin minutely and irregularly crenulate towards the apical half. **Lip** united to the column, base cordate, deeply 3-lobed; bicallose, the calli laminar, extending to the middle of the disc, with a very short, thickened keel in front, at the middle of the midlobe; lateral lobes falcate, ligulate, apically obliquely truncate, acute, posterior margin crenulate; isthmus of the midlobe linear-oblong, the apex bifid, apical lobes narrow and oblong, truncate, apical margin crenulate-dentate. **Column** arched, thickened towards the apex. **Clinandrium-hood** short, entire. **Anther** 4-celled, reniform. **Pollinia** 4, obovoid, caudicles granulate, shorter than the pollinia. **Rostellum** apical, slit. **Nectary** without penetrating the ovary, smooth.

OTHER SPECIMENS: COLOMBIA: [Nariño:] Pasto, IX 1880, *Rimann s.n.*, W-R!

DISTRIBUTION AND ECOLOGY: Known only from southern Colombia, on the upper eastern slopes of the Cordillera Occidental; epiphytic at 3000-3120 m altitude. Flowering from July to September.

RECOGNITION: *Epidendrum diphyllum* Schltr belongs to the Mancum group which is characterized by the sympodial habit, few-leaved stems, racemose inflorescence with 1-2 ancipitose, long, spathaceous bracts with parallel sides and *Cylindraceum* sub-group which has resupinate, a generally non-reduced lip, and membranaceous flowers. The species can be recognized by the large, wide leaves, 7-12 x 2.3-3.7 cm, 7.5-11 mm long, dorsally speculate sepals, margin of the petals minutely and irregularly crenulate, smooth, 23-28 mm long ovary, lateral lobes of the lip falcate, ligulate, apically obliquely truncate, acute, posterior margin crenulate, isthmus of the midlobe linear-oblong, the apex bifid, apical lobes narrow and oblong, apical margin crenulate-dentate. It is very similar to *Epidendrum cylindraceum* Lindl. but that species

has wider leaves, 2.5-3.5 cm, sepals dorsally smooth to rarely verrucose towards the apex, margin of the petals entire to lightly serrulate, ovary slightly verrucose, 12-22 mm long; lateral lobes of the lip falcate, the isthmus of the midlobe oblong, wider, and the apical lobes falcate. *Epidendrum løjtnantii* Hágsater & Dodson has narrower leaves 1.8-2.0 cm wide, sepals dorsally verrucose, the lateral lobes of the lip have the margin crenulate, and the isthmus of the midlobe cuneate with the apex 3-lobed.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek *δίο*, two, and *φύλλον*, leaf, in reference to the two leaves per stem.



Authors: L. Sánchez S. & E. Hágsater

Illustrator: R. Jiménez M.

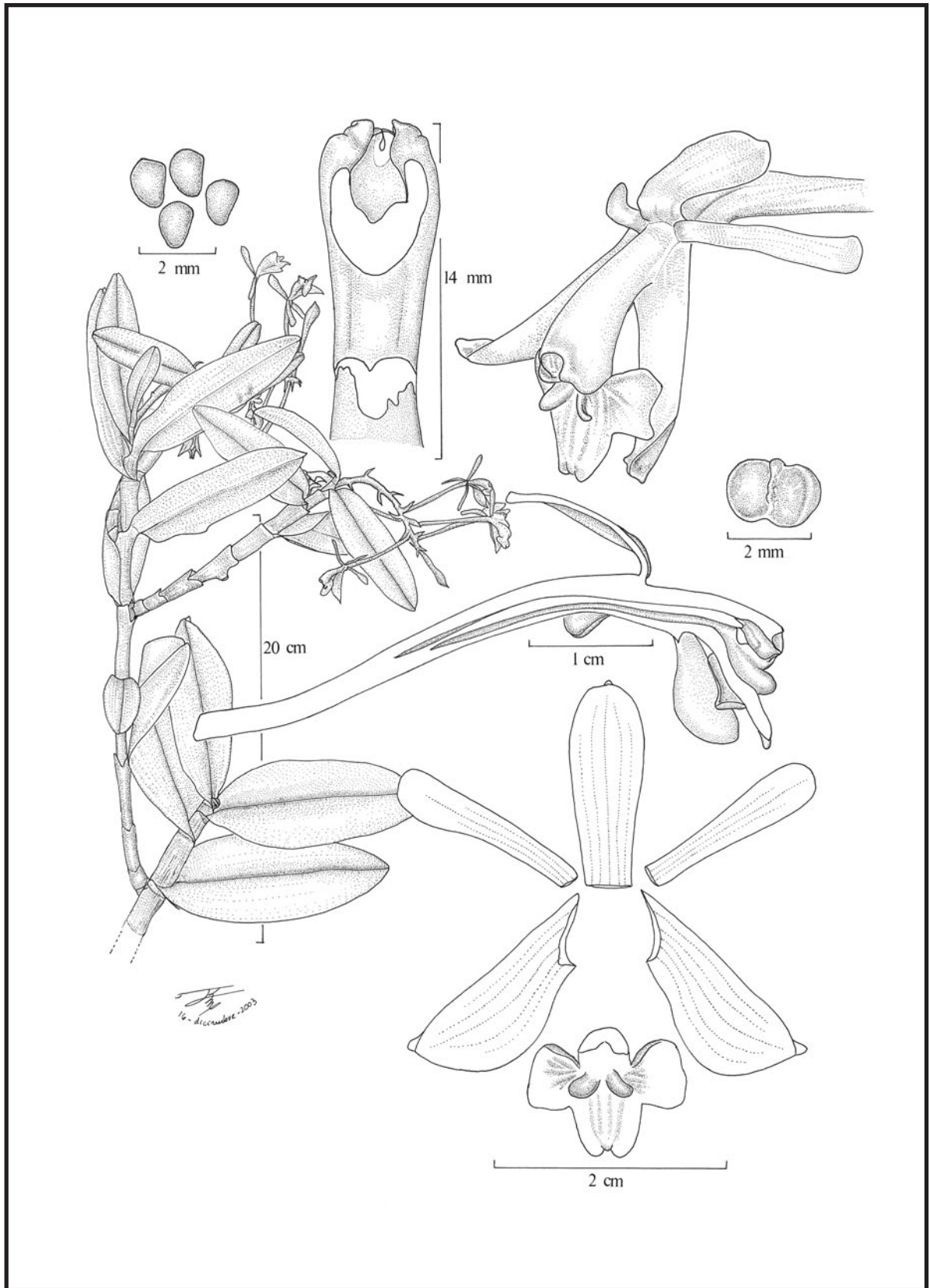
Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009.

Plate 1239



EPIDENDRUM ELATUM C.Schweinf.

Plate 1240

EPIDENDRUM ELATUM C.Schweinf., Bot. Mus. Leafl. 11(4): 89. 1943.

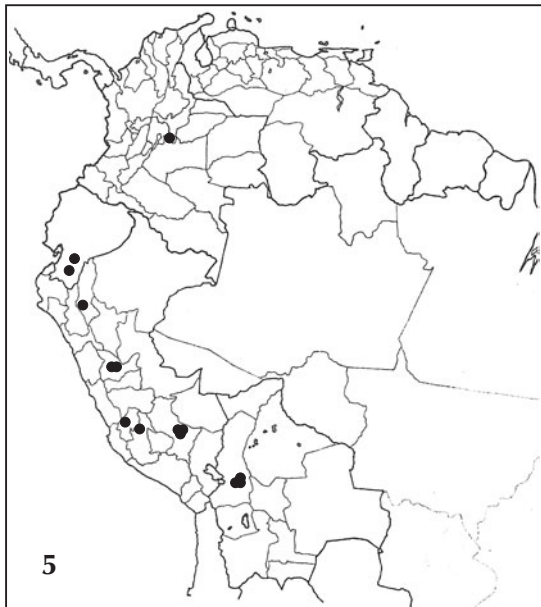
Type: PERU: Ayacucho: Prov. Huanta, Choimacota Valley, 3000 m, in evergreen mountain forest, 28 February-10 March 1926, **A. Weberbauer 7536**. Holotype: F 562446! Isotypes: AMES! F!

Hierba terrestre, erecta, monopodial, ramificada arriba en plantas maduras, hasta 3 m de alto. **Raíces** no vistas. **Tallos** tipo caña, ramificados subapicalmente, teretes, erectos, rectos; las ramas de ca. 17 x 0.6-1 cm. **Hojas** numerosas, distribuidas a lo largo de los tallos, alternas, articuladas; las hojas del tallo principal mucho más grandes que las de las ramificaciones; vaina tubular, estriada, rugosa, 1-3 x 0.6-1 cm; lámina oblongo elíptica a elíptico lanceolada, ápice obtuso a redondeado, subcoriácea, margen entero; las del tallo principal 14-16 x 3.6-4 cm; las de las ramificaciones 3-9 x 1.8-2.6 cm. **Inflorescencia** apical, racemosa, arqueada a suberecta, pluriflora, florece una sola vez, 5-14 cm de largo; pedúnculo corto, terete, delgado, 10 mm de largo. **Bráctea espátea** ausente. **Brácteas florales** mucho más cortas que el ovario, linear lanceoladas, acuminadas, abrazadoras, 3-7 mm de largo. **Flores** 20-35, simultáneas, no resupinadas, carnosas, de color verde a amarillo verdoso, en ocasiones difuminado de violáceo, fragancia a jazmín. **Ovario** terete, grueso, algo dilatado justo detrás del perianto, no ornamentado, el ápice ligeramente arqueado, 25-50 mm de largo. **Sépalos** entreabiertos, oblanceolado oblongos, obtusos, diminutamente apiculados, 5-nervados, margen entero, extendido, 15-21 x 4.6-6.5 mm; el **dorsal** libre; los **laterales** fusionados de manera oblicua a la parte basal de la columna, algo oblicuos. **Pétalos** libres, entreabiertos, angostamente oblanceolados, ápice redondeado, 3-nervados, margen apical eroso, algo revuelto, 17-19 x 3-4 mm. **Labelo** unido a la columna, trilobado, base cordada, margen entero, 7-10 x 10-11 mm; bicalloso, los callos pequeños, subglobosos; disco provisto de 3 quillas, intercallosas, alargadas cerca del ápice del labelo; lóbulos laterales dolabriformes, 5 x 3 mm; lóbulo medio más grande, subrectangular (generalmente más ancho en la base que en el ápice), el ápice truncado, diminutamente apiculado, 5 x 5-7 mm. **Columna** recta, delgada, obcónica, 12-15 mm de largo. **Clinandrio** reducido, margen entero. **Antera** reniforme, 4-locular. **Polinios** 4, obovoides, lateralmente comprimidos. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** prominentes, de 1/3 del largo de la cavidad. **Nectario** penetrando 1/2 del ovario, liso. **Cápsula** no vista.

Terrestrial, erect, monopodial, tall **herb**, branching above in mature plants. **Stem** cane-like, terete, erect, straight, branching sub-apically. **Leaves** numerous, distributed throughout the stems, alternate, articulate, the leaves of the main stem much larger than those of the branches; sheath tubular striated, rugose; blade oblong-elliptic to elliptic-lanceolate, apex obtuse to rounded, sub-coriaceous, margin entire. **Inflorescence** apical, racemose, arching to sub-erect, many-flowered, flowering only once; peduncle short, terete, thin. **Floral bracts** much shorter than the ovary, linear-lanceolate, acuminate, amplexicaul. **Flowers** 20-35, simultaneous, non-resupinate, fleshy, green to greenish yellow, occasionally tinged purple; fragrance of jasmine. **Ovary** terete, thick, somewhat dilated behind the perianth, smooth, the apex slightly arched. **Sepals** partly spreading, oblanceolate-oblong, obtuse, minutely apiculate, 5-veined, margin entire, spreading; dorsal sepals free, the lateral sepals obliquely fused to the base of the column, somewhat oblique. **Petals** free, partly spreading, narrowly oblanceolate, apex rounded, 3-veined, apical margin erose, somewhat revolute. **Lip** united to the column, 3-lobed, base cordate, margin entire; bicallose, the calli small, sub-globose; disc provided with 3 parallel keels, nearly reaching the apex of the lip; lateral lobes dolabriform, midlobe slightly larger, sub-rectangular (generally wider at the base), apex truncate, minutely apiculate. **Column** straight, thin, obconical, long. **Clinandrium-hood** reduced, margin entire. **Anther** reniform, 4-celled. **Pollinia** 4, obovoid, laterally compressed. **Rostellum** apical, slit. **Nectary** penetrating 1/2 the ovary, smooth.

OTHER SPECIMENS: BOLIVIA: La Paz: Nor Yungas: entre Zongo y Cahua, I 1980, [Luer,] *Vásquez 264*, SEL 47134! SEL 47138! Sud Yungas: Unduavi to Chulumani, 8400 ft, 24 II 1975, *Plowman 5187*, AMES! U! Unduavi to Yolosa Junction (Coroico), 3100 m, 29 II 1980, *Solomon 5164*, MO! **COLOMBIA:** Los Farallones, vertiente oriental, Almorzadero, 2950 m, 25 VII 1946, *Cuatrecasas 21712*, AMES! F! U! US! **ECUADOR: Loja:** Loja to Zamora, km 17.7, después del puerto, 8040 ft, 11 IX 1999, *Hágsater 12342*, AMO! (Illustration voucher) QCA! **Morona-Santiago:** road Limón (General Plaza)-Gualaceo, km 20-30 from Limón, 2000-2300 m, 25 III 1974, *Harling 12839*, AMES! GB! **PERU: Amazonas:** Bagua, Cordillera Colón SE of La Peca, 7750-8075 ft, 16 X 1978, *Barbour 4099*, MO! SEL! **Cuzco:** Paucartambo: Pillahuata, 3200 m, 12 XII 1942, *Vargas 3039*, AMES! **Huánuco:** Abajo de Carpish, 11 IX 1960, *Acleto 128*, USM! Ibid. *Acleto 129*, UC! USM! Carpish, first summit above Acomayo, 2450 m, 16 VII 1964, *Hutchison 5970*, AMES! K-L! MO! NY! UC! US! USM!

OTHER RECORDS: ECUADOR: Loja: bajando del puerto a Loja, ca. 3000 m, 28 I 2004, *Hágsater 14068*, spirit and digital photo, AMO! **PERU: Cuzco:** Quillabamba, *Hunt s.n.*, digital photo, AMO! **Huancavelica:** Huachocolpa, *Collantes s.n.*, digital photo, AMO! **BOLIVIA:** Without locality data, *Vásquez 737*, xerox of illustration, AMO!



DISTRIBUTION AND ECOLOGY: Apparently scarce from southern Colombia, on the eastern slope of the Western Cordillera of the Andes, south to central Bolivia on the eastern side of the Andes, in wet forests or growing on embankments at 2000-3200 m altitude. Flowering throughout the year.

CONSERVATION STATUS: DD. Data deficient.

RECOGNITION: *Epidendrum elatum* belongs to the Andean Group, Vernixium Subgroup which is characterized by the monopodial, sub-apical branching habit, erect inflorescences, lax, non-resupinate flowers, and the lip 3-lobed. The species is recognized by the robust, 3 m tall plants with oblong-elliptic to elliptic-lanceolate leaves to 4 cm wide; flowers green to greenish-yellow, the ovary elongate, 25-50 mm long, sepals 15-21 mm long, the petals narrowly oblanceolate with the apex rounded; lip 3-lobed, the lateral lobes dolabriform, midlobe somewhat wider towards the base than the apex. *Epidendrum adamsii* Hágsater & Dodson has shorter plants, to 70 cm tall, sepals 15 mm long, the ovaries shorter, 20-32 mm long. *Epidendrum pozoi* Hágsater & Dodson, from southern Ecuador has linear-elliptic leaves to 1.2 cm wide, and a straight ovary 32-62 mm long.

ETYMOLOGY: From the Latin *elatus*, tall. It is said of plants that are taller than their parts would have led one to expect. In reference to the height of the plant as described by its collectors.

Authors: E. Santiago & E. Hágsater

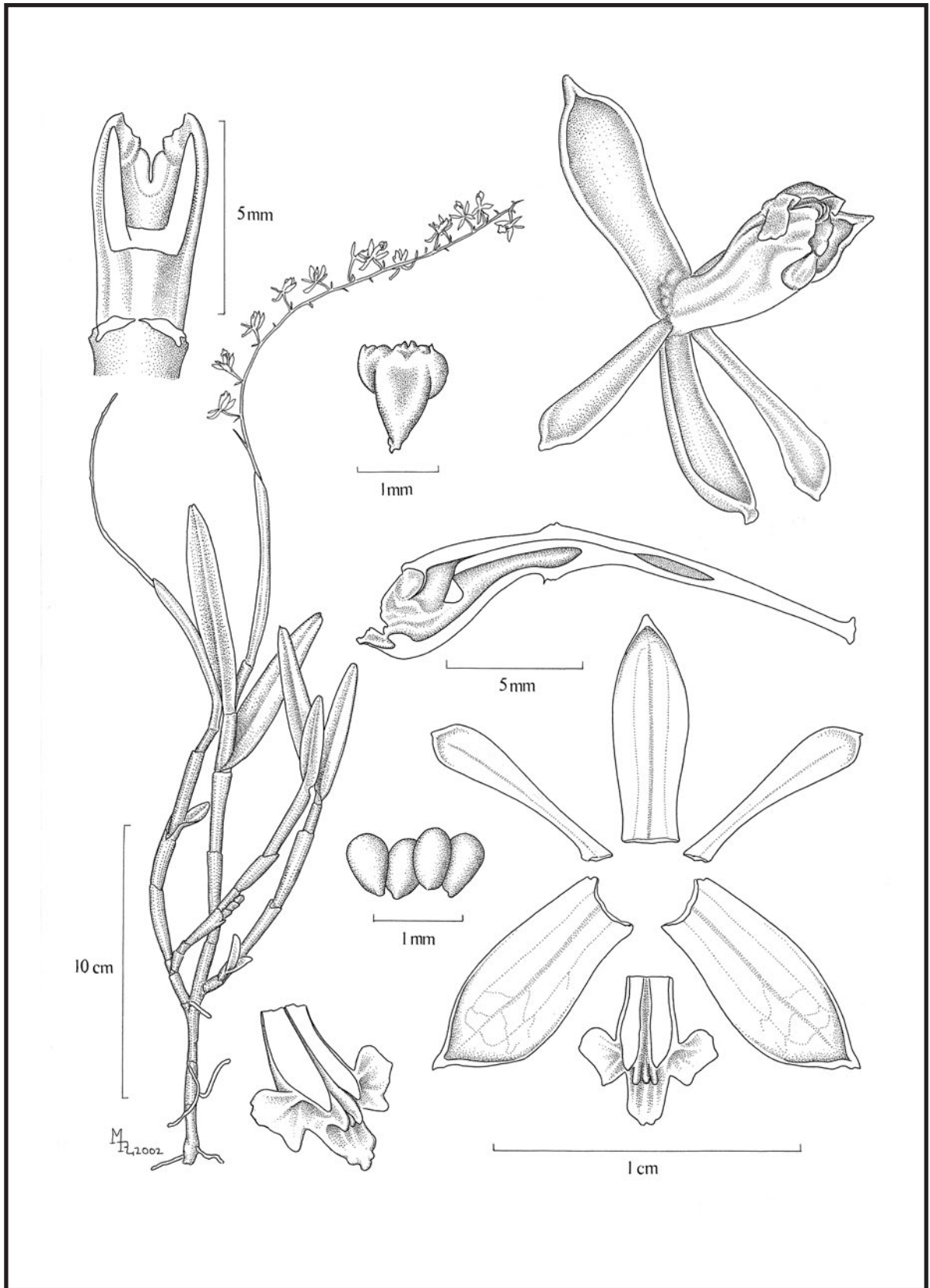
Illustrator: R. Jiménez M.

Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009. Plate 1240



EPIDENDRUM ELEPHANTOTIS Hágsater & L.Sánchez

Plate 1241

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

Type: COLOMBIA: On the W slopes of the Andes of Popayan, 2300-2700 m. Blooms in June. **F. C. Lehmann 8607.**
Holotype: AMES 22602! (Illustration voucher). Isotypes: AMES 74064! K-L! NY!

Epidendro sarcodes Lindl. simile sed inflorescentia longiore, floribus minoribus, labelli lobulis lateralibus oblique dolabriformibus, ad basem rotundatis, apice angulum rectum facienti, lobulo medio subquadrato, apice breviter emarginato duos lobulos minutos rotundatos formanti, recedit.

Hierba epífita, simpodial, cespitosa, 17-40 cm de alto. **Raíces** basales, carnosas, 1.0-1.5 mm de grosor. **Tallos** sencillos, tipo caña, lateralmente comprimidos en los dos tercios apicales, 8.5-14 cm de largo, con 1-2 vainas, parcialmente imbricadas, tubulares, conduplicadas, papiráceas, 2.5-4 cm de largo. **Hojas** 2-3, distribuidas en el tercio apical del tallo; vaina lateralmente aplanada, estriada en seco; lámina elíptico ovada, coriácea, ápice desigualmente bilobado, mucronado, margen entero, 3.5-8.5 x 0.7-1.5 cm. **Bráctea espatácea** 1, de lados casi paralelos, aguda, 3.5-7.5 x 0.8-1.2 cm. **Inflorescencia** apical, racemosa, 8.5-25 cm de largo; pedúnculo lateralmente aplanado, 4.5-11 cm de largo; raquis algo lateralmente comprimido, no ornamentado, racimo cilíndrico, laxo, alargado. **Brácteas florales** mucho más cortas que el ovario, más pequeñas hacia el ápice, triangulares, acuminadas, agudas, 1-5 mm de largo. **Ovario** terete, liso, 7.5-12 mm de largo. **Flores** 13-27, simultáneas, no resupinadas, distribuidas en las 2/3 partes de la inflorescencia, color y fragancia no registrados. **Sépalos** extendidos, libres, agudos, 3-nervados, margen entero, extendido, 6.5-6.8 x 1.7-2.4 mm; el **dorsal** cuneado ligulado; los **laterales** elípticos, cortamente aristados. **Pétalos** extendidos, oblanceolado espatulados, obtusos, 1-nervados, margen entero, extendido, 6.3-6.5 x 0.6-0.7 mm. **Labelo** unido a la columna, base cordada, trilobado, margen entero, extendido, 2.8-3 x 2.9-3 mm; bicalloso, los callos mas grandes que la quilla central corta, carnosos; lóbulos laterales dolabriformes, oblicuos, la base redondeada, el ápice formando un ángulo recto; lóbulo medio subcuadrado, ápice cortamente emarginado formando dos diminutos lóbulos redondeados, enteros. **Columna** recta, corta, 5.0-5.5 mm de largo. **Clinandrio** reducido, margen entero. **Antera** 4-locular, obovoidea con una prominencia triangular al frente, apiculada. **Polinios** 4, obovoideos, lateralmente comprimidos. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** ocupando 2/3 partes del largo de la cavidad estigmática. **Nectario** corto, penetrando el ovario ligeramente, algo inflado, no ornamentado. **Cápsula** no vista.

Epiphytic, sympodial, caespitose **herb.** **Roots** basal, fleshy, thin. **Stems** simple, cane-like, the apical 2/3 laterally compressed, the base enveloped in 1-2 partially imbricating, tubular, conduplicate, papery sheaths. **Leaves** 2-3, distributed along the apical 1/3 of the stem, sheaths laterally compressed, striated when dry, blade coriaceous, ovate-elliptic, apex unequally bilobed, mucronate, margin entire, spreading. **Spathaceous-bract** 1, the sides nearly parallel, long and narrow, acute. **Inflorescence** apical, racemose; peduncle laterally compressed; rachis somewhat laterally compressed, smooth, raceme cylindrical, lax-flowered, elongate. **Floral bracts** much shorter than the ovary, the apical ones much shorter, triangular, acuminate, acute. **Ovary** terete, smooth. **Flowers** 13-27, simultaneous, non-resupinate, distributed along the apical 2/3 of the inflorescence. **Sepals** spreading, free, acute, 3-veined, margin entire, spreading; the dorsal sepal cuneate-ligulate, the lateral sepals elliptic, short aristate. **Petals** spreading, oblanceolate-spatulate, obtuse, 1-veined, margin entire, spreading. **Lip** united to the column, base cordate, 3-lobed, margin entire, spreading; bicallose, fleshy, the calli larger than the short central keel; lateral lobes of the lip dolabriform, oblique, the base rounded the apex acute; midlobe sub-quadrato, apex short emarginate, forming two, minute, rounded, entire lobes. **Column** straight, short. **Clinandrium-hood** reduced, margin entire. **Anther** 4-celled, obovoid, with a triangular, apical lobe in front, apiculate. **Pollinia** 4, obovoid, laterally compressed. **Rostellum** sub-apical, slit. **Nectary** short, shortly penetrating the ovary, somewhat widened, smooth.

OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: The species is known only from southern Colombia, at 2300-2700 m altitude. Flowering in June.

RECOGNITION: *Epidendrum elephantotis* belongs to the Mancum group which is characterized by the sympodial habit, few-leaved stems, racemose inflorescence with 1-2 ancipitose, long, spathaceous bracts with parallel sides and the Mancum sub-group has non-resupinate flowers, generally reduced and fleshy lip. The species can be recognized by its 2-3-leaved stems, 1-veined petals, 3-lobed, bicallose lip, the calli larger than the short central keel, and the lateral lobes of the lip dolabriform, oblique, the base rounded the apex acute; midlobe sub-quadrato, apex short emarginate. It is very similar to *Epidendrum sarcodes*, also from Colombia, but that species has 4-6-leaved stems, large flowers, sepals 7-9 mm long, 3-veined petals, the lateral lobes of the lip small, semi-circular, entire, the midlobe sub-rectangular, the triangular apex somewhat conduplicate in natural position. *Epidendrum sarcoglottis* Schltr. from Colombia and Ecuador, has larger leaves 5-13 x 1.3-2.2 cm, an entire, triangular, claw-shaped lip, with a single prominent callus forming a wide, fleshy cushion. *Epidendrum violetense* Hágsater & Dodson known from Loja, Ecuador, has wider leaves, 1.3-1.6 cm wide, a reduced, entire lip, with two very prominent calli, occupying 2/3 of the lip, with a short keel in the middle, thus appearing as a thick, 3-lobed structure.

CONSERVATION STATUS: DD: Data deficient.

ETYMOLOGY: From the Greek ελεφας, elephant and αυτιον, ear, elephant-ears, in reference to the shape of the lateral lobes of the lip.

REFERENCES: Hágsater, E., & C.H. Dodson. 2001. *Epidendrum violetense* Hágsater & Dodson, in Hágsater, E., & L. Sánchez S. **Icon. Orchid. (México)** 4: pl. 498. Sánchez S., L. & E. Hágsater. 2006. *Epidendrum sarcodes* Lindl. in Hágsater, E., & L. Sánchez S. **Icon. Orchid. (México)** 8: pl. 885.



Authors: E. Hágsater & L. Sánchez S.

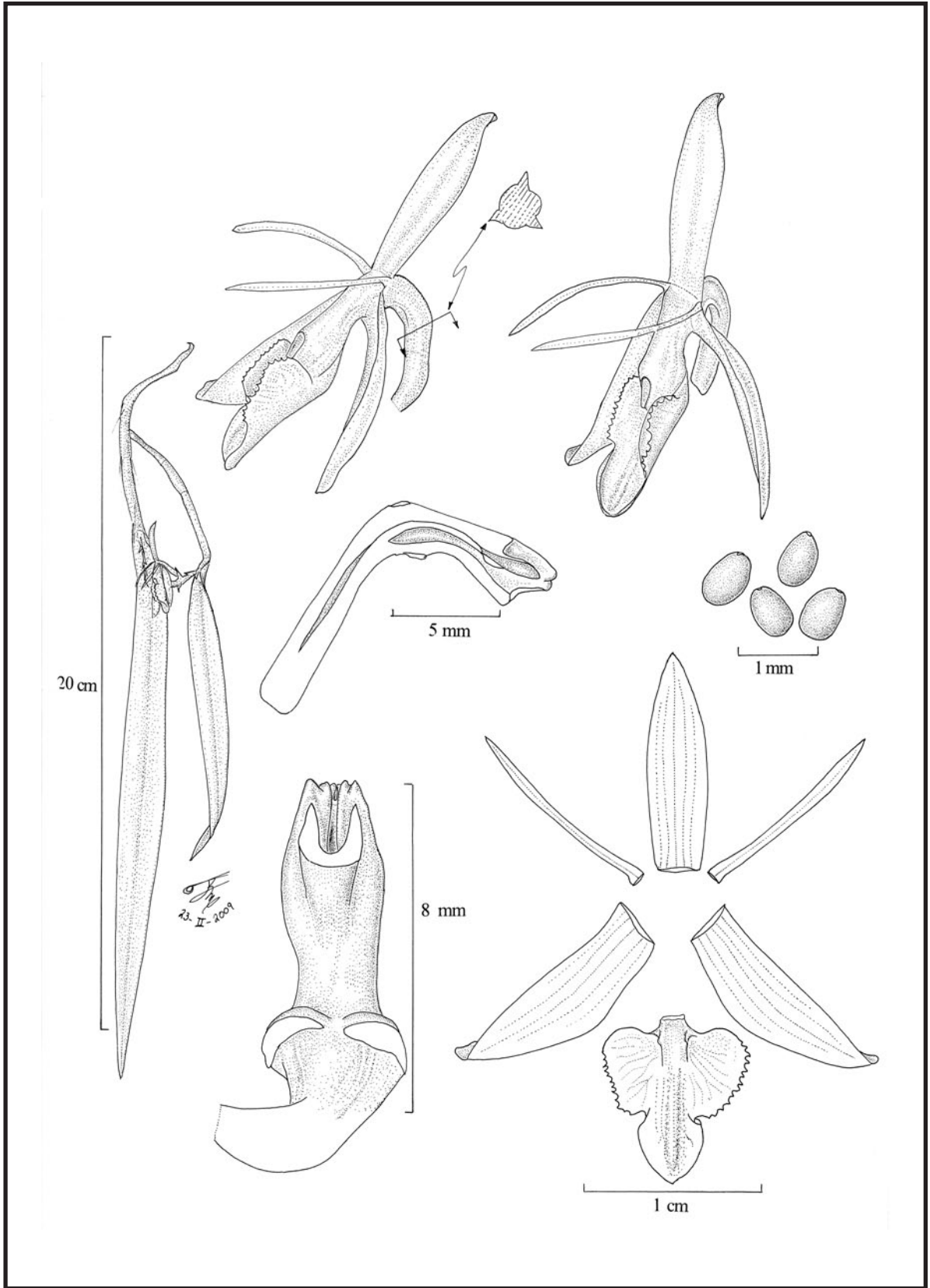
Illustrator: M. López R.

Editors: E. Hágsater & L. Sánchez S.

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ICONES ORCHIDACEARUM 12. 2009. Plate 1241



EPIDENDRUM FILAMENTOSUM Kraenzl.

EPIDENDRUM FILAMENTOSUM Kraenzl., Notizbl. Bot. Gart. Berlin-Dahlem 7: 444. 1920.

Type: COLOMBIA: "Santander" [Cundinamarca]: Am Salto de Tequendama, 1600 m, **Kalbreyer 974**. Holotype: B, destroyed.
Neotype (here designated): COLOMBIA: Cundinamarca: Quetame, "Monte Redondo", ca. 1250 m, March 1975, **Pedro Ortíz Valdívieso 703**. HPUJ! Illustration, HPUJ! Digital images of specimen and illustration, AMO!

Synonym: *Epidendrum rostratum* Garay & Dunsterv., Ven. Orch. Ill. 2: 142. 1961. Type: VENEZUELA: Aragua: carretera hacia Tiara, 1200 m, **C. G. K. & E. Dusterville 405**. Holotype: AMES 118677! fragment of holotype with illustration AMES 118679! Illustration, K-L! Illustration, AMES 118678!

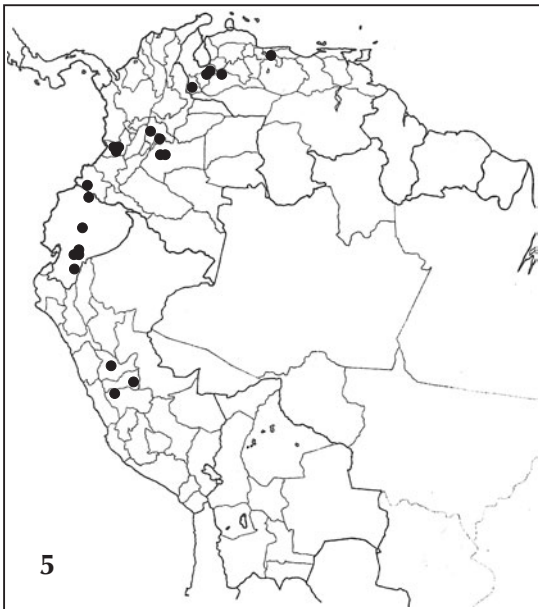
Hierba epífita, monopodial, colgante, de 20-45 cm de alto. **Raíces** de la base del tallo inicial, delgadas, carnosas, blancas, 0.5-1.5 mm de grosor. **Tallos** tipo caña, producidos de manera sucesiva a partir de los entrenudos intermedios de tallos anteriores, teretes, rectos, teñidos de pardo púrpúreo, 4-10 x 0.1-0.3 cm. **Hojas** 1, apical, hasta 3 en el tallo inicial juvenil, producidas a lo largo del tallo (aunque sólo una persistente en el ápice del tallo maduro), articuladas, verdes en la superficie dorsal y ventralmente rojo púrpúreas; vaina tubular, estriada, 1-4 x 0.1-0.3 cm; lamina succulenta coriácea, linear lanceolada, algo falcada, acuminada, margen entero, extendido, 6-19 x 0.8-1.7 cm. **Inflorescencia** apical, racemosa, corta, pauciflora, laxa, 2.5-3 cm de largo; pedúnculo subterete, 11-17 mm de largo; provisto de 2 brácteas tubulares, acuminadas, parcialmente imbricadas, 12-15 mm de largo. **Bráctea espatácea** ausente. **Flores** 3-10, sucesivas, resupinadas, carnosas, lustrosas, generalmente de color pardo cremoso a raramente verdosas, con tintes rosados principalmente en la superficie dorsal de los sépalos, la columna pardo verdosa teñida se rosado en el ápice y labelo blanco cremoso; sin datos de fragancia. **Brácteas florales** mucho más cortas que el ovario, angostamente triangulares, agudas, abrazadoras, 4-6 mm de largo. **Ovario** triquetro, delgado, no inflado, no ornamentado, 10-13 mm de largo. **Sépalos** lanceolados, agudos, con una quilla dorsal alta, de color rosado (muy evidente incluso en los botones florales), 5-nervados, margen entero, extendido, 9-15 x 3-4 mm; el **dorsal** libre, extendido; los **laterales** entreabiertos, unidos de manera oblicua a la base de la columna, ligeramente oblicuos, apiculados. **Pétalos** entreabiertos, libres, filiformes, obtusos, 1-nervados, margen entero, extendido, 8-13 x 0.5-0.9 mm. **Labelo** unido a la columna, cortamente unguiculado en la base, incipientemente a profundamente trilobado (raramente entero, el tipo), base subcordada, margen dentado en la mitad basal y entero en la mitad apical, [5]8-11 x 6-9 mm; bicalloso, los callos laminares, cortos; disco con una quilla ancha, carnosa, alargada hasta cerca del ápice de la lámina; lóbulos laterales hemielípticos, 3.5 x 5 mm; lóbulo medio subovado-rectangular, el ápice obtuso, diminutamente apiculado, 5 x 4 mm. **Columna** recta, delgada, 6-8 mm de largo; el ápice con un par de cuernos prominentes. **Clinandrio** reducido, margen entero. **Antera** angostamente ovoide, con el ápice agudo y cortamente bifido, 2 veces más largo que la cavidad que alberga a los polinios y sobrepasando el ápice de la columna, 4-locular. **Polinios** 4, obovoides; caudículas suaves y granuladas, algo más largas que los polinios. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** de la mitad del largo de la cavidad estigmática. **Nectario** poco profundo, sin penetrar el ovario, no inflado, no ornamentado. **Cápsula** no vista.

Epiphytic, monopodial, pendent **herb. Roots** only from the base of the initial stem, thin, fleshy, white. **Stems** cane-like, produced in succession from the intermediate internodes of the previous stem, terete, straight, tinged purple-brown. **Leaves** 1, apical, up to 3 on the juvenile initial stem, distributed throughout the stem (only the apical one persistent), articulate, dorsal surface green, ventrally purple-red; sheath succulent-leathery, tubular, striated; blade linear-lanceolate, somewhat falcate, acuminate, margin entire, spreading. **Inflorescence** apical, racemose, short, lax, few-flowered; peduncle sub-terete, provided with 2 tubular, acuminate, partly imbricating bracts. **Flowers** 3-10, successive, resupinate, fleshy, lustrous, generally creamy brown to rarely greenish, generally tinged with pink, mainly on the dorsal surface of the sepals, column greenish-brown tinged with pink towards the apex, lip creamy white. **Floral bracts** much shorter than the ovary, narrowly triangular, acute, amplexicaul. **Ovary** triquetrous, thin, not inflated, smooth. **Sepals** lanceolate, acute, with a high dorsal keel, pink (very evident even in floral buds), 5-veined, margin entire, spreading; dorsal sepal free, spreading; lateral sepals partly spreading, obliquely united to the base of the column, slightly oblique, apiculate. **Petals** partly spreading, free, filiform, obtuse, 1-veined, margin entire, spreading. **Lip** united to the column, short unguiculate at the base, somewhat to deeply 3-lobed (rarely entire, the type), base sub-cordate, margin of the basal half dentate, apical half entire; bicallose, the calli laminar, short, disc with a short, wide, fleshy keel, running nearly to the apex of the lip; lateral lobes hemi-elliptic; midlobe sub-ovate-rectangular, the apex obtuse, minutely apiculate. **Column** straight, thin; apex with a pair of prominent horns. **Clinandrium-hood** reduced, margin entire. **Anther** narrowly obovoid, with the apex acute, short-bifid, twice as long as the cavity that holds the pollinia and surpassing the apex of the column, 4-celled. **Pollinia** 4, obovoid; caudicles soft and granulose, somewhat longer than the pollinia. **Rostellum** apical, slit. **Nectary** shallow, without penetrating the ovary, not inflated, smooth.

OTHER SPECIMENS AND RECORDS: See appendix.

DISTRIBUTION AND ECOLOGY: Widespread on the Andes from Venezuela to central Peru, along the upper Amazon basin, as well as west of Bogotá and along the Pacific slope in southern Colombia and northern Ecuador; epiphytic, pendent, at 600-2000 m altitude. Flowering throughout the year.

RECOGNITION: *Epidendrum filamentosum* belongs to Filamentosum Group which is characterized by the thin, short pendent stems



which originate successively from the previous stem, with a single, persistent, apical leaf (juvenile main stem has several leaves), linear-lanceolate, acuminate; inflorescence apical, short, racemose, flowers successive, fleshy; lip 3-lobed, the margin of the lateral lobes dentate to ciliate; anther narrowly ovoid, long, surpassing the apex of the column. The species is recognized by the thin new stem produced from the middle of the previous stem, creamy brown flowers dorsally tinged pink, lanceolate sepals 9-15 mm long, filiform petals, and the short unguiculate lip with the margin of the lateral lobes dentate, low laminar calli, and the narrowly ovoid, elongate, apically bifid anther. *Epidendrum ruizlarreanum* D.E.Benn. & Christenson has white, concolor flowers, the entire lip with the margin fimbriate, high, laminar calli, and 3 narrow keels, the reniform anther is truncate. *Epidendrum moronense* Dodson & Hágsater has thickened, pseudobubulous stems 4 cm long, greenish white, non-resupinate flowers, reflexed sepals and petals nearly as long as the ovary, and the lip is reniform with the margin lacerate.

CONSERVATION STATUS: DD. Data deficient. Widespread but locally scarce.

ETYMOLOGY: From the Latin *filamentosum*, thread-shaped, in reference to the narrow, nearly thread-like petals. *Rostratum* refers to *rostrum*, beak, in reference to the long anther which is reminiscent of a bird's beak.

REFERENCES: Baumbach, N., 2002, *Epidendrum rostratum*, *Die Orchidee* 53(6): 739. Dodson, C. H., 2001, *Native Ecuadorian Orchids* 2: 295; Escobar, G., 1970, *Orquideología* 5(3): 176, photo pg. 186. Escobar, R., 1994, *Orquídeas Nativas de Colombia* 5: 771, photo 906. Foldats, E., 1970, *Flora de Venezuela*, *Epidendrum rostratum*, 15(3): 372-374.

Authors: E. Santiago & E. Hágsater

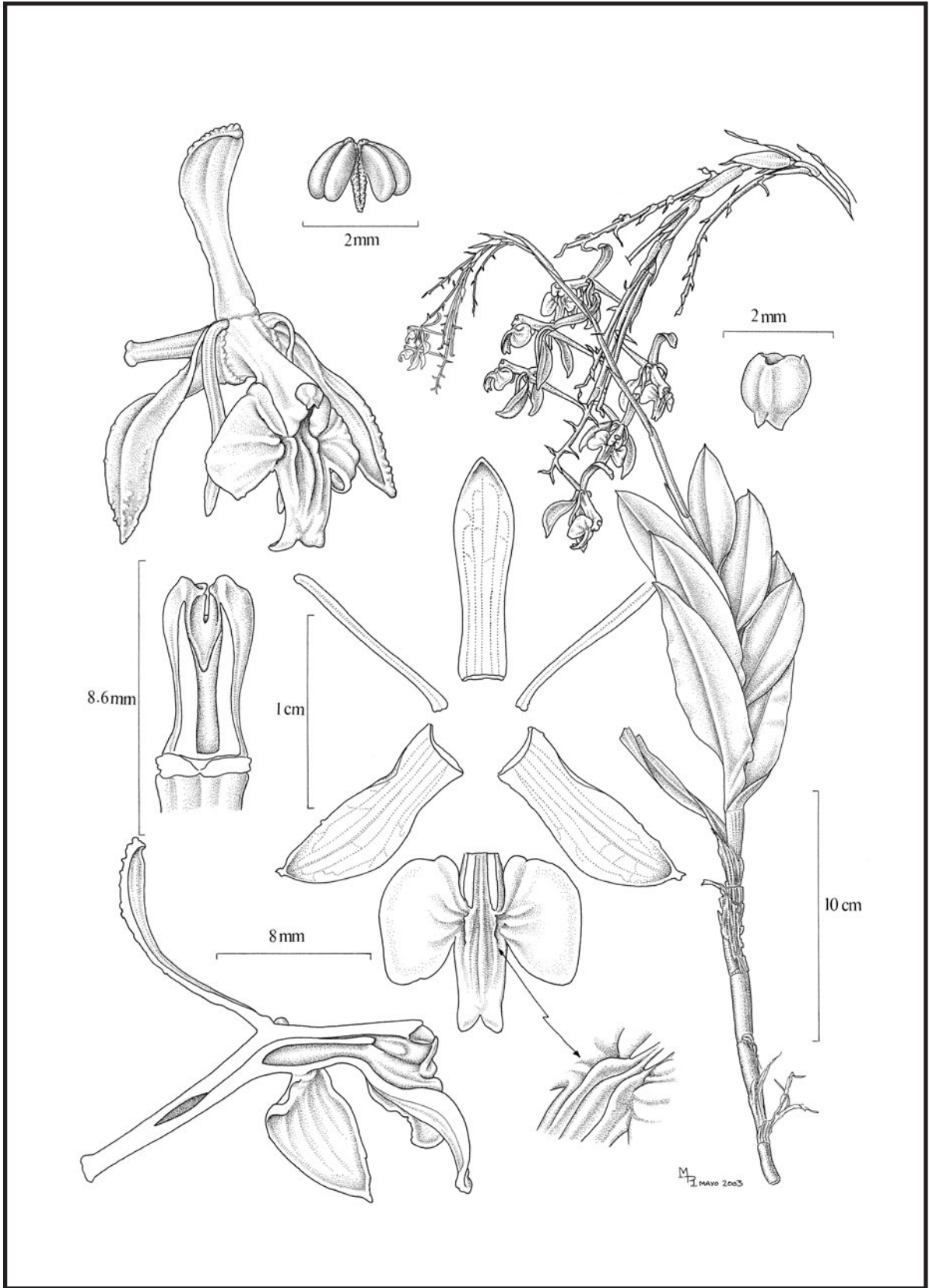
Illustrator: R. Jiménez M.

Editors: E. Hágsater & L. Sánchez S.

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ICONES ORCHIDACEARUM 12. 2009. Plate 1242



EPIDENDRUM FORCIPATUM C.Schweinf.

Plate 1243

EPIDENDRUM FORCIPATUM C.Schweinf., Fieldiana (Bot.) 33: 36. 1970.

Type: PERU: without locality, **F. Wojtkowski s.n.**, cultivated at University of California Botanical Garden at Berkeley 52.1853-1, pressed 24 July 1959. Holotype: AMES 69508! Duplicates: AMES 90057! MO! Clonotypes: 11 July 1962, UC! 15 March 1963, US! 13 March 1964, UC! 1 July 1965, UC!

Synonym: *Epidendrum pseudoanceps* D.E.Benn. & Christenson, Lindleyana 13(1): 46. 1998. Type: PERU: Huanuco: Leoncio Prado, below El Mirador, 1800 m, 10 August 1966, **Bennett 2333**. Holotype: AMES

Hierba epífita, cespitosa, de 47*[215] cm de alto. **Raíces** basales, gruesas. **Tallos** ancipitosos, erectos, 25 [65] x 0.57 cm. **Hojas** 8, distribuidas en la mitad apical del tallo, alternas, suberectas, parcialmente imbricadas en ejemplares herborizados; vaina tubular, ancipitosa, lisa, las de la base no persistentes, fibrosas con el tiempo, 1.1-3.0 x 0.47-0.57 cm; lámina elíptica, ápice agudo, margen extendido y entero, ligeramente ondulado, coriácea, dorsalmente prominentemente carinada, 6-10 x 2.0-2.4 [6.4] cm. **Bráctea Espatácea** ausente. **Inflorescencia** apical, racemosa, plurianual, produciendo racimos nuevos de los nudos apicales, 24 [150] cm de largo, cada racimo 3.0-3.5 cm de largo, provisto en la base de una bráctea muy prominente; pedúnculo delgado, alargado, ancipitoso, 16 cm de largo, cubierto en su totalidad por 6-7 brácteas tubulares, ancipitosas, agudas, imbricadas, gradualmente más cortas hacia el ápice, 2-4 cm de largo; raquis terete, liso, 3.5-4 [16] cm de largo. **Brácteas florales** mucho más cortas que el ovario, triangulares, acuminadas, 3-5 mm de largo. **Ovario** terete, delgado, liso, no inflado, 10 [14] mm de largo. **Flores** 10 [30] por racimo, simultáneas, resupinadas, color amarillo ocre; sin fragancia. **Sépalos** libres, oblanceolados, subagudos, escasamente papilosos dorsalmente hacia el ápice, 5-nervados, carnosos, [10] 11.5-12 x 3-4.2 mm; el **dorsal** algo retrorso; los **laterales** descendentes, ligeramente cóncavos, oblicuos. **Pétalos** descendentes, libres, lineares, redondeados, 1-nervados, 10-11 x 0.7-0.8 mm. **Labelo** unido a la columna, trilobado, base cordada, margen entero, en aspecto general ligeramente convexo, [7.5] 9.2-9.7 x 10.6-11.4 mm; bicalloso, los callos laminares, lisos, prolongados en carinas, con una carina central prominente que se desvanece cerca del ápice del lóbulo medio; lóbulos laterales dolabriformes, provistos de 3 venas engrosadas cortas y muy prominentes, 4.7 x 7.6 mm; lóbulo medio subrectangular, emarginado, 5 x 2.8 mm. **Columna** corta, delgada, recta, dilatada hacia el ápice, 6-8.6 mm de largo. **Clinandrio** reducido, entero. **Antera** ovoide, con una quilla roma al frente, 4-locular. **Polinios** 4, obovoides, aplanados lateralmente, desiguales, el par interior algo más pequeño; caudículas granuladas, más largas que los polinios. **Rostelo** apical, hendido. **Nectario** corto, penetrando ligeramente justo detrás del perianto, levemente inflado detrás de la cavidad estigmática, liso. **Lóbulos laterales del estigma** de menos de ¼ del largo de la cavidad estigmática. **Cápsula** no vista.

Epiphytic, caespitose **herb.** **Roots** basal, fleshy. **Stem** ancipitose, erect. **Leaves** distributed throughout the apical half of the stem, suberect; sheath tubular, ancipitose, smooth; blade elliptic, apex acute, coriaceous, dorsally carinate, margin spreading, entire, somewhat undulate. **Inflorescence** apical, racemose, flowering repeatedly over several years and producing new racemes from the apical internodes; peduncle thin, elongate, ancipitose, totally covered by tubular, acute, bracts; rachis terete, smooth. **Floral bracts** much shorter than the ovary, triangular, acuminate. **Ovary** terete, thin, smooth. **Flowers** 10 [30], per raceme, simultaneous, resupinate, yellow-ochre; not fragrant. **Sepals** free, oblanceolate, subacute, somewhat papillose dorsally towards the apex, 5-veined, fleshy, the **dorsal** somewhat reflexed, the **laterals** oblique. **Petals** hanging, free, linear, rounded, 1-veined. **Lip** united to the column, 3-lobed, base cordate, margin entire, convex; bicallose, the calli laminar, prolonged into rounded keels, with a central keel running down most of the midlobe; lateral lobes dolabriform, with 3 short, thickened keels; midlobe subrectangular, emarginate. **Column** short, thin, straight, dilated towards the apex. **Clinandrium-hood** reduced, entire. **Anther** ovoid, with a rounded keel in front, 4-celled. **Pollinia** 4, obovoid, laterally flattened; the inner pair somewhat smaller; caudicles granulose, longer than the pollinia. **Rostellum** apical, slit. **Nectary** short slightly penetrating the ovary, somewhat inflated behind the stigmatic cavity.

OTHER SPECIMENS: ECUADOR: Zamora-Chinchipec: Cordillera del Condor, Mirador, 1800 m, Hort. Ecuagenera, 8 III 2003, Hágsater 13834, AMO! (Illustration voucher). **PERU: Huanuco:** Leónico Prado, along road above Cueva de Pavas, 1400 m, 10 XI 1991, **Bennett 5354**, USM. **Junin:** Tarma, 6 III 1967, 1500 m, **Bennett 2333**, SEL! [this specimen has the same collecting number of the type, but a different locality and date; the sterile specimen conforms to the species.]

DISTRIBUTION AND ECOLOGY: Known only from the Amazon side of the Andes in southern Ecuador and central Peru, at about 1500 m altitude. Flowering in March, possibly also in July and November.

RECOGNITION: *Epidendrum forcipatum* belongs to the Anceps Group and Polyanthum Subgroup, recognized by the caespitose habit, simple stems, pluri-racemose inflorescence flowering over several years, elongate racemes and fleshy flowers and linear petals. The species is recognized by the generally crisped-undulate leaves, about 10 [30] flowers of green-ochre tones, filiform petals. *Epidendrum forcipatoides* Hágsater, from Bahía, Brazil has relatively small plants, with smaller flowers, the obovate sepals about 6.0-6.5 mm long, and the margin of the leaves is not undulate.

NOTE: The holotype of *E. forcipatum* was from a plant cultivated in the University of California Botanical Garden at Berkeley, collected several years earlier in Peru. Felix Wojtkowski collected in Huánuco (Sariapampa in May, 1946 and Carpish in June), near Moyobamba and Bagua (June 1947), and in Junin (Utcuyacu and Agua Dulce in February and March, 1948), then none until 1953. Thus the accession number does not appear to correspond to the year it was collected. But Carpish is close to the type locality of *E. pseudoanceps*. *Measurements taken from plant cultivated at Ecuagenera. The measurements in square brackets correspond to the original description, and were taken from the plant cultivated at UC Berkeley.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Latin *foriceps*, fork, probably in reference to the two-pronged, curved, midlobe of the lip, which looks like a fork.

REFERENCES: Hágsater, E. 2001. *Epidendrum forcipatoides* Hágsater, **Icones Orch. (Mexico)** 4: plate 437.



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Illustrator: M. López R.
México, D.F. MÉXICO

Editors: E. Hágsater & L. Sánchez S.
ICONES ORCHIDACEARUM 12. 2009. Plate 1243

EPIDENDRUM FRANCISCI Chocce, Hágster et Acuña, *sp. nov.*

Type: PERU: Amazonas; Prov. Bongará: Corosha, Área de Conservación Privada HierbaBuena-Allpayacu, en los matorrales de la Jalca, 2720 m, 24 de septiembre de 2008, **M. Chocce, N. Vega y G. Gómez 4776**. Holotype: USM! (Illustration voucher). Digital images of pretype, AMO!

Epidendro subliberi C.Schweinf. vegetative simile sed rhachide fructiflexa, floribus successivis majoribus, columna crassa cum labello in tota longitudine juncta, labello cordiformi margine integro, sepalis lateralibus ad basem adnatis, falcatis acutis et petalis linearibus, differens.

Hierba epífita, monopodial, de crecimiento escandente vertical, 90 cm de alto. **Raíces** producidas en la base del tallo inicial, delgadas, sencillas, 1 mm de grosor. **Tallos** delgados, tipo caña en los 2/3 basales y ligeramente engrosados en el tercio apical, 9.5-14 x 0.2-0.25 cm, la parte engrosada fusiforme, 4-5 x 0.35-0.45 cm, cada tallo nuevo producido de un entrenudo debajo del tercio apical del tallo anterior, cubierto por 8 vainas tubulares, escariosas y fibrosas, 0.5-2 cm de largo. **Hojas** 2, apicales, articuladas, coriáceas, linear oblongas, conduplicadas en la base, el ápice obtuso, apiculado, margen apical diminutamente papiloso, 5.5-6 x 0.5-0.6 cm. **Bráctea espátacea** ausente. **Inflorescencia** apical, del tallo maduro, paniculada, pauciflora, laxa, de floración asincrónica, 8-11 cm de largo; pedúnculo corto, terete, delgado, 7-20 mm de largo; raquis fractiflexo. **Brácteas florales** mucho más cortas que el ovario, triangulares, agudas, abrazadoras, hasta 1 mm de largo. **Ovario** terete, delgado, ligeramente inflado en la parte media apical, no ornamentado, 10 mm de largo. **Flores** 7-15, sucesivas, resupinadas, algo carnosas, de color lila pálido, con la mitad basal de la columna verdosa, el ápice lila oscuro; fragancia no registrada. **Sépalos** agudos, 5-nervados, margen entero, algo revoluto; el **dorsal** libre, reflexo, oblongo lanceolado, 8 x 2 mm; los **laterales** adnados de manera oblicua a los 2/3 basales de la columna y a la vez soldados en la base de los mismos, oblicuamente triangulares, falcados, 8 x 2.5 mm, con una quilla dorsal diminuta en el ápice. **Pétalos** libres, extendidos, lineares, ligeramente sinuosos, agudos, 3-nervados, margen entero, extendido, 8 x 0.8 mm. **Labelo** unido a la columna, membranoso, entero, cordiforme, el centro cóncavo en posición natural algo convexo hacia el margen, margen entero; disco con dos pequeños callos en la base de la porción libre del labelo, ocultos por el ápice de la columna, 4.3 x 5 mm (parte libre). **Columna** recta, en la base arqueada con respecto del ovario, engrosada en toda su longitud, formando un saco amplio a lo largo de la unión de la columna con los sépalos laterales, el ápice con un par de dientes diminutos, los lados redondeados, 5 x 2 mm. **Clinandrio** reducido, margen entero. **Rostelo** subapical, hendido. **Antera** reniforme, bidentada en el ápice, con una quilla central en la superficie dorsal, 4-locular. **Polinios** 4, obovoideos, lateralmente comprimidos; caudículas y viscidio no vistos. **Nectario** corto, sin penetrar el ovario, amplio, fondo redondeado, liso. **Cápsula** no vista.

Epiphytic, scandent, erect **herb. Roots** at the base of the initial stem, simple, thin. **Stems** thin, cane-like along the basal 2/3, and slightly thickened along the apical 1/3 which is fusiform; each new stem produced from an internode below the apical 1/3 of the previous stem, covered by 8 tubular, scarios, fibrous sheaths. **Leaves** 2, apical, articulate, coriaceous, linear-oblong, base conduplicate, apex obtuse, apiculate, margin apical minutely papillose. **Inflorescence** apical, from the mature stem, paniculate, lax flowered, asynchronous; peduncle short, terete, thin, rachis fractiflexo. **Floral bracts** much shorter than the ovary, triangular, acute, amplexicaul. **Ovary** terete, thin, slightly inflated along the apical half, smooth. **Flowers** 7-15, successive, resupinate, somewhat fleshy, pale lilac, the basal half of the column greenish, the apex darker lilac. **Sepals** acute, 5-veined, margin entire, somewhat revolute; dorsal sepal free, reflexed, oblong-lanceolate; lateral sepals obliquely adnate to the basal 2/3 of the column, and united to each other at the base, obliquely triangular, falcate, with a minute dorsal keel at the apex. **Petals** free, spreading, linear, slightly sinuous, acute, 3-veined, margin entire, spreading. **Lip** united to the column, membranaceous, entire, cordiform, the center concave in natural position, somewhat convex towards the margins, margin entire; disc with two small calli at the base of the free portion of the lip, hidden by the apex of the column. **Column** straight, arched at the base in relation to the ovary, thick throughout, forming a wide sac along the insertion of the lateral sepals and the column, apex with a pair of minute teeth, the sides rounded. **Clinandrium-hood** reduced, margin entire. **Rostellum** sub-apical, slit. **Anther** reniform, apex bidentate, with a low central keel along the dorsal surface, 4-celled. **Pollinia** 4, obovoid, laterally compressed. **Nectary** short, without penetrating the ovary, wide, rounded at the end, smooth.

OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: Known only from the higher parts of the Área de Conservación Privada Hierbabuena-Allpayacu, in the community of Corosha, province of Bongará, Amazonas, Perú; scarce, epiphytic among shrubs in Jalca. Flowering in September.



RECOGNITION: *Epidendrum francisci* is recognized by the vertically scandent herb, with the new stem produced from an internode about 2/3 from the base of the previous stem, the new stem thickened and somewhat fusiform along the apical 1/3, apically bifoliate, the leaves linear-oblong, the apical inflorescence paniculate, rachis fractiflex, producing successive pale-lilac flowers, the lip united to the column, cordiform, with two very small calli at the base, and the nectary inflated to form a vesicle behind the base of the lateral sepals. The plant is reminiscent of *Epidendrum subliberum* C.Schweinf., but the inflorescence of that species is straight and has numerous, simultaneous small flowers, sepals 3-4 mm long, and the lip free from the thin straight column. At this point we cannot assign it to any group of species within *Epidendrum*.

CONSERVATION STATUS: DD. Data deficient. Scarce where it has been collected.

ETYMOLOGY: In honor of Francisco Homero López, who was one of the first promoters of the establishment of the Área de Conservación Privada Hierbabuena-Allpayacu.

ACKNOWLEDGEMENTS: We are grateful of Nanette Vega and Fanny Cornejo, for their invaluable support and help during the field trip that led to this discovery.

Authors: M. Chocce, E. Hágster & M. Acuña

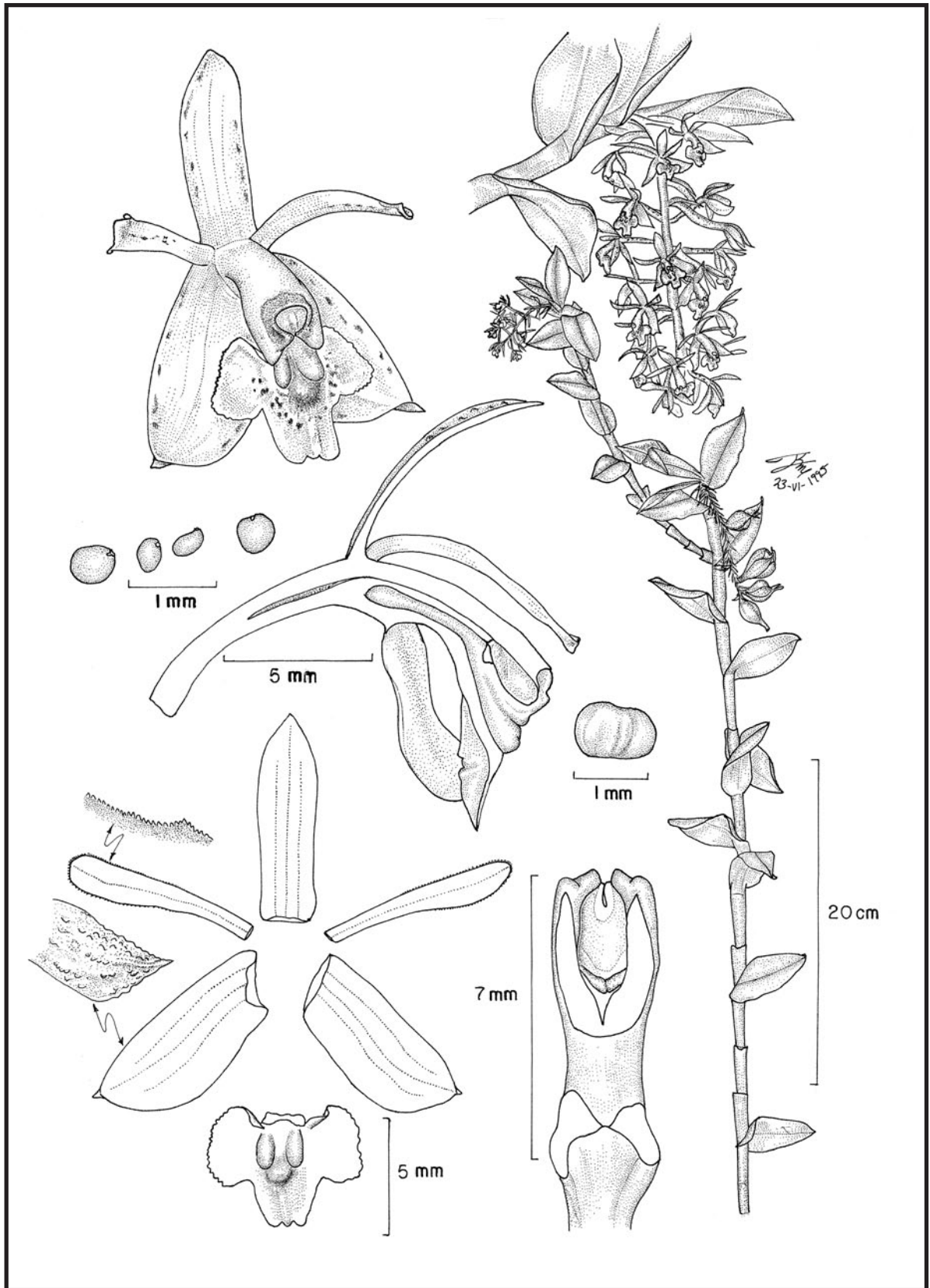
Illustrator: M. E. Acuña T.

Editors: E. Hágster & L. Sánchez S.

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ICONES ORCHIDACEARUM 12. 2009. Plate 1244



EPIDENDRUM FRITZIANUM Hoehne

Plate 1245

EPIDENDRUM FRITZIANUM Hoehne, Arq. Bot. Estado Sao Paulo 2(6): 143. 1952.

Basionym: *Epidendrum polyphyllum* F. Lehm. & Kraenzl., Engl. Bot. Jahrb. Syst. 26: 470. 1899. Type: Ecuador: [Azuay] in locis humidis ad declivitates Andium orientalium ditionis Sigsig, 2800-3200 m, **F. C. Lehmann 8351**. Holotype: K-L! Isotype: K-L! (non Vellozo, 1829 [1831]) = *Cyrtopodium polyphyllum* (Vell.) Pabst, ex F. Barros).

Synonym: *Epidendrum aurorae* Dodson & D.E. Benn., Icon. Plant. Trop. ser. II, 1: 57. 1989, based on *Epidendrum polyphyllum* F. Lehm. & Kraenzl.; neither the text nor the illustration; see *E. chaoticum* Hágsater & E. Santiago.

Hierba terrestre, monopodial, ramificada arriba, 70-150 cm de alto. **Raíces** de la base del tallo principal, a lo largo de algunos entrenudos basales, delgadas, carnosas, blancas, 2-3 mm de grosor. **Tallos** tipo caña, erectos, rectos, el principal ramificado subapicalmente cuando maduro, 45-70 x 0.6-0.7 cm; las ramificaciones (en ocasiones a su vez también ramificadas), 5-11 x 0.3-0.4 cm. **Hojas** 24-30, en el tallo principal; 6-16 en las ramas, distribuidas a lo largo del tallo principal como de las ramificaciones, alternas, extendidas con respecto al tallo, algo arqueadas, subcoriáceas; vaina tubular finamente estriada, rugosa, teñida de morado, 1-2 x 0.3-0.7 cm; lámina ovado elíptica, ápice obtuso, margen entero, en ocasiones algo revuelto, 3.5-6 x 2-2.4 cm; las de las ramas 1.5-3 x 1.2-1.5 cm. **Bráctea espátacea** ausente. **Inflorescencia** apical, florece una sola vez, racemosa, arqueado nutante, pluriflora, densa, 4-9 cm de largo; pedúnculo muy corto, terete, desprovisto de brácteas, 4 mm de largo; raquis verrucoso. **Flores** 16-32, simultáneas, resupinadas, verdes, los sépalos, pétalos y labelo con puntos morados, el ápice de la columna amoratado; sin fragancia. **Brácteas florales** prominentes, generalmente casi tan largas como el ovario, triangular lanceoladas, largamente acuminadas, dorsalmente verrucosas, de color verde con puntos morados, 7-17 mm de largo. **Ovario** terete, delgado, no inflado, no ornamentado, 7-18 mm de largo. **Sépalos** extendidos, dorsalmente verrucosos, subobtusos, 3-nervados, margen entero, extendido; el **dorsal** oblongo, ligeramente incurvado, 9 x 1.5-3 mm; los **laterales** unidos de manera oblicua a la base de la columna, obovado oblongos, diminutamente apiculados, oblicuos, 9 x 4-5 mm. **Pétalos** extendidos, ligeramente falcados, linear espatulados, redondeados, 1-nervados, margen serrulado, 8 x 1-1.5 mm. **Labelo** unido a la columna, trilobado, base ligeramente cordada, 5 x 6.5 mm; bicalloso, los callos prominentes, algo lateralmente aplanados; disco tricarinado, las carinas intercallosas, muy cortas formando una protuberancia semicircular carnosita ubicada justo al frente de los callos; lóbulos laterales redondeados, margen crenado, 2.5 x 3.5 mm; lóbulo medio trapezoide, diminutamente apiculado, 2 x 3 mm. **Columna** ligeramente arqueada, delgada, 7 mm de largo. **Clinandrio** reducido, margen entero. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** muy pequeños, de 1/5 del largo de la cavidad estigmática. **Nectario** poco profundo, sin traspasar el perianto, liso. **Antera** reniforme, 4-locular. **Polinios** 4, desiguales, subobovoides. **Cápsula** globosa, cuerpo 16-20 x 12 mm; pedicelo corto 5-6 mm de largo, cuello apical reducido.

Terrestrial, monopodial **herb**. **Roots** from the base of the main stem, from several basal internodes, thin, fleshy, white. **Stems** cane-like, erect, straight, the main stem branching sub-apically when mature, long, the branches themselves branching, short. **Leaves** 24-30 on the main stem, 6-16 on the branches, distributed throughout, alternate, spreading, somewhat arched, sub-coriaceous; sheath tubular, minutely striated, rugose, purple tinged; blade ovate-elliptic, apex obtuse, margin entire, sometimes somewhat revolute. **Inflorescence** apical, flowering only once, racemose, arching-nutant, densely many-flowered; peduncle very short, terete, without bracts and verrucose rachis. **Flowers** 16-32, simultaneous, resupinate, green, the sepals, petals and lip dotted purple, apex of the column purple; without fragrance. **Floral bracts** prominent, generally nearly as long as the ovary, triangular-lanceolate, long-acuminate, dorsally verrucose, green with purple dots. **Ovary** terete, thin, not inflated, smooth. **Sepals** spreading, dorsally verrucose, sub-obtuse, 3-veined, margin entire, spreading; dorsal sepals oblong, slightly incurved, lateral sepals obliquely united to the base of the column, obovate-oblong, minutely apiculate, oblique. **Petals** spreading, slightly falcate, linear-spatulate, rounded, margin serrulate, 1-veined. **Lip** united to the column, 3-lobed, base slightly cordate; bicallose, the calli prominent, somewhat laterally flattened; disc 3-keeled, the keels very short, forming a semi-circular, fleshy protuberance in front of the calli; lateral lobes rounded, margin crenate; midlobe trapezoid, minutely apiculate. **Column** slightly arched, thin, short. **Clinandrium-hood** reduced, margin entire. **Rostellum** apical, slit. **Anther** reniform, 4-celled. **Pollinia** 4, sub-equal, sub-obovoid. **Capsule** globose, pedicel short, apical neck reduced.

OTHER SPECIMENS: BOLIVIA: La Paz: Nor Yungas: Chuspipata, 3000 m, 27 VIII 1983, *Solomon 10703*, MO! **ECUADOR: Loja:** Parque Nacional Podocarpus, Yangana-Cerro Toledo, 3100 m, 26 II 1985, *Øllgaard 58260*, QCA! QCNE! Parque Nacional Podocarpus, Yangana-Cerro Toledo, 3200-3900 m, 29 IV 1987, *van der Werff 9171*, QCNE! **Morona-Santiago:** East of pass on road Cuenca to Limón, 2800-3100 m, 21 XI 1988, *Hágsater 9626*, MO! (Illustration voucher). Gualaceo to Limón km 27, 2860 m, 21 XI 1988, *Hágsater 9627*, AMO! QCNE! QCA! Gualaceo to Chiquinda, 3400 m, I 1989, *Hirtz 3997*, MO! QCNE! Sigsig to Gualaceo, km 80, 3000 m, 3 XII 1990, *Jørgensen 92803*, QCA! San Miguel de Cuyes, 2900-3200 m, 2 XII 1995, *Suin 19*, AMO! **Zamora-Chinchipec:** road Loja-Zamora, 2800 m, 3 X 1997, *Lewis 3605*, LOJA! **PERU: Cajamarca:** Sallique, 2960-3050 m, 20 VI 1998, *Díaz 9649*, USM! **Pasco:** N of Oxapampa, 2000-3500 m, 25 VI 1988, *Foster 12244*, F! USM!

OTHER RECORDS: BOLIVIA: Without locality, VII 1997, *Vásquez 843*, xerox of illustration, AMO! **ECUADOR: Morona Santiago:** Sigsig-Chigüinda, km 23, 3281 m, 24 I 2004, *Hágsater 14045*, flower in spirit, AMO!



DISTRIBUTION AND ECOLOGY: Ranging from southern Ecuador to Bolivia, along the upper eastern slope of the Andes, terrestrial, at 2800-3400 m altitude. Flowering throughout the year.

RECOGNITION: *Epidendrum fritzianum* belongs to the Andean Group, Fritizianum Subgroup characterized by the monopodial stems branched above, the ovate to ovate-elliptic, acute to short-acuminate leaves, lateral sepals obliquely united to the base of the column, and clearly 3-lobed lip. The species is recognized by the tall plants, to 1.5 m, the leaves ovate-elliptic, somewhat arched of the main stem, 3.5-6 x 2-2.4 cm; flowers green, dotted purple, the sepals dorsally verrucose, 9 mm long, the lip with the disc fleshy, midlobe trapezoid. *Epidendrum pittieri* Ames (apparently endemic to Colombia) has shorter plants, to 60 cm tall, leaves ovate to ovate-oblong, 2-3 x 0.7-1.1 cm, flowers creamy white to yellowish green, sepals unornamented, 12-14 mm long, and the lip has 3, low keels, the midlobe is oblong. *Epidendrum scabrum* Ruiz & Pavón has shorter, narrower leaves, 2.5-3.7 x 0.8-1.4 cm, the inflorescence is paniculate with yellow flowers, sepals 8.8-10 mm long, the midlobe of the lip sub-ovoid.

NOTE: The specific epithet, *Epidendrum polyphyllum*, was first used by Vellozo for the Brazilian *Cyrtopodium andersonii* (Lamb. ex Andr.) R. Br. Dodson & Bennett noted this but did not record Hoehne's earlier new name. The illustration and description published by Dodson & Bennett do not correspond to this species; the new name was validly published but a is later synonym.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: Not stated.

Authors: E. Santiago & E. Hágsater

Illustrator: R. Jiménez M.

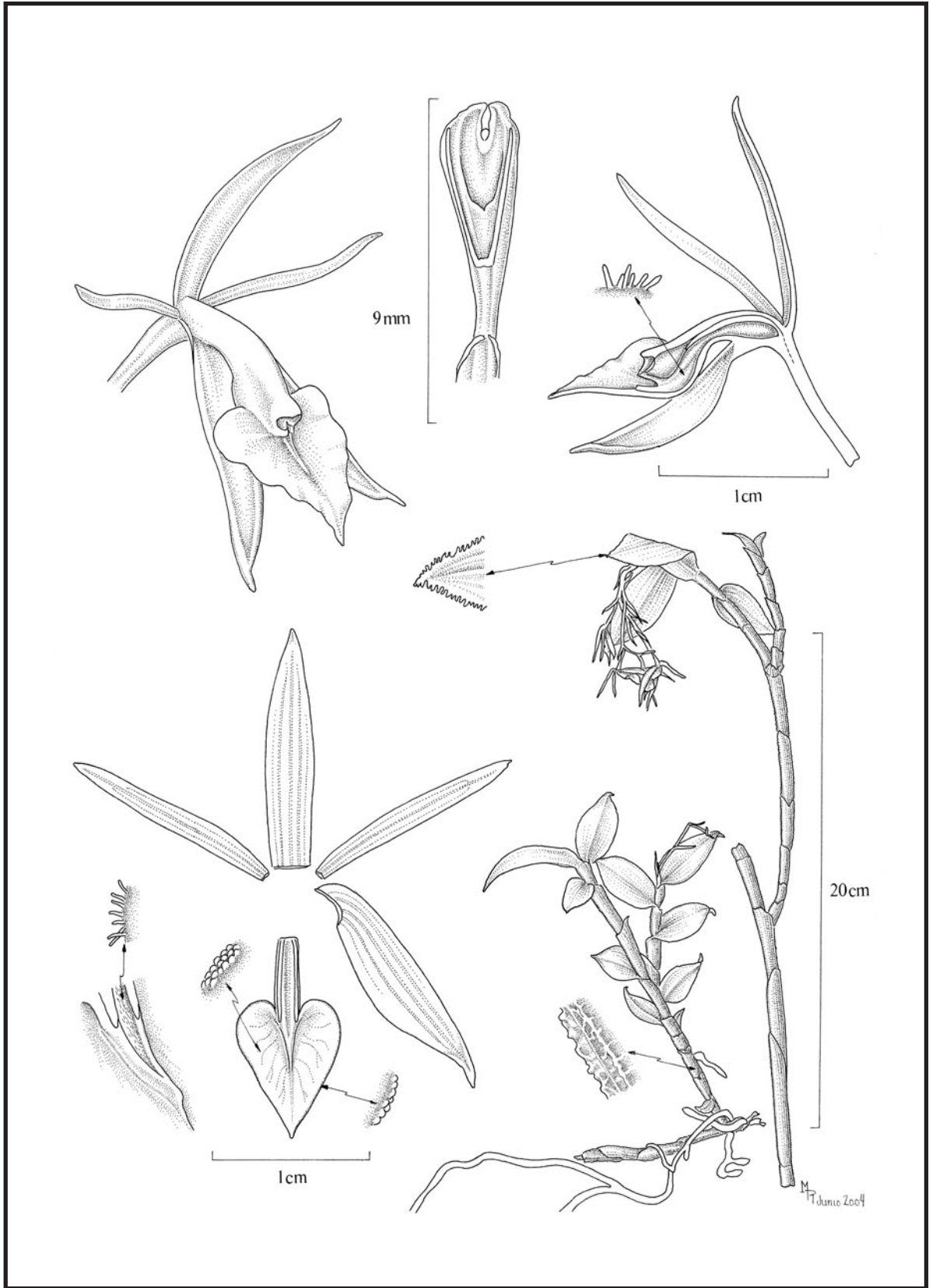
Editors: E. Hágsater & L. Sánchez S.

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México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009.

Plate 1245



EPIDENDRUM FRITZICARDIUM Hágsater & E.Santiago

Plate 1246

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

Type: ECUADOR: Morona-Santiago: above Sigisig, 2850 m, **J. & L. Kuhn & C. & J. Luer 56**. Holotype: SEL!
(Illustration voucher).

Epidendrum fritzianum Hoehne simile sed caulis ramificationibus subapicalibus, inflorescentia parum paniculata, floribus majoribus et labello cordiformi cum callo unico anguste triangulari et pubescenti in foramina, distinctum.

Hierba terrestre, monopodial, ramificada arriba, 13-31 cm de alto. **Raíces** de la base del tallo principal y de algunas ramificaciones, escasas, delgadas, carnosas, blancas, 2.0-2.5 mm de grosor. **Tallos** tipo caña, teretes, erectos, ramificados, las ramificaciones producidas de la mitad del tallo anterior, debajo de las hojas; 10-15 x 0.4-0.6 cm. **Hojas** 5-7 en las ramas, distribuidas en la mitad apical del tallo, alternas, articuladas, extendidas, coriáceas; vaina tubular finamente estriada, rugosa, algo verrucosa, 1-2.3 x 0.4-0.6 cm; lámina ovado elíptica, ápice obtuso, margen apical diminutamente ciliado, extendido, 2-5 x 0.8-2 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, florece una sola vez, racemosa a incipientemente paniculada, arqueada nutante, pauciflora, laxa, 5.5 cm de largo; pedúnculo corto, subterete, provisto de una bráctea, angostamente triangular, acuminada, 13 mm de largo. **Flores** 3-10, simultáneas, resupinadas, sin datos de color ni fragancia. **Brácteas florales** prominentes, casi tan largas como el ovario, triangular lanceoladas, largamente acuminadas, abrazadoras, 7-10 mm de largo. **Ovario** terete, delgado, no inflado, no ornamentado, 8-10 mm de largo. **Sépalos** entreabiertos, oblongo elípticos, agudos, 5-nervados, margen entero, extendido; el **dorsal** libre; los **laterales** unidos de manera oblicua a la base de la columna, oblicuos, 17-18 x 3-4 mm. **Pétalos** entreabiertos, libres, linear lanceolados, 3-nervados, obtusos, margen entero, extendido, 14 x 1.5 mm. **Labelo** unido a la columna, entero, cordiforme, cortamente acuminado, 8 x 6.5 mm; unicalloso, el callo angostamente triangular, pubescente en el hueco, alargado hasta la mitad apical de la lamina. **Columna** ligeramente arqueada, delgada, 9 mm de largo. **Clinandrio** corto, margen entero. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** no vistos. **Nectario** poco profundo, sin traspasar el perianto, algo papiloso frente a la cavidad estigmática. **Antera**, **Polinios** y **Cápsula** no vistos.

Terrestrial, monopodial **herb**, branching sub-apically. **Roots** from the base of the main stem, and some of the branches, scarce, thin, fleshy, white. **Stems** cane-like, terete, erect, sub-apically branching, below the leaves. **Leaves** 5-7 on the branches, distributed along the apical half of the stem, alternate, articulate, spreading, coriaceous; sheath tubular, minutely striated, rugose, somewhat verrucose; blade ovate-elliptic, apex obtuse, apical margin minutely ciliate, spreading. **Inflorescence** apical, flowering only once, racemose to paniculate, arching-nutant, lax, few-flowered; peduncle short, sub-terete, provided with a narrowly-triangular, acuminate bract. **Flowers** 3-10, simultaneous, resupinate. **Floral bracts** prominent, nearly as long as the ovary, triangular-lanceolate, long-acuminate, amplexicaul. **Ovary** terete, thin, not inflated, smooth. **Sepals** partly spreading, oblong-elliptic, acute, 5-veined, margin entire, spreading; the dorsal sepal free, the lateral sepals obliquely united to the base of the column, oblique. **Petals** partly spreading, free, linear-lanceolate, 3-veined, obtuse, margin entire, spreading. **Lip** united to the column, entire, cordiform, short-acuminate, with a single, narrowly triangular callus, pubescent in the hollow, reaching the middle of the lip. **Column** slightly arching, thin, long. **Clinandrium-hood** short, margin entire. **Rostellum** apical, slit. **Nectary** shallow, without penetrating the perianth, somewhat papillose in front of the stigmatic cavity.

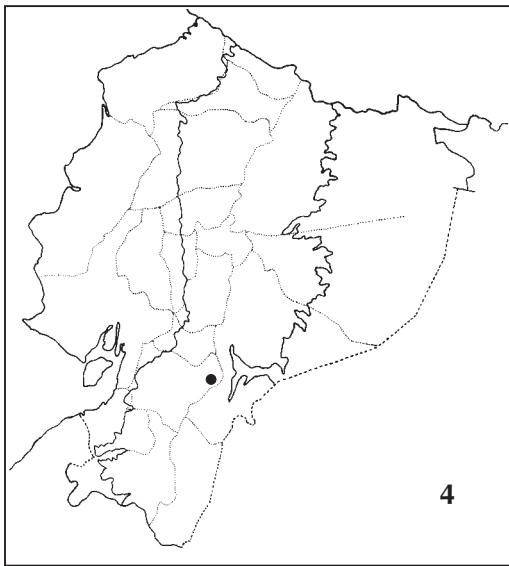
OTHER SPECIMENS: None seen.

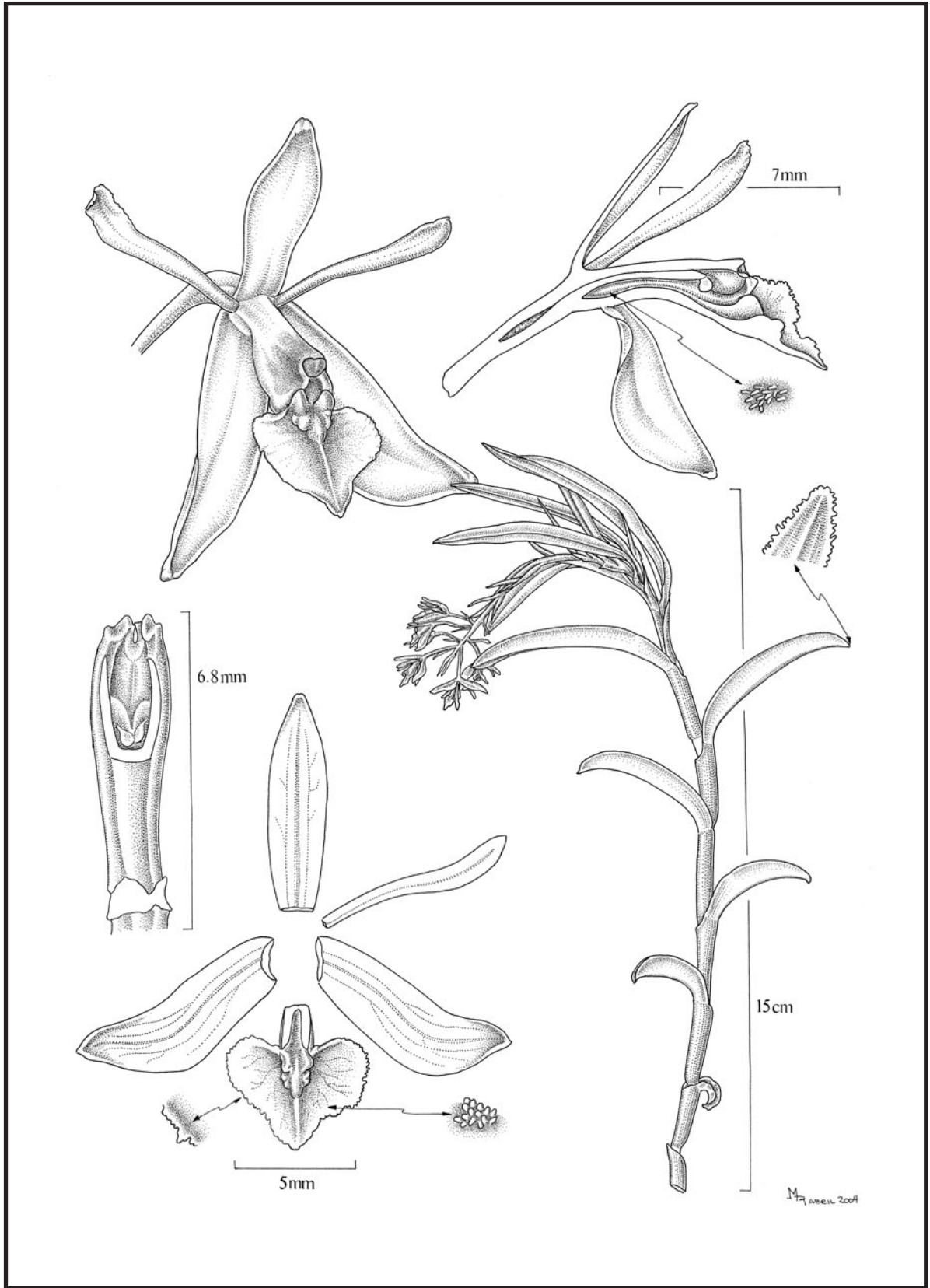
DISTRIBUTION AND ECOLOGY: Known only from the type, from the upper Amazon slope of the Andes in Ecuador, terrestrial at 2850 m altitude.

RECOGNITION: *Epidendrum fritzicardium* belongs to the Andean Group, Fritzianum Subgroup characterized by the monopodial stems branched above, the ovate to ovate-elliptic, acute to short-acuminate leaves, lateral sepals obliquely united to the base of the column, and clearly 3-lobed lip. The species is recognized by the racemose to paniculate, lax-flowered inflorescence, the sepals and petals partly spreading, the cordiform, short acuminate lip with a narrowly triangular callus, pubescent in the hollow. *Epidendrum fritzianum* is vegetatively somewhat similar, but the inflorescence is racemose, densely-flowered, sepals and petals are spreading, and the lip is 3-lobed and bicallose, with a thickened, fleshy, rounded disc. The type of branching, paniculate inflorescence, entire, acuminate lip and pubescence in the hollow of the callus and extending into the nectary are quite peculiar, and would seem to suggest a hybrid origin, though we cannot recognize the possible parents.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek καρδιά, heart, and Fritz, in reference to the similarity of this species to *E. fritzianum* but recognized by the heart-shaped, acuminate lip.





EPIDENDRUM FRITZIMEGALOTYLOSUM Hágsater & E.Santiago

Plate 1247

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

Type: ECUADOR: Morona-Santiago: Chiguinda via Bermejos, 1600-1800 m, Hort. Ecuagenera, prensado 8 marzo 2003, **E. Hágsater 13841**. Holotype: AMO! (Illustration voucher).

Epidendro fritziani Hoehne simile sed foliis angustioribus, floribus fere viridibus, sepalis dorsaliter laevibus et labelli callis valde prominentibus altis truncatis, distinguibile.

Hierba epífita, monopodial, ca. 19 cm de alto. **Raíces** no vistas. **Tallos** tipo caña, erectos, rectos, subteretes, el principal probablemente ramificado subapicalmente cuando maduro, 13 x 0.25-0.3 cm. **Hojas** 11, distribuidas a lo largo del tallo, alternas, articuladas, extendidas con respecto al tallo, algo arqueadas, desiguales en tamaño (las basales más pequeñas); vaina tubular finamente estriada, levemente rugosa, verdosa, 1.5-2 x 0.25-0.3 cm; lámina elíptico lanceolada, aguda, margen apical diminutamente ciliado, extendido, 0.7-4.5 x 0.5-1.0 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, florece una sola vez, racemosa, arqueada nutante, pluriflora, 5 cm de largo; pedúnculo corto, subterete, provisto de 5-6 brácteas, muy prominentes (probablemente un artificio del cultivo), semejantes a las hojas, 2-4 cm de largo. **Flores** 15, sucesivas, resupinadas, verdes, los sépalos con escasos puntos morados en la superficie dorsal, el ápice de la columna fuertemente amoratado; sin fragancia. **Brácteas florales** prominentes, más largas que el ovario, triangular lanceoladas, largamente acuminadas, abrazadoras, 7-10 mm de largo. **Ovario** terete, delgado, no inflado, no ornamentado, 6 mm de largo. **Sépalos** entreabiertos, oblongo elípticos, obtusos, 3-nervados, margen entero, extendido; 9 x 2.3 mm; el **dorsal** libre; los **laterales** unidos de manera oblicua a la base de la columna, oblicuos. **Pétalos** entreabiertos, libres, linear espatulados, obtusos, 1-nervados, margen entero, revoluto, 8 x 1 mm. **Labelo** unido a la columna, incipientemente trilobado, base ligeramente cordada, margen eroso, 4.5 x 6 mm; bicalloso, los callos muy prominentes, erectos, trapecoides, lateralmente aplanados; disco con una protuberancia carnosa, semicircular, ubicada justo al frente de los callos; lóbulos laterales semicordiformes, 2 x 3.2 mm; lóbulo medio anchamente triangular, 1.5 x 2.3 mm. **Columna** recta, delgada, 7 mm de largo. **Clinandrio** reducido, margen entero. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** pequeños, de ¼ del largo de la cavidad estigmática. **Nectario** poco profundo, sin penetrar el ovario, pubescente. **Antera, Polinios y Cápsula** no vistos.

Epiphytic, monopodial **herb** with sub-apical branching. **Stems** cane-like, erect, straight, sub-terete, the main stem with sub-apical branching when mature. **Leaves** 11, distributed throughout the stem, alternate, articulate, spreading, somewhat arching, unequal in size (the basal ones smaller); sheath tubular, minutely striated, slightly rugose, greenish; blade elliptic-lanceolate, acute, apical margin minutely ciliate, spreading. **Inflorescence** apical, flowering only once, racemose, arching-nutant, many-flowered; peduncle short, sub-terete, provided with 5-6 very prominent bracts, similar to the leaves (probably a result of cultivation). **Flowers** 15, successive, resupinate, green, the sepals with a few purple dots dorsally, apex of the column strongly tinged purple. **Floral bracts** prominent, longer than the ovary, triangular-lanceolate, long-acuminate, amplexicaul. **Ovary** terete, thin, not inflated, smooth. **Sepals** partly spreading, oblong-elliptic, obtuse, 3-veined, margin entire, spreading; dorsal sepal free, lateral sepals obliquely united to the base of the column, oblique. **Petals** partly spreading, free, linear-spatulate, obtuse, 1-veined, margin entire, revoluted. **Lip** united to the column, slightly 3-lobed, base somewhat cordate, margin erose; bicallose, the calli very prominent, erect, trapezoid, laterally compressed; disc with a semi-circular, fleshy, thickening in front of the calli; lateral lobes semi-cordiform; midlobe widely triangular. **Column** straight, thin, long. **Clinandrium-hood** reduced, margin entire. **Rostellum** apical, slit. **Nectary** shallow, without penetrating the ovary, pubescent.

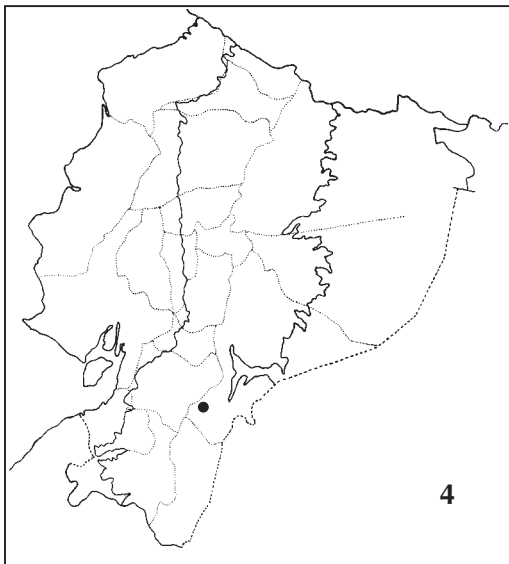
OTHER SPECIMENS: None seen.

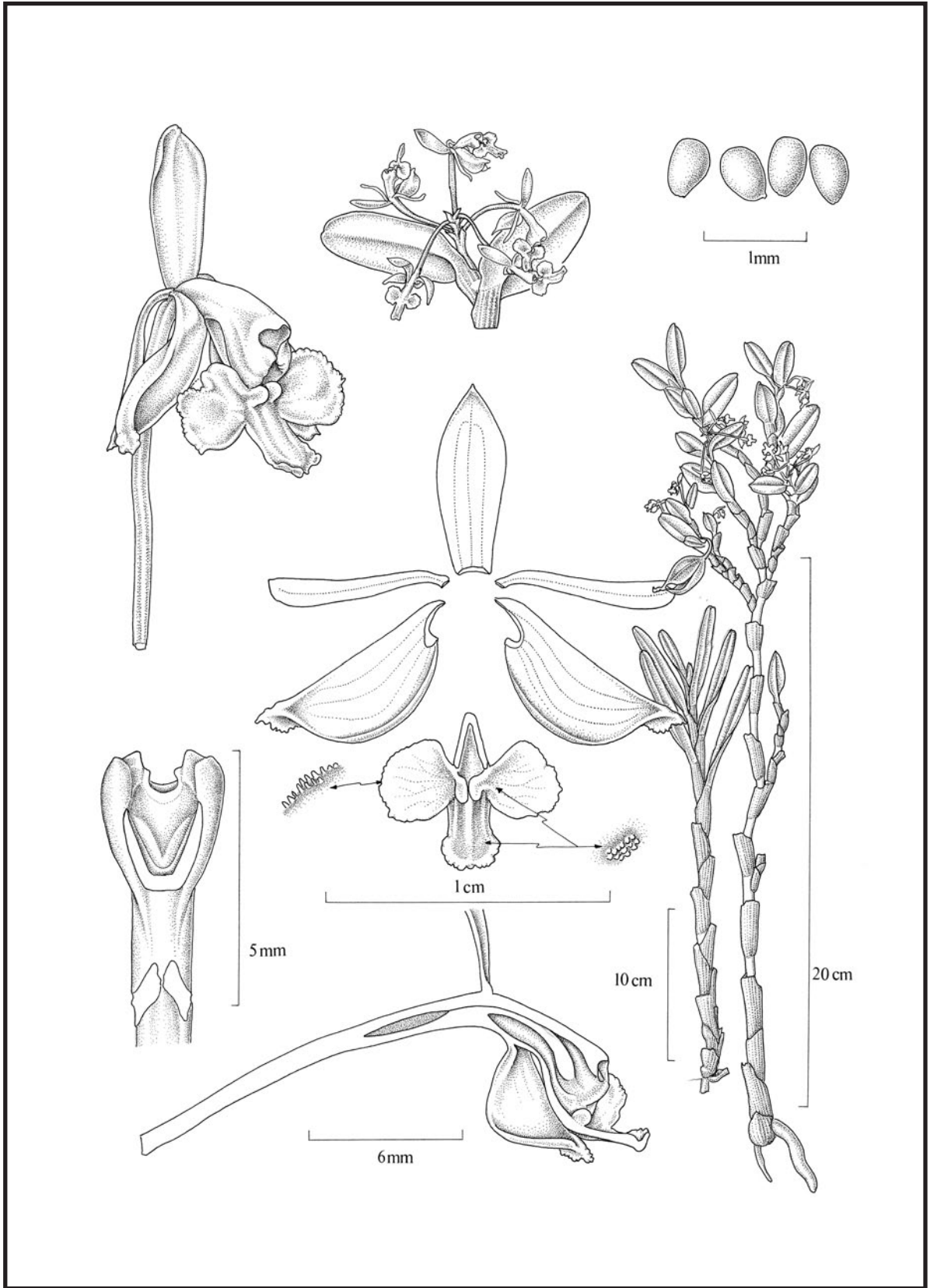
DISTRIBUTION AND ECOLOGY: Known only from the type, from the Amazon slope of the Andes in southern Ecuador, growing at 1600-1800 m altitude. Flowering in March.

RECOGNITION: *Epidendrum fritzimegalotylosum* belongs to the Andean Group, Fritzianum Subgroup characterized by the monopodial stems branched above, the ovate to ovate-elliptic, acute to short-acuminate leaves, lateral sepals obliquely united to the base of the column, and 3-lobed lip. The species is recognized by the elliptic-lanceolate leaves, somewhat arching and unequal in size, the racemose inflorescence with greenish flowers, the apex of the column tinged purple, glabrous sepals 9 mm long, with a few scarce purple dots dorsally, and the lip with a pair of very prominent, erect, trapezoid calli, and a fleshy thickened disc. *Epidendrum fritzianum* Hoehne has ovate-elliptic leaves of equal size, a racemose inflorescence, green flowers strongly marked with purple dots, dorsally verrucose sepals, a bicallose lip, with the disc fleshy thickened.

CONSERVATION STATUS: DD. Data deficient. Known only from the type, a cultivated plant.

ETYMOLOGY: From the Greek *μεγαλο*, large, and *τυλος*, callus, lump, preceded by Fritz, in reference to the similarity of this species with *Epidendrum fritzianum*, but with large calli, which distinguish it.





EPIDENDRUM FRUTICULUM Schltr.

EPIDENDRUM FRUTICULUM Schltr., Repert. Spec. Nov. Regni Veg., Beih. 9: 84. 1921. (as *E. fruticosus*).

Type: PERU: Junín: Berge westlich von Huacapistana, 3000-3100 m, Januar 1903, A. **Weberbauer 2053**. Holotype: B, destroyed. Neotype: (here designated) PERU: Pasco: Paucartambo on road to Yaupi, 3600 m, 20 February 1965, **D. E. Bennett 1415**. F! (Illustration voucher). Isoneotypes: AMES! UC x2! USM!

Hierba litófito, monopodial, ramificada, erecta, 30-55 cm de alto. **Raíces** basales, raras en algunas ramificaciones, carnosas, muy gruesas, 4-6 mm de grosor. **Tallos** profusamente ramificados subapicalmente, tipo caña, lateralmente aplanados, ligeramente sinuosos; el basal 28-35 x 0.3-0.8 cm; las ramificaciones 2.5-16 x 0.2-0.5 cm. **Hojas** del tallo basal no persistentes; en las ramificaciones, distribuidas todo a lo largo de las mismas, alternas, articuladas, dirigidas hacia arriba; vainas infundibuliformes, estriadas, rugosas, 5-38 x 2.8-8.5 mm; lámina oblonga a ovada, ápice redondeado, bilobado, con una quilla dorsal, margen crenulado hacia el ápice, coriácea, lisa; las del tallo basal, 5.3-8 x 0.5-0.8 cm; las de las ramificaciones 1-4.7 x 0.5-1.1 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, florece una sola vez, racemosa, suberecta, corta, ca. 1 cm de largo; pedúnculo corto, terete, delgado, desprovisto de brácteas, 3 mm de largo, raquis oculto casi en su totalidad por las brácteas florales. **Brácteas florales** mucho más cortas que el ovario, lanceoladas, acuminadas, 2-4 mm de largo. **Flores** 8-12, simultáneas, resupinadas, amarillas, sin datos de fragancia. **Ovario** delgado, terete, no inflado, no ornamentado, 7-16 mm de largo. **Sépalos** extendidos, libres, obovados, agudos, 3-nervado, margen entero, 9 x 2.4-4 mm; los **laterales** oblicuos, margen ventral involuto, con una quilla dorsal crenada. **Pétalos** extendidos, libres, lineares, redondeados, 1-nervado, margen entero, 8 x 1-1.5 mm. **Labelo** unido a la columna, trilobado, base profundamente cordada, 4.5-6 x 6.5-8 mm; bicalloso, callos basales, redondeados, alargados hasta la mitad del disco; disco provisto de tres quillas lisas muy bajas; lóbulos laterales obovado orbiculares, redondeados, margen crenulado, 2.7-3.5 x 3-4 mm; lóbulo medio casi tan largo como los laterales, rectangular en la base, ensanchado y redondeado en el ápice submarginado, margen entero en la base a crenado en el ápice, 2.2-3 x 2.1-2.5 mm. **Columna** ligeramente arqueada, delgada, obcónica en el ápice, 5-7 mm de largo. **Clinandrio** reducido, entero. **Antera** no vista. **Polinios** 4, obovoides, lateralmente comprimidos. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** no vistos. **Nectario** poco profundo, sin penetrar del ovario, liso. **Cápsula** elipsoide; pedicelo delgado de 8 x 1 mm, cuerpo 17 x 9 mm, cuello apical 3 x 1 mm.

Lithophytic, monopodial, erect **herb**, branching above. **Roots** basal, few, very thick, rarely from a branch. **Stems** much branched sub-apically, cane-like, laterally compressed, somewhat sinuous, the basal stem larger, the branches progressively smaller. **Leaves** distributed throughout the stems, articulate, erect, sheaths infundibuliform, striated, rugose; blade oblong to ovate, short, apex rounded, bilobed, with a dorsal keel, margin crenulate towards the apex, coriaceous, smooth. **Inflorescence** apical, flowering only once, sub-erect, short, peduncle short, terete, thin, rachis nearly totally hidden by the floral bracts. **Floral bracts** much shorter than the ovary, lanceolate, acuminate. **Flowers** 8-12, simultaneous, resupinate, yellow. **Ovary** thin, terete, smooth. **Sepals** spreading, free, obovate, acute, 3-veined, margin entire, the **laterals** oblique, ventral margin involute, with a dorsal, crenulate keel. **Petals** spreading, free, linear, rounded, margin entire, 1-veined. **Lip** united to the column, 3-lobed, base deeply cordate, bicallose, the keels basal, rounded, reaching the middle of the disc, disc provided with three very low, smooth keels; lateral lobes obovate-orbicular, rounded, margin crenulate; midlobe nearly as long as the laterals, rectangular, at the base, the apex widened and rounded, the apex sub-emarginate, margin entire at the base, crenulate above. **Column** slightly arching, thin. **Clinandrium-hood** reduced, entire. **Pollinia** 4, obovoid, laterally compressed. **Nectary** shallow, without penetrating the ovary. **Capsule** ellipsoid, with a long, thin, pedicel, apical neck short, thin.

OTHER SPECIMENS: PERU: **Amazonas:** Chachapoyas-Celendin, 3000 m, 27 V 1984, *Smith 7176*, AMO! MO! USM! **Cuzco:** Paucartambo, Cerro de Cusilluyoc, 2800-3100 m, 3 V 1985, *Pennell 14127*, AMES! F! NY! **Huánuco:** Sariapampa, 3100 m, 7 V 1947, *Woytkowski 34302*, F! UC! **Pasco:** Huancabamba; Lanturachi-Sta. Bárbara, 2300-3300 m, 3 VII 1985, *Foster 10556*, F! SEL! USM!

DISTRIBUTION AND ECOLOGY: Known only from Cordillera Central in central Peru at 3000-3600 m altitude. Flowering in January to July.

RECOGNITION: *Epidendrum fruticulum* belongs to the Cardiophyllum Group, Soratae Subgroup characterized by the monopodial stem, branching habit, acute to acuminate leaves and infundibuliform sheaths. The species is recognized by the tall plants, short, oblong to ovate, rounded, bilobed leaves, a short, sub-erect inflorescence, the deeply 3-lobed lip, the midlobe rectangular, widened and rounded at the apex which is somewhat emarginate, linear petals and 9 mm long sepals. It is florally nearly identical to *Epidendrum chrysomyristicum* Hágsater & E.Santiago which has narrowly elliptic, acute leaves, a deeply 3-lobed lip, with the midlobe rectangular, twice as long as it is wide and bilobed at the apex with a minute apicule in the middle. *Epidendrum soratae* Rchb.f. has a reniform lip with two small lobules at the apex and 6-7 mm-long sepals, the leaves are narrower, 4-8 mm wide. *Epidendrum cartilaginiflorum* Rchb.f. has a cordiform lip, apex obtuse, rounded, and the sepals are 15-16 mm long. *Epidendrum bolivianum* Schltr. has 13 mm long sepals, non-infundibuliform sheaths, the lip quadrate-reniform in outline. *Epidendrum scopulorum* Rchb.f. is vegetatively similar, but with shorter, sub-parallel branches, adpressed leaves, purple-violaceous flowers, and a cordiform lip.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Latin *fruticosus*, bushy, like a small bush, in reference to the monopodial, bush-like habit of the species. In accordance with article 23.5 of the Saint Louis Code, the ending is hereby corrected to agree grammatically with the generic name.



Authors: E. Santiago & E. Hágsater

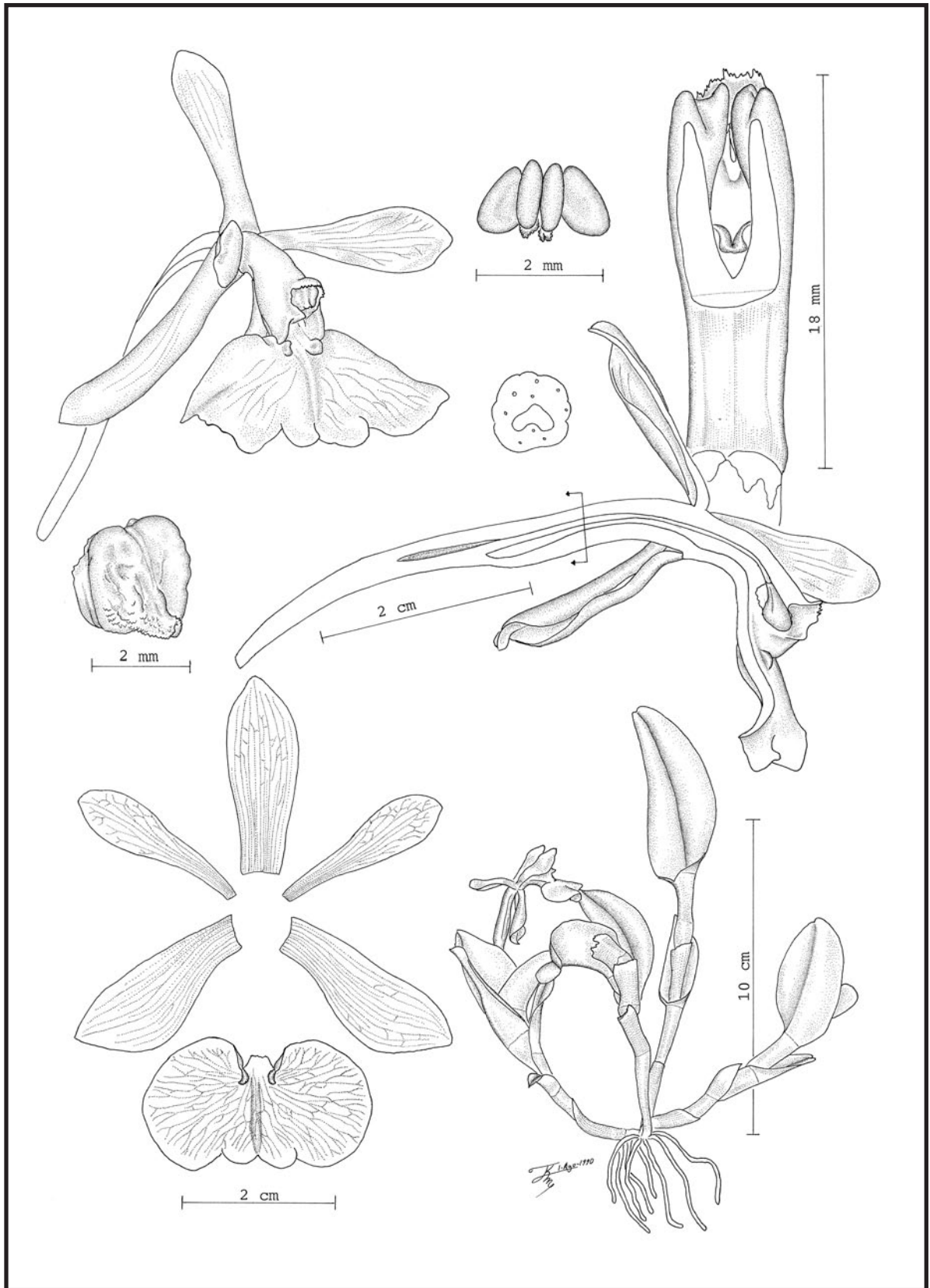
Illustrator: M. López R.

Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009. Plate 1248



EPIDENDRUM GARCIAE Pabst

Plate 1249

EPIDENDRUM GARCIAE Pabst, Bradea 2(14): 82. 1976.

Type: BRAZIL: Bahia: CEPEC (Centro de Pesquisas do Cacau) prope Itabuna, 7 April 1965, **J. García** 5. Holotype: HB!

Synonym: *Neolehmannia garciae* (Pabst) F.Barros, Bol. Mus. Bot. Mun. (Curitubá) (53): 3. 1982.

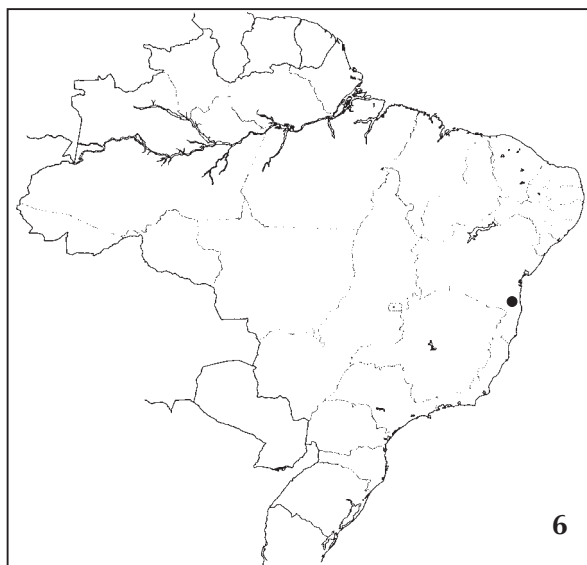
Hierba epífita, simpodial, cespitosa, 10-15 cm de alto. **Raíces** basales, delgadas, 1.7 mm de grosor. **Tallos** sencillos, lateralmente comprimidos, rectos a ligeramente flexuosos, 6-12 x 0.4-0.7 cm. **Hojas** 2-4, distribuidas a lo largo del tallo; vaina tubular hacia la base, lateralmente comprimida hacia el ápice, lisa, 1.0-1.7 cm de largo; lámina foliar anchamente ovada, ápice bilobado, margen entero, extendido, verde, 4.2-7.5 x 2-3.6 cm. **Inflorescencia** apical en el tallo maduro, florece una sola vez, sésil. **Brácteas florales** mucho más cortas que el ovario, triangulares, agudas, 2.0-2.8 x 1.0-1.6 mm. **Flores** 1-2, simultáneas, resupinadas, sépalos y pétalos blanco verdosos, columna verde, labelo blanco; fragancia intensa nocturna y al amanecer. **Ovario** inflado longitudinalmente, terete, no ornamentado, 45-50 x 1.4-2 mm. **Sépalos** coriáceos, reflexos, libres, glabros, redondeados, 7-nervados con numerosas nervaduras originadas de las principales, margen entero, revoluto, 20-22 x 6.5-7.2 mm; el **dorsal** elíptico; los **laterales** oblicuamente obovados, 20-22 x 8-8.5 mm. **Pétalos** coriáceos, paralelos a la columna, espatulados, agudos, 5-nervados con dos nervaduras secundarias y con numerosas nervaduras originadas de las anteriores, margen entero, extendido, 20-22 x 5-6 mm. **Labelo** unido a la columna, transversalmente oblongo, trilobado, 16-17 x 25-29 mm; bicalloso, los callos pequeños, subglobosos, con una carina central; lóbulos laterales semielípticos, margen entero, 6.5-7.3 x 9.3-13.2 mm; lóbulo medio corto sin sobrepasar a los lóbulos laterales, emarginado, formando dos lóbulos semiorbiculares, 1.0-1.7 x 7.5-12.5 mm. **Columna** ligeramente arqueada, delgada, 14-16 x 2.3-3 mm. **Clinandrio** ligeramente sobrepasando el ápice de la columna, entero, margen eroso a ligeramente dentado, 1.5-2 mm de largo. **Antera** subs esférica, con una punta al frente, 4-locular. **Polinios** 4, subiguales, semiovalados, lateralmente comprimidos, subiguales; caudículas suaves y granuladas, más cortas que los polinios; viscidio viscoso, translúcido. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** penetrando 1/4 de la cavidad estigmática. **Nectario** penetrando 1/2 del ovario, presenta algunas gotas de miel al fondo. **Cápsula** no vista.

Epiphytic, sympodial, caespitose **herb.** **Stems** simple, laterally compressed, erect to somewhat flexuose. **Leaves** 2-4, ovate, bilobed, green. **Inflorescence** apical, sessile. **Floral Bracts** shorter than the ovary, triangular, acute. **Flowers** 1-2, resupinate, simultaneous, sepals and petals greenish-white, column green, lip white; fragrance intense, sweet, at night-time and sunup. **Ovary** inflated, terete, unornamented. **Sepals** coriaceous, reflexed, free, glabrous, rounded, 7-veined, margin entire, revolute; the **dorsal** elliptic, the lateral sepals obliquely obovate. **Petals** coriaceous, parallel to the column, spatulate, acute, 5-veined, margin entire, spreading. **Lip** united to the column, transversally oblong, 3-lobed; bicallose, the calli sub-globose, with a central keel; lateral lobes semi-elliptic, entire; midlobe shorter than the lateral lobes, emarginate forming two semi-orbicular lobes. **Column** somewhat arched. **Clinandrium-hood** somewhat surpassing the apex, entire, margin erose-dentate. **Anther** sub-spherical, 4-celled. **Pollinia** 4, sub-equal. **Rostellum** subapical, slit. **Lateral lobes of stigma** penetrating one fourth of the stigmatic cavity. **Nectary** penetrating one half of the ovary, with a few honey drops.

OTHER SPECIMENS: BRAZIL: cult., 11 III 1981, *Ferreira da Silva s.n.*, SP! **Bahia:** Ilhéus, Centro de Pesquisas do Cacau, CEPEC, 13 IX 1965, *Belém 1768*, UB! Ilhéus, Area do CEPEC (Centro de Pesquisas do Cacau) km 22 de Rodovia, Ilhéus/Itabuna, 3 V 1981, *Carvalho 664*, SP! Ilhéus, Area do CEPEC (Centro de Pesquisas do Cacau) km 22 de Rodovia, Ilhéus/Itabuna, 50 m, 1 VII 1981, *Hage 1026*, SP! Prope Itabuna, pressed cult. 16 I 1991, *Hágsater 10258*, AMO! Ibid. pressed cult. 24 IX 1991, HB! Ibid. pressed cult. 24 III 1992, SP! Ibid. pressed cult. 28 IX 1992, MO! Ibid. pressed cult. 9 X 1992, W-R!

OTHER RECORDS: BRAZIL: Bahia, Without locality, *Brieger s.n.*, (Brieger, et al. 1977), as *E. chlorocorymbis* Schltr. Itabuna, prepared 2 VII 1990, *Hágsater 10258*, flowers in spirit, AMO! (Illustration voucher).

DISTRIBUTION AND ECOLOGY: Known only from state of Bahia in eastern Brazil. Epiphyte on cacao trees, growing at 50 m altitude. Flowering from March to July.

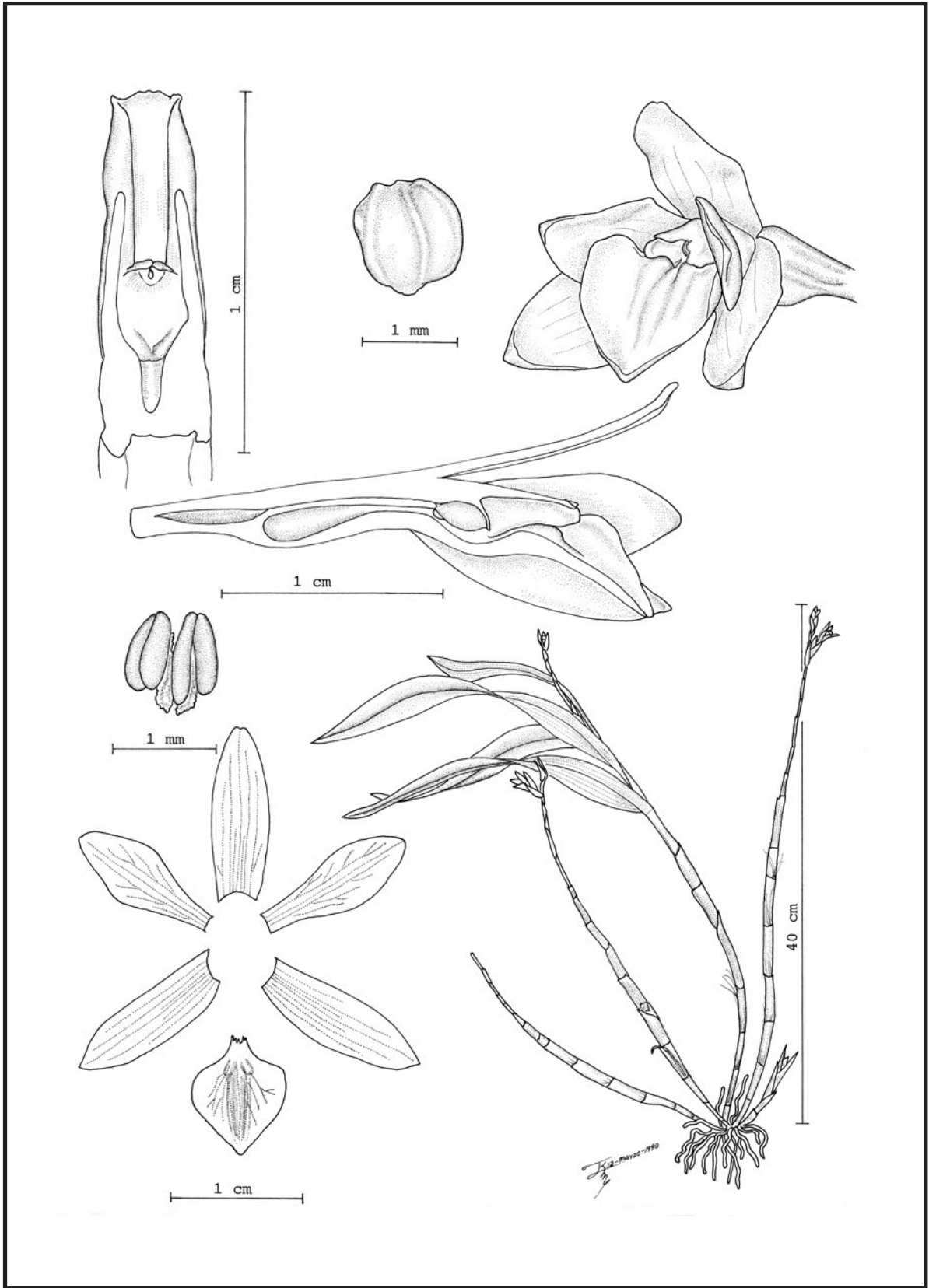


RECOGNITION: *Epidendrum garciae* belongs to the Difforme Group which is characterized by the caespitose, sympodial plants, fleshy, pale green to glaucous leaves, apical inflorescence, sessile, rarely with a short peduncle, one-flowered to corymbose, without spathaceous bracts, fleshy, green to yellowish-green rarely white flowers. The species can be recognized by its laterally compressed stems, single-flowered inflorescence, very sweetly fragrant flower at night and sunup, sepals and petals greenish-white, column green, lip white, spatulate petals, transversely oblong, 3-lobed lip, lateral lobes semi-elliptic, midlobe shorter than the lateral lobes, emarginate forming two semi-orbicular lobes, column somewhat arcuate. Frequently confused with *Epidendrum latilabrum* Lindl., another Brazilian species, which has 2-4, green flowers, lip four times broader than long. *Epidendrum althausenii* A.D.Hawkes from Amazon basin has 1-3, green flowers, a sub-quadrate lip, and prominent clinandrium-hood.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In honor of J. Garcia, the collector of the type.

REFERENCES: Brieger, F. G., R. Maratsch & K. Senghas. 1977. *Die Orchideen (Schlechter)*, 3 ed; 1(9): 523; photo 350.



EPIDENDRUM GENTRYI Dodson

Plate 1250

EPIDENDRUM GENTRYI Dodson, Icon. Plant. Trop. 5: pl. 427. 1982.

Type: ECUADOR: Pastaza: at Tarquí, 15 km E of Puyo, 1000 m, 12 VIII 1978, *Calaway H. Dodson 7262*. Holotype: SEL! Ibid. Hort. SEL, 10 III 1980, *Calaway H. Dodson 9136*. Paratype: SEL!

Hierba epífita o litófito, simpodial, de hasta 40 cm de alto. **Raíces** de la base de la planta, carnosas, delgadas. **Tallos** sencillos, tipo caña, teretes, subarqueados, erectos, ligeramente engrosados hacia la parte media, ligeramente flexuosos, 15 x 0.5 cm. **Hojas** 5, distribuidas hacia la mitad apical del tallo, alternas, articuladas; vainas tubulares, ligeramente estriadas cuando secas, las inferiores no foliosas, fibrosas con el tiempo, 1.2-3.2 cm de largo; lámina elíptica, acuminada, margen entero, desiguales, las apicales gradualmente más grandes, 6-20 x 1.2-2.5 cm. **Bráctea espátacea** ausente. **Inflorescencia** apical, racemosa, con el tiempo se producen racimos nuevos que se originan de la base del racimo anterior, suberecta, 14.2 cm de largo; pedúnculo ancipitoso, elongado, 10.7 cm de largo, cubierto en su totalidad 7 brácteas tubulares, conduplicadas, estriadas, agudas e imbricadas, de 1.5-2.0 x 2.5-5 mm. **Brácteas florales** más largas que el ovario, oblongo elípticas, obtusas, estriadas, margen entero, conduplicadas e imbricadas, 11-16 mm de largo. **Flores** sucesivas, una desarrollándose a la vez, resupinadas, color verde claro; sin fragancia. **Ovario** terete, dilatado ventralmente en el ½ apical, no ornamentado, 12.5-14 mm de largo. **Sépalos** entreabiertos, libres, oblongo elípticos, subagudos, 5-nervados, margen entero, 13-14 x 3.5-4.5 mm. **Pétalos** entreabiertos, libres, obtrulado subespatulados, obtusos, 3-nervados, las nervaduras cortamente ramificadas, margen entero, 12 x 4.5 mm. **Labelo** unido a la columna, entero, anchamente ovado, obtuso, margen entero, 6-8 x 7-8 mm; bicalloso, los callos pequeños, redondeados, con una quilla intercallosa, muy corta, subaguda. **Columna** recta, delgada, 9-10 mm de largo, incluyendo el clinandrio, el cuerpo ocupa 1/3 parte del largo total de la columna. **Clinandrio** prominente, sobrepasando el cuerpo de la columna, tridentado en el ápice. **Antera** elipsoide, 4-locular. **Polinios** 4, obovoides, lateralmente aplanados, el par interior ligeramente más grande; caudículas suaves y granuladas, tan largas como los polinios; viscidio semi líquido. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** de 1/3 de largo de la cavidad estigmática. **Nectario** penetrando 1/2 del ovario, ensanchado hacia la base, no ornamentado. **Cápsula** no vista.

Epiphytic or lithophytic, sympodial **herb**. **Roots** basal, fleshy, thin. **Stems** simple, cane-like, terete, slightly thickened towards the middle, slightly flexuose, sub-arching and erect. **Leaves** 5, distributed towards the apical half of the stem, alternate, articulate; sheaths tubular, slightly striated when dry, the lower ones non foliaceous, fibrous with time; blade elliptic, acuminate, margin entire, unequal, the apical ones larger. **Inflorescence** apical, racemose, producing new racemes with time from the base of the primary raceme, suberect; peduncle ancipitose, elongate, totally covered by 7 tubular, imbricating bracts, similar to the floral bracts but progressively longer towards the base of the peduncle. **Floral bracts** longer than the ovary, oblong-elliptic, obtuse, striated, conduplicate and imbricating, margin entire. **Flowers** successive, one developing at a time, resupinate, light green, without fragrance. **Ovary** terete, inflated ventrally along the apical half. **Sepals** partly spreading, free, oblong-elliptic subacute, 5-veined, margin entire. **Petals** partly spreading, free, obtrullate-subspatulate, obtuse, 3-veined, the veins short-branching, margin entire. **Lip** united to the column, wide-transversely ovate, margin entire; bicallose, the calli small, rounded, with a short, sub-acute, fleshy, intercallose keel. **Column** straight, the body occupies about 1/3 of the total length including the clinandrium. **Clinandrium-hood** prominent, much surpassing the body of the column, apex tridentate. **Anther** ellipsoid, 4-celled. **Pollinia** 4, obovoid, laterally compressed, the inner pair slightly larger; cudicles soft and granulose, as long as the pollinia; viscidium semiliquid. **Rostellum** apical, slit. **Nectary** penetrating ½ the ovary, inflated towards the base, smooth.

OTHER SPECIMENS: ECUADOR: Morona-Santiago: Patuca-Santiago, Cañada Honda, 860 m, 22 XI 1988, *Hágsater 9715*, AMO! (Illustration voucher). Cuenca to Limón, 2100 m, I 1989, *Hirtz 4017*, AMO! MO! **Pastaza:** Veracruz, 900 m, 18 II 1956, *Asplund 19435*, S!

OTHER RECORDS: ECUADOR: Azuay: Arriba de Plan de Milagro, 2100 m, 24 XI 1988, *Hágsater 9726*, flowers in spirit and slide, AMO! Arriba de Plan de Milagro, Reserva, 26 I 2004, hort. Ecuagenera, *Hágsater 14033*, digital photo and illustration, AMO!

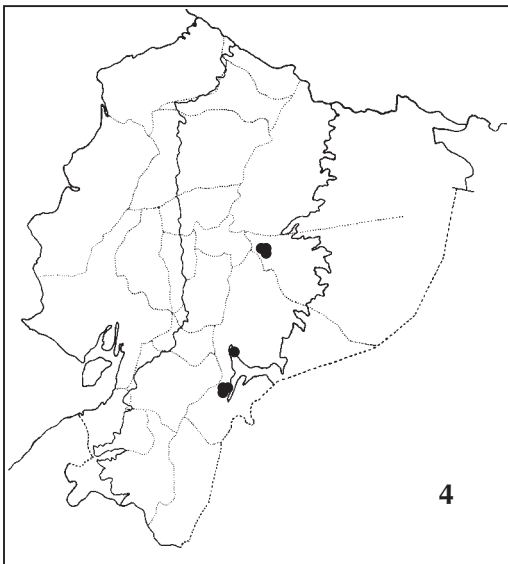
DISTRIBUTION AND ECOLOGY: Known only from the eastern slopes of the Andes in central Ecuador, in sphagnum moss banks growing with *Oncidium harlingii* Stacy and *Epidendrum bractiacuminatum* Hågster & Dodson in upper wet montane forest, between 860 and 2100 m altitude. Flowering from November to February.

RECOGNITION: *Epidendrum gentryi* belongs to the Albertii Group, Ellipsophyllum Subgroup, which is characterized by the caespitose habit, the slightly thickened stems with the leaves distributed throughout the apical half, the apical inflorescence somewhat shorter than the apical leaf and completely covered by imbricating bracts, the flowers produced successively, one at a time, with a very long clinandrium-hood. The species has partly spreading floral segments, the sepals 13-14 mm long, with the lip entire, widely-transversely ovate; the leaves are 6-20 cm long, the inflorescence is longer than the apical leaves; it is restricted to the Amazon slope of the andes in Ecuador. *Epidendrum lagenomorphum* Hágsater & Dodson is quite similar and ranges along the western slope of the Andes in Colombia and Ecuador has shorter floral bracts, narrower petals, and a proportionately longer clinandrium-hood, the body occupying only ¼ of the total length. *Epidendrum salpianthum* Hágsater & Dressler has the inflorescence slightly shorter than the apical leaves, and the flowers trumpet shaped, the apex of the 14-15 mm long sepals clearly reflexed, and the leaves 8-12 x 1.6-2.4 cm. It is similar to *Epidendrum ellipsophyllum*, which has somewhat smaller, straight sepals (10-13 mm long) and much larger plants, with the leaves 12-20 x 2.8-4.8 cm. *Epidendrum hygrophylephilum* Hágsater & E.Santiago from coastal southern Colombia, has larger flowers (sepals 17-18 mm long), large, narrow leaves (7.5-19 x 1.2-2.1 cm) and an ovate, unlobed lip, with the apical half triangular.

CONSERVATION STATUS: DD. Data deficient. The species has been found in the Nature Reserve of Ecuagenera, above Plan de Milagro.

ETYMOLOGY: In honor of Alwyn H. Gentry, who collected and studied the flora of Ecuador and died tragically in an airplane accident there.

REFERENCE: Hágsater, E. & C. H. Dodson. 2001. *Epidendrum lagenomorphum* in *Icones Orch. (Mexico)* 4: pl. 451.



Authors: E. Santiago & E. Hágsater

Illustrator: R. Jiménez M.

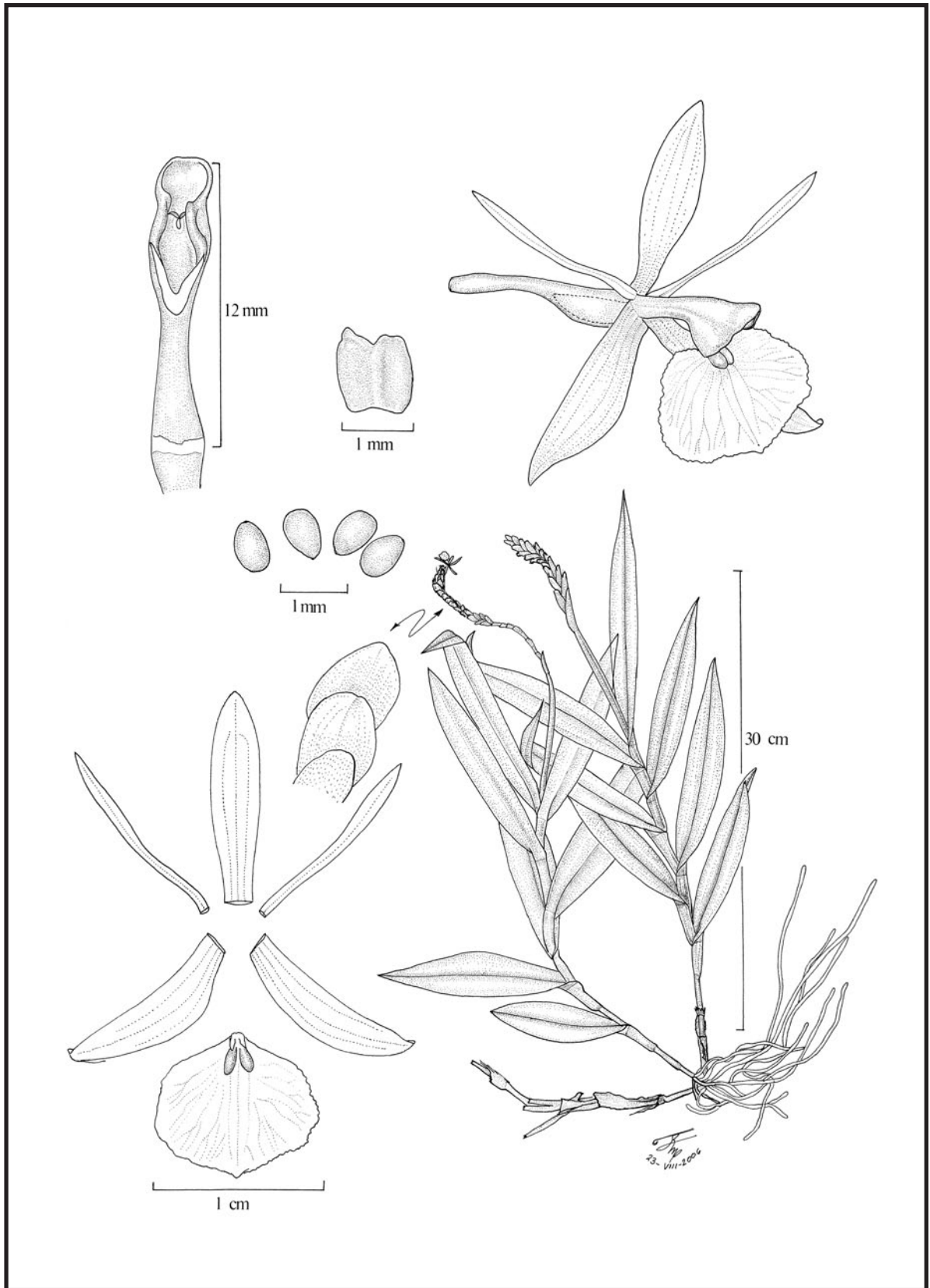
Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009.

Plate 1250



EPIDENDRUM GRAYUMII Hágsater & E.Santiago

Plate 1251

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

Type: COSTA RICA: Heredia: Forest between Río Peje and Río Sardinalito, Atlantic slope of Volcán Barva, 700-950 m, 9 April 1986, **Michael Grayum 6961**. Holotype: MO! (Illustration voucher).

Epidendro lankesteri Ames simile sed floribus aliquantum minoribus, labello elliptico ad basem cuneato, sine carinis et cum margine crenulato, bractearum floralium apice rotundato et sepalis falcatis, distinguitur.

Hierba epífita, simpodial, cespitosa, ca. 50 cm de alto. **Raíces** basales, carnosas, delgadas, de 1-2 mm de grosor. **Tallos** sencillos, tipo caña, teretes en la base a lateralmente aplanados y ancipitosos arriba, erectos, 21-23 x 0.2-0.8 cm. **Hojas** 7, distribuidas a lo largo del tallo, alternas, articuladas, suberectas; vainas tubulares, algo expandidas en el ápice sin llegar a ser infundibuliformes, estriadas, ancipitosas, teñidas de púrpura, 20-30 mm de largo; lámina angostamente elíptica, largamente acuminada, margen entero, 8.5-17 x 2-3 cm. **Bráctea espátácea** 1, en el ápice del pedúnculo, lanceolada, aguda, ancipitosa, tubular en la base y conduplicada en el ápice, 2.7 cm de largo. **Inflorescencia** apical, racemosa, pluriflora, erecta, 16-20 cm de largo; pedúnculo, recto, ancipitoso, bialado, las alas gradualmente más angostas hacia el ápice, 9-10 cm de largo; raquis oculto en su totalidad por las brácteas florales, 7-12 cm de largo. **Brácteas florales** algo más cortas que el ovario, ovado-elípticas, ápice redondeado, conduplicadas, imbricadas, persistentes en el raquis aún sin flores, 10-13 x 6-8 mm. **Ovario** terete, delgado, inflado ventralmente en la mitad apical, no ornamentado, 16 mm de largo. **Flores** sucesivas, 1 abierta a la vez, resupinadas, blanco verdosas con los sépalos teñidos de púrpura; sin datos de fragancia. **Sépalos** extendidos, libres, obtusos, 3-nervados, margen entero, extendido, 11-12 x 2.5-3 mm; el **dorsal** oblanceolado; los **laterales** oblicuamente oblongos, falcados, dorsalmente apiculados. **Pétalos** extendidos, libres, lineares, agudos, 1-nervados, ligeramente oblicuos, margen entero, extendido, 12 x 1 mm. **Labelo** unido a la columna, entero, elíptico, cuneado en la base, ápice redondeado, incipientemente apiculado, margen crenulado, extendido, 8 x 10 mm; bicalloso, callos subglobosos, pequeños; disco desprovisto de quillas. **Columna** recta, delgada en la mitad basal y verticalmente ensanchada en la mitad apical, 12 mm de largo. **Clinandrio** prominente, (sobrepasando ligeramente el cuerpo de la columna), margen entero. **Antera** reniforme, 4-locular. **Polinios** 4, obovoides. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** no vistos. **Nectario** penetrando 1/2 del ovario, ligeramente inflado, liso. **Cápsula** no vista.

Epiphytic, sympodial, caespitose, **herb. Roots** basal, fleshy, thin. **Stems** simple, cane-like, terete at the base, laterally compressed, and ancipitose above, erect. **Leaves** 7, distributed throughout the stem, alternate, articulate, sub-erect; sheaths tubular, somewhat expanded at the apex, without being infundibuliform, striated, ancipitose, tinged purple; blade narrowly elliptic, long acuminate, margin entire. **Spathaceous bract** 1, at the apex of the peduncle, lanceolate, acute, ancipitose, tubular at the base, apically conduplicate. **Inflorescence** apical, racemose, many-flowered, erect; peduncle straight, ancipitose, two-winged, the wings gradually narrower towards the apex; rachis totally hidden by the floral bracts. **Floral bracts** somewhat shorter than the ovary, ovate-elliptic, apex rounded, conduplicate, imbricating, persistent on the rachis after flowering. **Ovary** terete, thin, ventrally inflated along the apical half, smooth. **Flowers** successive, a single flower open at one time, resupinate, greenish white, the sepals tinged purple. **Sepals** spreading, free, obtuse, 3-veined, margin entire, spreading; the dorsal sepal oblanceolate, lateral sepals obliquely oblong, falcate, dorsally apiculate. **Petals** spreading, free, linear, acute, 1-veined, slightly oblique, margin entire, spreading. **Lip** united to the column, entire, elliptic, base cuneate, apex rounded, slightly apiculate, margin crenulate, spreading; bicallose, the calli sub-globose, small, disc without keels. **Column** straight, basal half thin, the apical half progressively vertically thickened. **Clinandrium-hood** prominent, slightly surpassing the body of the column, margin entire. **Anther** reniform, 4-celled. **Pollinia** 4, obovoid. **Rostellum** sub-apical, slit. **Nectary** penetrating 1/2 of the ovary, slightly inflated, smooth.

OTHER SPECIMENS: COSTA RICA: Without locality data, *Endres 184*, W-R 10549!

DISTRIBUTION AND ECOLOGY: Known only from the upper Atlantic slope of the Cordillera Central in Costa Rica, epiphytic, at 700-950 m altitude. Flowering in April, probably throughout the year, since the flowers are successive.

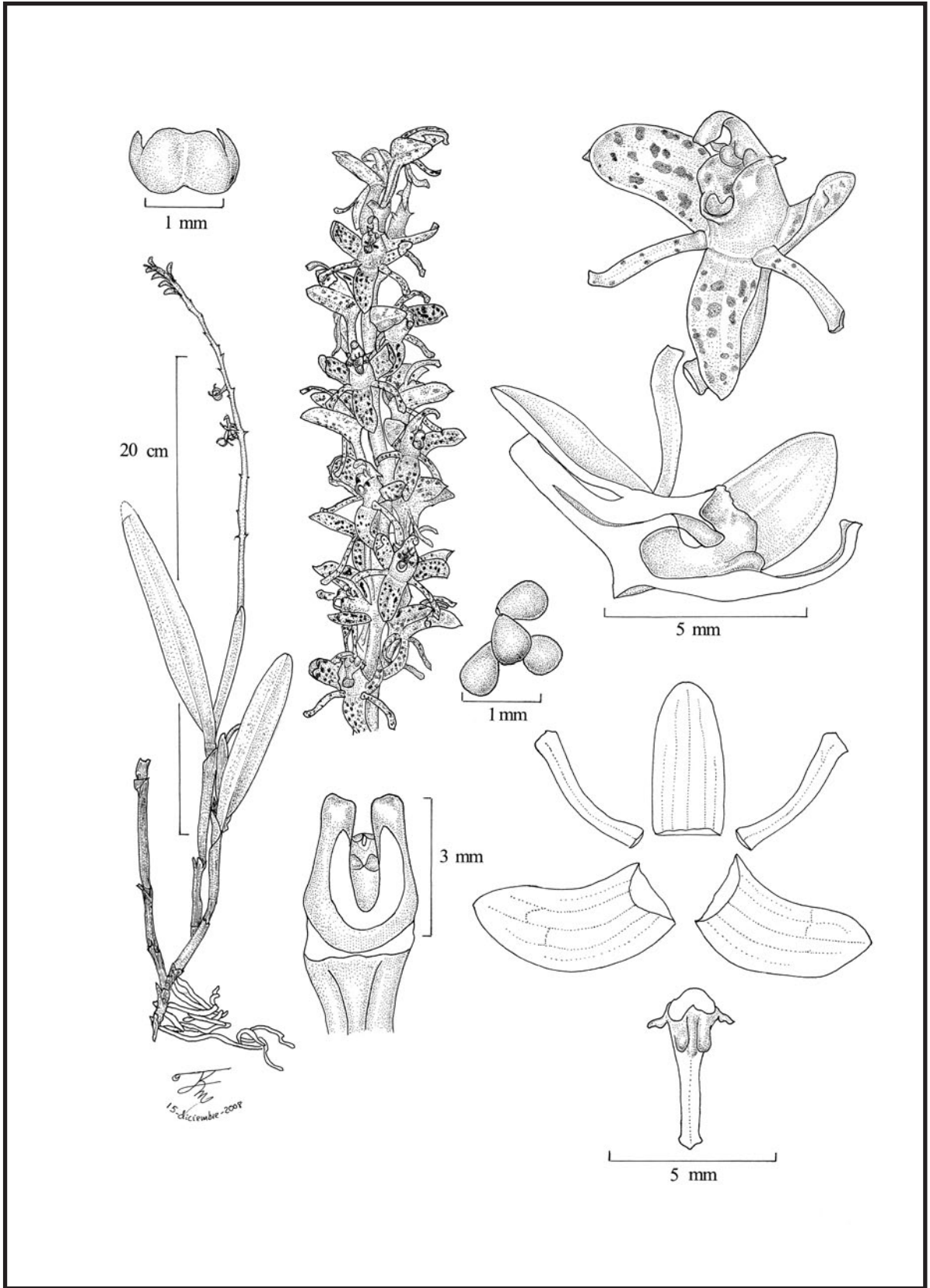
RECOGNITION: *Epidendrum grayumii* belongs to the Albertii Group which is characterized by the sympodial habit, laterally compressed to ancipitose or somewhat fusiform-thickened stems, the apical or apical and lateral racemose, distichous inflorescence more or less with imbricating bracts on the peduncle, producing one flower at a time, and the Allenii Subgroup which is characterized by the stems with numerous leaves, the apical inflorescence (rarely lateral), peduncle elongate, bare, non-bract bearing, two-winged, the rachis short, covered by rounded, usually imbricating,



bracts. The species is recognized by the 50 cm tall plants with narrowly elliptic, acuminate leaves, greenish white flowers somewhat tinged purple, sepals 11-12 mm long, the elliptic lip cuneate at the base, the margin crenate, with a pair of small calli and without keels. *Epidendrum lankesteri* Ames has somewhat larger flowers, sepals 13-16 mm long, a sub-cordate lip with 3 evident keels, the margin entire. *Epidendrum maduroi* Hágsater & García-Cruz has apical and lateral inflorescences, bronze to greenish colored flowers, peduncle covered by 1-3 bracts, sepals 11-15 mm long, a sub-reniform lip with 3 low keels.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In honor of Michael H. Grayum, (1949-) Curator at the Missouri Botanical Garden, specialist in Araceae, who collected the type, among many other plants, especially in Mesoamerica.



EPIDENDRUM HAMATUM (Garay) Dressler

EPIDENDRUM HAMATUM (Garay) Dressler, Phytologia 21(7): 441. 1971.

Basionym: *Stenoglossum hamatum* Garay, Orquideología 4 (2): 72. 1969.

Type: COLOMBIA: "Cundinamarca*: Supatá y San Francisco," 1500-2000 m, 11 November 1956, *M. Ospina-Hernández 22"A'*. Holotype: AMES 86296!

Hierba simpodial, cespitosa a rastrera, epífita, 31.5-35.0 cm de alto incluyendo la inflorescencia. **Raíces** de la base de cada tallo, delgadas, carnosas, 1.3-1.7 mm de grosor. **Tallo** tipo caña, producido de los nudos inferiores del tallo anterior, 0.8-1.0 cm arriba de la base, erectos, rectos, teretes en la base, lateralmente aplanados hacia el ápice, 7-9 x 0.15-0.20 cm; cubierto en la base por 1-2 vainas no foliosas, escariosas, iguales a las foliares, estriadas y finamente rugosas. **Hojas** 1 raramente 2, agregadas en el ápice del tallo; vainas foliares tubulares, estriadas, lisas a finamente rugosas en seco, 20-45 mm de largo; lámina elíptico lanceolada oblonga, ápice obtuso, aristado, margen entero, 8-11 x 1.2-1.7 cm. **Bráctea espatácea** 1 raramente 2, ancipitosa, oblonga, aguda, aristada, 3.0-8.3 x 0.8-1.0 cm. **Inflorescencia** apical, racemosa, cilíndrica, generalmente densa, 8-23 cm de largo; el pedúnculo erecto, 8.5-9 cm de largo, cubierto de 1/2 a 3/4 por las brácteas espatáceas, el raquis ligera a completamente arqueado, 14-15 cm de largo. **Flores** 25-28, simultáneas, no resupinadas, sépalos, pétalos y labelo blanco cremosos a blanco verdosos con puntos rojo púrpura, columna blanca a verde con puntos rojo púrpura principalmente alrededor del clinandrio y en las prominencias laterales; fragancia no registrada. **Brácteas florales** mucho más cortas que el ovario, triangulares, agudas, 1.2-2.0 mm de largo. **Ovario** corto, no inflado, 3.5-5.0 mm de largo. **Sépalos** elípticos, obtusos, 5-nervados, margen entero, 4.5-9 x 2.0-2.5 mm; el dorsal reflexo; los laterales paralelos a la columna, oblicuos. **Pétalos** extendidos, lineares, con el ápice dilatado, espatulados, redondeado a truncado, 1-nervados, margen entero, 4.2-7.0 x 0.3-1.0 mm. **Labelo** unido a la columna, trilobado, base redondeada, 4-9 x 0.3-0.5 mm; bicalloso, los callos alargados, separados por una carina central prominente en ocasiones ligeramente más larga que los callos; lóbulos laterales diminutos, hamatos, agudos, enteros; lóbulo medio linear filiforme, con el ápice sagitado a romboide, agudo a redondeado. **Columna** muy corta, gruesa, con dos alas prominentes laterales, redondeadas; 2.7-3.0 mm de largo. **Clinandrio** corto, entero, margen ondulado. **Antera** reniforme, 4-locular. **Polinios** 4, obovoides, algo lateralmente comprimidos, caudículas suaves y granuladas; viscidio viscoso, translúcido. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** prominentes, penetrando 1/2 de la cavidad estigmática. **Nectario** muy amplio y corto, redondeado, sin penetrar el ovario, no ornamentado. **Cápsula** no vista.

Sympodial, caespitose to creeping epiphytic **herb**. **Roots** from the base of each stem, thin, fleshy. **Stem** cane-like, produced from the lower nodes of the previous stem, erect, straight, terete towards the base, laterally compressed towards the apex, the base covered by 1-2 non-foliar, scarioses sheaths, similar to the foliar sheaths, striated, minutely rugose. **Leaves** 1, rarely 2, aggregate at the apex of the stem; foliar sheaths tubular, striated, smooth to minutely rugose when dry; blade lanceolate-elliptic oblong, apex obtuse, aristate, margin entire. **Spathaceous bracts** 1 or rarely 2, ancipitose, oblong, acute, aristate. **Inflorescence** apical, racemose, cylindrical, generally densely-flowered; peduncle erect, 1/2 to 3/4 covered by the spathaceous bracts; rachis slightly to completely arching. **Flowers** 25-28, simultaneous, non-resupinate, sepals, petals and lip creamy white to greenish white with purple-red dots; column white to green with purple-red dots mainly around the clinandrium, and the lateral wings. **Floral bracts** much shorter than the ovary, triangular, acute. **Ovary** short, not inflated. **Sepals** elliptic, obtuse, 5-veined, margin entire; the dorsal sepal reflexed, the lateral sepals parallel to the column, oblique. **Petals** spreading, linear, the apex dilated, spatulate, rounded to truncate, 1-veined, margin entire. **Lip** united to the column, 3-lobed, base rounded; bicallose, the calli elongate, separated by a prominent mid keel, often longer than the calli; lateral lobes minute, hamate, acute, entire; midlobe linear-filiform, the apex sagitate to rhomboid, acute, to rounded. **Column** very short, thick, with prominent, lateral, rounded wings. **Clinandrium-hood** short, entire, margin undulate. **Anther** reniform, 4-celled. **Pollinia** 4, obovoid, somewhat laterally compressed, caudicles soft and granulose; viscidium viscous, translucent. **Rostellum** apical, slit. **Nectary** very wide and short, rounded, without penetrating the ovary, smooth.

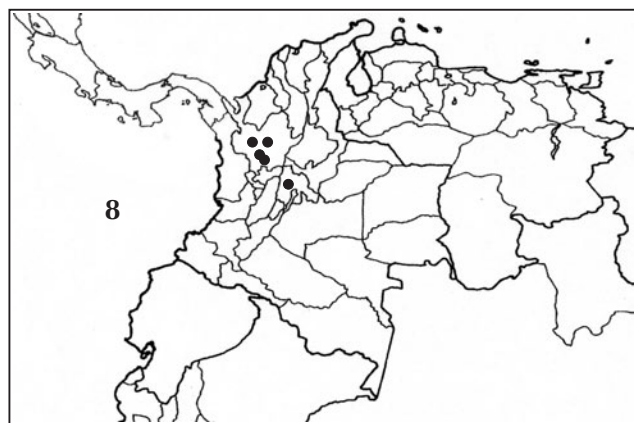
OTHER SPECIMENS: COLOMBIA: Without locality, cult. Colomborquideas, *Escobar 5104*, AMO! **Antioquia:** Medellín, Cerca de Santa Helena, camino entre Medellín y Río Negro, ca. 2500 m, 2 X 1947, *Barkley 4*, AMES! New Grenada, Medellín, *Patin s.n.*, W-R! La Ceja, "El Tambor", 2330 m, 1 IX 1971, *Ortiz 532*, HPUJ! Abriaqui, 1 1971, *Ortiz 4184*, HPUJ!

OTHER RECORDS: COLOMBIA: Without locality, cult. Medellín, XI 1966, photo by R. Escobar, slide color AMO! *Ibid.* cult. Colomborquideas, *Escobar 5104* (Illustration voucher!) flowers in spirit, AMO! Color slide AMO! **Antioquia:** Abejorral, al oriente del departamento de Antioquia, 1800 m, *Duque 1188*, color slide AMO! Medellín, *Patin s.n.*, W-R! La Ceja, "El Tambor", 2330 m, 1 IX 1971, *Ortiz 532*, illustration HPUJ! slide AMO! color slide AMO!

DISTRIBUTION AND ECOLOGY: Known only from Colombia, on the Cordillera Central, around Medellín. Epiphytic at 1800-2330 m altitude. Flowering from September to November.

***NOTE:** The type is reportedly from near Bogotá, but as no other specimen has been recorded from the area, we think it may correspond to a mislabeled specimen. The locality on the holotype has been erased on the holotype, and the collection number is only "22".

RECOGNITION: *Epidendrum hamatum* belongs to the Mancun group which is characterized by the sympodial habit, few-leaved stems, racemose inflorescence with 1-2 ancipitose, long, spathaceous bracts with parallel sides, and *Stenoglossum* Subgroup which has non resupinate flowers, a short column, the lip entire, linear, or 3-lobed and then the midlobe linear. The species can be recognized by the 1-2-leaved stems, the creamy to greenish white flowers with purple-red dots, linear petals, the apex dilated, spatulate, 3-lobed lip, the lateral lobes minute, hamate, and the linear-filiform midlobe with the apex sagitate to rhomboid. It is similar to *Epidendrum coryophorum* (Kunth) Rchb.f. which is widespread from the Cordillera Central in Colombia through the Cordillera oriental in Ecuador, has purple-red flowers, generally with the apical third white to greenish white, large petals, entire, linear, ecallose lip. *Epidendrum cylindrostachys* Rchb.f. is superficially similar, has resupinate flowers, the lip membranaceous and not reduced, spreading sepals and petals, the lateral lobes of the lip falcate, the midlobe with a narrow, lanceolate-ligulate, fleshy isthmus, and the apex obtuse to retuse, the column 5.5-6 mm long.



CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Latin *hamatus*, hooked at the tip, in reference to the narrow linear midlobe of the lip which is curved inwards towards the tip.

Authors: L. Sánchez S. & E. Hágater

Illustrator: R. Jiménez M.

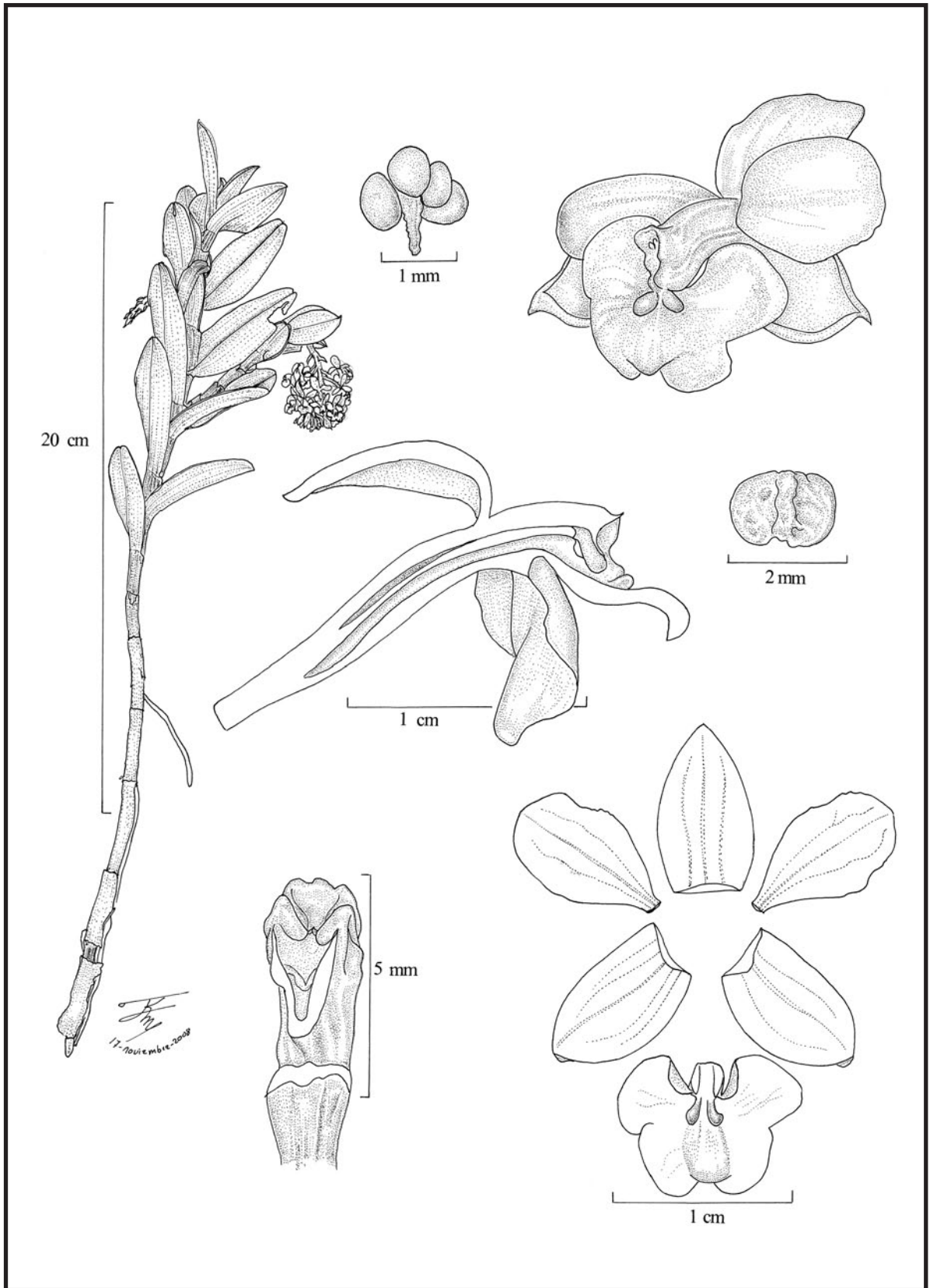
Editors: E. Hágater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009.

Plate 1252



EPIDENDRUM HELICONAËNSE Hágsater & E.Santiago

Plate 1253

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

Type: COLOMBIA: Cundinamarca: Summit of Cordillera de Helicon, 13 km southeast of Gachalá, 15 km northwest of Medina, 2930 m, 23 September 1944, **Martín L. Grant 10253**. Holotype: US! (Illustration voucher). Isotype: CAS x2! NY! WIS!

Epidendrum cornicallosi Foldats simile sed inflorescentia valde densa multiflora, floribus minoribus et labelli margine patenti, recedens.

Hierba terrestre, monopodial, ramificada, ca. 180 cm de alto. **Raíces** producidas a lo largo de algunos entrenudos basales del tallo principal, carnosas, gruesas, blancas, 2-4 mm de grosor. **Tallos** tipo caña, teretes, ramificados arriba; el tallo principal de ca. 180 x 0.7-1.2 cm, las ramificaciones ca. 20 x 0.4-1.0 cm; cubiertos en la base por vainas tubulares no foliáceas, estriadas, rugosas, parcialmente imbricadas, 9-15 mm de largo. **Hojas** más de 12 en el tallo principal, 6-7 en las ramas, distribuidas en la mitad apical de los tallos, dísticas, articuladas, erecto extendidas, coriáceas; vainas tubulares, rugosas, estriadas, 0.6-3 x 0.5-1.3 cm; lámina elíptica, ápice redondeado y ligeramente bilobado, margen entero, extendido; las del tallo principal mayores, 6-9 x 2.5-3 cm; las de las ramas 1.5-4 x 1.6-2.2 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, florece una sola vez, arqueado nutante, pluriflora, muy densa, 4.5-7 cm de largo; pedúnculo corto, lateralmente aplanado, 1.5 cm de largo; provisto en la parte media de una bráctea, triangular lanceolada, aguda, abrazadora, 7 mm de largo. **Brácteas florales** más cortas que el ovario, triangular ovadas, cortamente acuminadas, 4-8 mm de largo. **Flores** 20-30, la mayoría abierta de manera simultánea, resupinadas, carnosas, amarillo pálido tornándose pardo amarillentas con la edad; sin datos de fragancia. **Ovario** terete, delgado, no inflado, no ornamentado, 13-15 mm de largo. **Sépalos** extendidos, libres, muy carnosos, glabros, obtusos, 3-nervados, margen entero, extendido, 9 x 5 mm; el **dorsal** ovado; los **laterales** elípticos, con una quilla dorsal diminuta. **Pétalos** extendidos, libres, anchamente espatulado obovados, redondeados, 3-nervados, margen subentero, extendido, 9 x 5.5 mm. **Labelo** unido a la columna, trilobado, ligeramente convexo, margen entero, revoluto, 8 x 10 mm; bicalloso, los callos subglobosos, ligeramente divaricados; disco con una quilla intercallosa, engrosada, muy carnosa y alargada hasta el ápice de la lámina; lóbulos laterales subreniformes, 4 x 5 mm; lóbulo medio transversalmente rectangular, bilobado en el ápice y anchamente mucronado, 4.2 x 7.3 mm. **Columna** arqueada, gruesa, 5 mm de largo. **Clinandrio** prominente (aunque sin sobrepasar el ápice de la columna), en forma de embudo, margen eroso. **Antera** no vista. **Polinios** 4, obovoides, lateralmente comprimidos; caudículas del doble del largo de los polinios. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** prominentes, ocupando la mitad del largo de la cavidad estigmática. **Nectario** penetrando más de la mitad del ovario, no inflado, no ornamentado. **Cápsula** no vista.

Terrestrial, monopodial **herb**, branching sub-apically. **Roots** produced from the basal internodes of the main stem, fleshy, thick, white. **Stems** cane-like, terete, branching above, the main stem much longer than the branches. **Leaves** more than 12 on the main stem, 6-7 on the branches, distributed along the apical half of the stems, distichous, articulate, erect-spreading, coriaceous; sheaths tubular, rugose, striated; blade elliptic, apex rounded to slightly bilobed, margin entire, spreading; those of the main stem about twice as large as those of the branches. **Inflorescence** apical, racemose, flowering only once, arching-nutant, densely many-flowered; peduncle short, laterally compressed, provided with a triangular-lanceolate, acute bract in the middle. **Floral bracts** shorter than the ovary, triangular-ovate, short-acuminate. **Flowers** 20-30, the majority open simultaneously, resupinate, fleshy, pale yellow, turning yellowish brown with age. **Ovary** terete, thin, not inflated, smooth. **Sepals** spreading, free, very fleshy, glabrous, obtuse, 3-veined, margin entire, spreading; the dorsal sepal ovate, the lateral sepals elliptic, with a minute dorsal keel. **Petals** spreading, free, widely spatulate-obovate, rounded, 3-veined, margin sub-entire, spreading. **Lip** united to the column, 3-lobed, slightly convex, margin entire, revolute; bicallose, the calli sub-globose, slightly divaricate; disc with a single thickened, very fleshy keel reaching the apex of the lip; lateral lobes sub-reniforme, midlobe transversely rectangular, apex bilobed and widely mucronate. **Column** arching, thick, short. **Clinandrium-hood** prominent (though not surpassing the body of the column), funnel-shaped, margin erose. **Pollinia** 4, obovoid, laterally compressed; caudicles twice as long as the pollinia. **Rostellum** sub-apical, slit. **Nectary** penetrating more than half the ovary, not inflated, smooth.

OTHER SPECIMEN: None seen.

DISTRIBUTION AND ECOLOGY: Known only from northeastern Colombia, from the Cordillera de Helicon, a branch of the Cordillera Oriental, terrestrial, at 3000 m altitude. Flowering in September.

RECOGNITION: *Epidendrum heliconaeense* belongs to the Andean Group, Cernuum Subgroup, characterized by the monopodial branching habit, cane-like stems, branching sub-apically, the branches shorter than the main stem, leaves coriaceous to sub-coriaceous and fleshy flowers, the lip 3-lobed. The species is recognized by the elliptic, apically rounded leaves, densely many flowered inflorescence, small, yellow to brownish yellow flowers (sepals 9 mm long), wide floral segments, 5 mm long column, and 3-lobed lip, with a very fleshy, low, wide keel. *Epidendrum cornicallosum* Foldats has larger flowers (sepals 21-26 mm long), and the margin of the lip revolute. *Epidendrum pazii* Hágsater, of the Renilabium Subgroup is vegetatively very similar, but the flowers are creamy green, larger (sepals 21 mm long), and the entire lip, reniform.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In reference to the Cordillera de Helicon, where the species has been collected.



Authors: E. Hágsater & E. Santiago

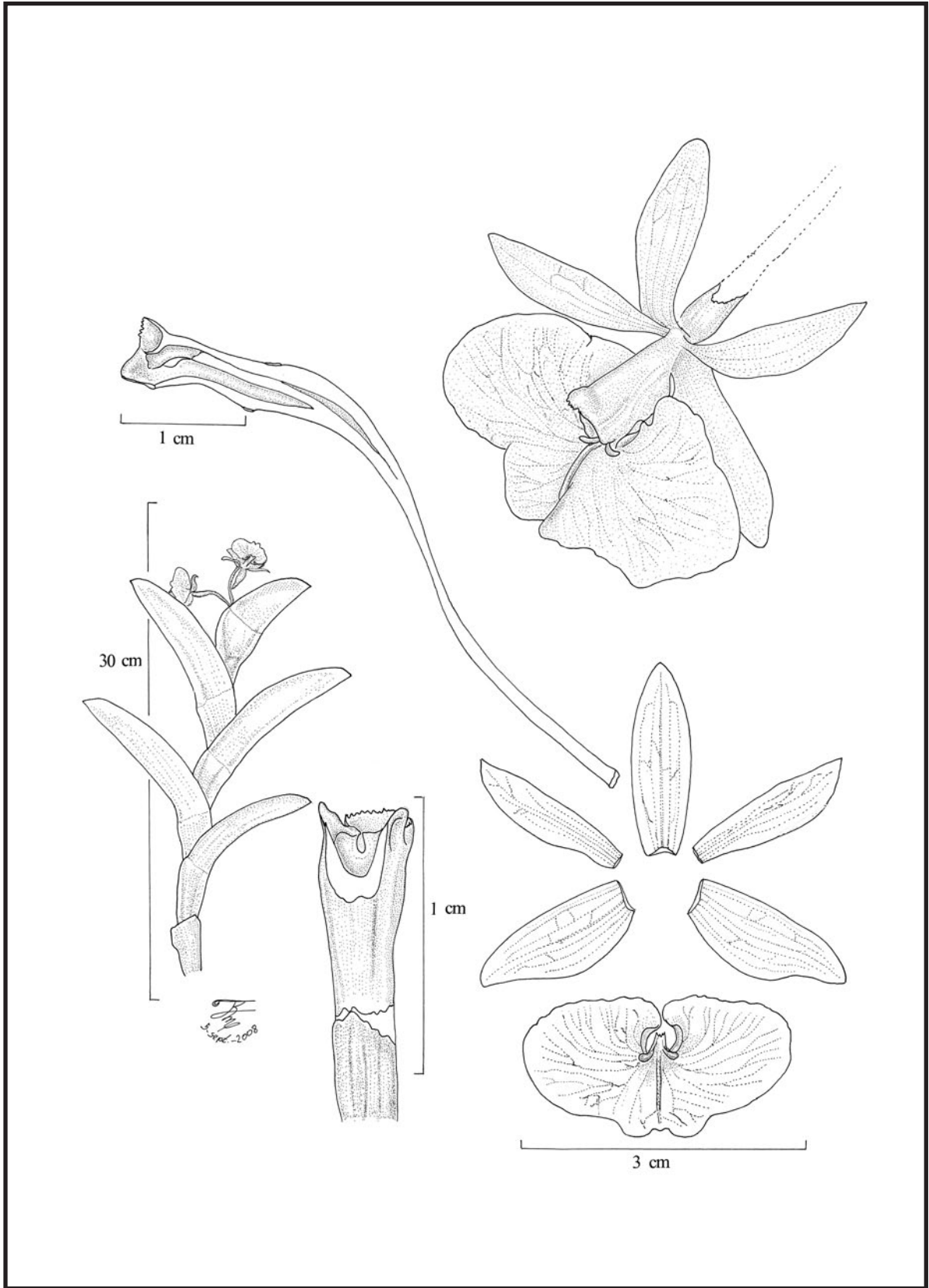
Illustrator: R. Jiménez M.

Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009. Plate 1253



EPIDENDRUM HOLTONII Hágsater & L.Sánchez

Plate 1254

EPIDENDRUM HOLTONII Hágstater et L.Sánchez, *sp. nov.*

Type: COLOMBIA: [Valle del Cauca]: Neogranadina-Quindiensis: Las Playas. Circum Flumen Tuluam, 15 September 1853, **I. F. Holton s.n.** Holotype: NY! (Illustration voucher).

Epidendro yaracuensis Carnevali & G.A.Romero simile sed foliis acutis, floribus aliquantum minoribus, labello duplo latiore quam longiore, base margine undulato et profunde cordato, lobulo medio cum sinu amplo et apiculato, callis prominentibus elongatis divergentibus, columna recta, distinctum.

Hierba epífita, simpodial, cespitosa, 23-26 cm de alto incluyendo la inflorescencia. **Raíces** basales, carnosas, delgadas, 1.0-1.8 mm de grosor. **Tallos** sencillos, tipo caña, ancipitosos, rectos, 21.5 x 1-2.1 cm. **Hojas** 5-6, equidistantes a lo largo del tallo; vaina foliar ancipitosa, lisa, 2-3 cm de largo; lámina foliar elíptica, ápice aguado, lisa, carina dorsal prominente, coriácea, margen entero, 4.5-10 x 3-4.6 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical en el tallo maduro, subcorimbosa, florece una sola vez, sésil. **Bráctea floral** mucho más pequeña que el ovario. **Flores** 4-5, resupinadas, simultáneas, verdes. **Ovario** liso, no ornamentado, terete, ligeramente engrosado hacia el perianto, 35-45 mm de largo. **Sépalos** extendidos, libres, subcoriáceos, elípticos, obtusos, glabros, 5-nervados, margen entero, revuelto, 18-20 x 4.5-7.0 mm, los **laterales** oblicuos, con 5-nervaduras principales y dos nervaduras laterales más cortas y delgadas siendo en total 7-nervados. **Pétalos** extendidos, oblanceolado espatulados, agudos, margen entero, extendido, 5-nervados, las nervaduras laterales menores, 18.0-18.5 x 4.5-5 mm. **Labelo** unido a la columna, entero, transversalmente elíptico reniforme, oscuramente trilobado en el ápice, profundamente cordado en la base, margen entero, ondulado en la base, 15 x 30 mm; bicalloso, los callos pequeños, alargados, divergentes, con una quilla central ligeramente engrosada; lóbulos laterales elípticos, lóbulo medio muy pequeño, con un seno amplio y apiculado en el ápice, formando dos lóbulos cortos y redondeados. **Columna** recta, 10 mm de largo. **Clinandrio** truncado al mismo nivel del ápice de la columna, recto, margen diminutamente dentado. **Antera** no vista. **Polinios** no vistos. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** de casi la mitad de la cavidad estigmática. **Nectario** penetrando el ovario ligeramente detrás del perianto. **Cápsula** no vista.

Epiphytic, sympodial, caespitose **herb.** **Roots** basal, fleshy, thin. **Stems** simple, cane-like, ancipitose, straight. **Leaves** 5-6 distributed throughout the stem; sheath ancipitose, smooth; blade elliptic, apex acute, with a prominent dorsal keel, coriaceous, margin entire. **Inflorescence** apical, from the mature stem, flowering only once, sub-corymbose, sessile. **Floral bracts** much shorter than the ovary. **Flowers** 4-5, resupinate, simultaneous, green. **Ovary** smooth, terete, slightly thickened towards the apex. **Sepals** spreading, free, elliptic, obtuse, glabrous, sub-coriaceous, margin entire, revolute, 5-veined; the laterals oblique, 5-veined with 2 secondary veins. **Petals** spreading, oblanceolate-spatulate, acute, margin entire, spreading, 5-veined, the lateral veins shorter. **Lip** united to the column, entire, transversely elliptic-reniform, base deeply cordate, apex obscurely 3-lobed, with a wide sinus, apiculate, margin entire, undulate at the base; bicallose, the calli small, elongate, divergent, with a thin central, slightly thickened keel; lateral lobes elliptic, midlobe very small, with a wide sinus, apiculate, forming two short, rounded lobes. **Column** straight. **Clinandrium-hood** straight, truncate, reaching the apex of the column, margin minutely dentate. **Rostelum** apical, slit. **Nectary** penetrating the ovary slightly behind the perianth.

OTHER SPECIMENS: None seen.

OTHER RECORDS: Illustration by *Bruno Manara s.n.* in Foldats, E. 1970. *Flora de Venezuela*. 15(3): 232. The illustration is surprisingly similar to that prepared from the holotype, in both the plant habit and shape of the lip, so as to be evidently based in that Colombian specimen. There is thus no confirmed record from Venezuela. It is unfortunate that Foldats did not cite the basis of the illustrations included in his work. It is not the first time that we confirm and some of Bruno Manara's illustrations are based on specimens at NY.

DISTRIBUTION AND ECOLOGY: Known only from central Colombia, from the upper valley of the Río Cauca. Flowering in September.

RECOGNITION: *Epidendrum holtonii* belongs to the Difforme Group, which is characterized by the sympodial, caespitose habit, fleshy, light green to glaucous leaves, apical, sessile inflorescence lacking spathaceous bracts, rarely with a short peduncle, inflorescence one-flowered to sub-corymbose, flowers green to yellowish-green, rarely white. The species is recognized by the ancipitose stems, and the transversely elliptic-reniform to obscurely 3-lobed lip, the base deeply cordate, the basal margin undulate, lateral lobes elliptic, midlobe very small, forming two small, rounded lobes, the apex with a wide, apiculate sinus, and the small, divergent calli. It is similar to *Epidendrum yaracuense*, from Venezuela, which has the apex of the leaves apiculate, the lip reniform, only slightly cordate at the base, margin entire, with two small, sub-globose calli and an arched column. Other species which could be confused with this species grow in

the Amazon basin of Peru such as *E. apaganoides* D.E.Benn. & Christenson which has a 3-lobed lip, the disc fleshy, and a slightly arching column. *Epidendrum apaganum* Mansf. has smaller leaves, the lip 3-lobed, small, sub-globose calli, and the disc of the lip with numerous thickened veins. *Epidendrum pseudoapaganum* D.E.Benn. & Christenson has large plants with numerous flowers, and the lip reniform without thickened veins.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In honor of I. F. Holton, who collected in Colombia in the middle of the 19th century.

REFERENCE: Foldats, E. 1970. *Flora de Venezuela*. 15(3): 232. Instituto Botánico. Dirección de Recursos Naturales Renovables. Ministerio de Agricultura y Cría, Caracas, Venezuela.



Authors: E. Hágstater & L. Sánchez S.

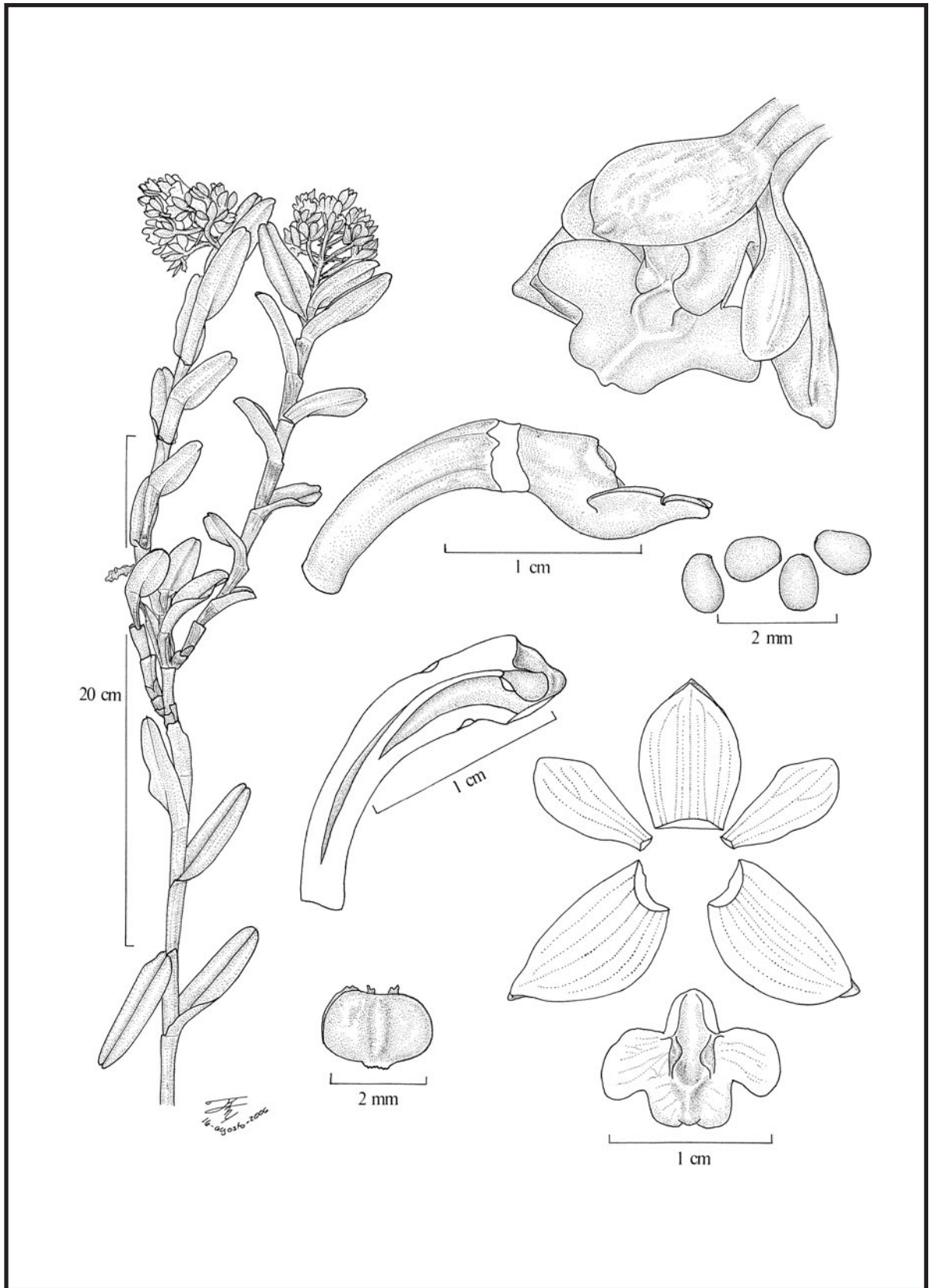
Illustrator: R. Jiménez M.

Editors: E. Hágstater & L. Sánchez S.

Herbario AMO

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ICONES ORCHIDACEARUM 12. 2009. Plate 1254



EPIDENDRUM INAMOENUM Kraenzl.

Plate 1255

EPIDENDRUM INAMOENUM Kranzl., in Engl. Jahrb. 37: 525. 1906.

Type: PERU: Junín: Tarma; Berge östlich von Talca, 2700-3000 m, **Weberbauer 2456**. Holotype: HBG, photo: AMES! F! NY! SEL!

Hierba terrestre, monopodial, ramificada subapicalmente, erecta, 15-50 cm de alto. **Raíces** en la base del tallo principal, escasas en la base de algunas ramificaciones, carnosas, gruesas, blancas, 2-3 mm de grosor. **Tallos** ramificados subapicalmente cuando maduros, sencillos, tipo caña, teretes, erectos, rectos; el principal 13-30 x 0.5-0.7 cm; las ramificaciones, 17-18 x 0.3-0.6 cm; cubiertos en la base por vainas tubulares, no foliares, escariosas y fibrosas con el tiempo, 5-22 mm de largo. **Hojas** numerosas en el tallo principal; 9-10 en las ramificaciones, distribuidas a lo largo de los tallos, suberectas, alternas, articuladas, coriáceas, verdes con el margen amarotado-negruzco; vainas tubulares, rugosas, 1-1.5 cm de largo; lamina oblonga, obtusa, ápice desigualmente bilobado, margen entero, extendido; las del tallo principal 4-8 x 1.2-1.7 cm; las de las ramificaciones 2.4-4.5 x 1.3-1.5 cm. **Bráctea espácea** ausente. **Inflorescencia** apical, florece una sola vez, racemosa, corta, ligeramente arqueada, [2]4-5 cm de largo; pedúnculo terete, delgado, recto, 10 mm de largo, ocasionalmente oculto por la hoja apical. **Brácteas florales** mucho más cortas que el ovario, triangulares, agudas, abrazadoras, 2-4 mm de largo. **Flores** [4-5] 15-17, simultáneas, resupinadas, carnosas, verdes a amarillo verdosas con la superficie dorsal de los sépalos pardo-amorotada; sin datos de fragancia. **Ovario** terete, grueso, estriado, no inflado, 11-14 mm de largo. **Sépalos** entreabiertos, libres, oblongos a elípticos, agudos, 7-nervados, algunas nervaduras ramificadas desde la base dando la impresión de ser 9-nervados, margen entero, extendido, 9-10 x 4-6 mm; los **laterales** cóncavos, ligeramente oblicuos. **Pétalos** entreabiertos, libres, oblongos o anchamente espatulados, agudos, 3-nervados, margen entero, extendido, 7-8 x 3-4 mm. **Labelo** unido a la columna, trilobado, ligeramente cordado en la base, extendido, margen entero, 6-7 x 5-10 mm; bicalloso, los callos erectos, laminares, prominentes; disco unicarinado, la carina carnosa, prominente, en forma de "Y", alargada hasta el ápice de la lamina; lóbulos laterales subovados, 4 x 4 mm; lóbulo medio transversalmente rectangular, ligeramente emarginado, con un apículo ancho, muy corto, 3 x 5 mm. **Columna** recta, gruesa, corta, 6 mm de largo. **Clinandrio** reducido, margen entero. **Antera** reniforme, 4-locular, ápice truncado, denticulado. **Polinios** 4, obovoides, lateralmente comprimidos. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** prominentes, de la mitad del largo de la cavidad estigmática. **Nectario** penetrando el 1/3 apical del ovario, no inflado, no ornamentado. **Cápsula** no vista.

Terrestrial, monopodial, branching **herb**. **Roots** from the base of the main stem, scarce at the base of some branches, fleshy, thick. **Stems** cane-like, terete, erect, straight, branching sub-apically when mature; the branches shorter than the main stem; the base covered by tubular, non-foliar, scarious sheaths, becoming fibrous with time. **Leaves** numerous on the main stem, 9-10 on the branches, distributed throughout the stems, sub-erect, alternate, articulate, coriaceous, green, the margin purple-black; sheaths tubular, striated, minutely rugose, reddish purple; blade oblong, apex rounded, slightly bilobed, margin entire, spreading; those on the branches slightly smaller than on the main stem. **Inflorescence** apical, flowering only once, racemose, arching-nutant, densely many-flowered; peduncle terete, thin, straight, short. **Floral bracts** much shorter than the ovary, triangular, acuminate, amplexicaul. **Flowers** [4-5]15-17, simultaneous, resupinate, very fleshy, green to yellowish green, the dorsal surface of the sepals purple-brown. **Ovary** terete, thick, striated, not inflated. **Sepals** partly spreading, free, "oblong" to elliptic, obtuse, glabrous, 7-veined, some veins branching from the base so as to appear 9-veined, margin entire, spreading; lateral sepals slightly oblique. **Petals** partly spreading, free, "oblong" to widely spatulate, apex acute, 3-veined, margin entire, spreading. **Lip** united to the column, 3-lobed, base slightly cordate, spreading, margin entire; bicallose, the calli sub-erect, laminar, prominent, disc 1-keeled, the keel fleshy, prominent, "Y" shaped at the base, reaching the apex of the lip; lateral lobes sub-ovate, slightly longer than the midlobe, midlobe transversely rectangular, slightly emarginate, with a wide, very short apicule. **Column** straight, thick, short. **Clinandrium-hood** reduced, margin entire. **Anther** reniform, 4-celled, apex truncate, denticulate. **Pollinia** 4, obovoid, laterally compressed. **Rostellum** apical, slit. **Nectary** penetrating 1/3 of the ovary, not inflated, smooth.

OTHER SPECIMENS: PERU: Amazonas: Jalca zone along Yamborasbamba-Pomacocha trail between Yanayacu and Pomacocha, 2300-2400 m, 26 VI 1962, *Wurdack 1074*, US! (Illustration, AMO!) USM! **Apurímac:** N of Chincheros, 2800 m, 27 II 1939, *Stork 10756*, AMES! UC! **Ancash:** Huascarán National Park, 3600 m, 1 I 1985, *Smith 8952*, MO! (Illustration, AMO!) **Cusco:** Calca, 3900, 15 I 1980, *Vargas 23282*, CUZ! **Huanuco:** Huanuco and Pampayacu, 13 I 1927, *Kanehira 313*, AMES! **Junín:** Tarma, ca. 35 km NE of Tarma on road to San Ramón, ca. 2300 m, 17 XII 1978, *Dillon 1400*, AMO! NY! Carpapata, above Huacapistana, 2700-3200 m, 7 I 1929, *Killip 24418*, AMES! US! Tarma; E of Palca; 2 km on road to Illic departing Tarma-Chanchamayo hwy., 5 km below Palca, 2750 m, 13 I 1987, *Stein 3812*, F! (Illustration voucher) MO! USM! **[Pasco:]** Yanahuanca, *McBride 1188*, AMES! **Piura:** Huancabamba, 2500 m, 17 VIII 1980, *Luer 5394*, SEL! **Puno:** Ollachea a Pte. Ackopampa, 3200-3450 m, 31 XII 1947, *Vargas 6992*, AMES! CUZ!

OTHER RECORDS: PERU: Amazonas: Luya: Longuita: Huala, Matorral (Jalca), 3387 m, 22 XI 2008, *Chocce 4901*, digital image, AMO! Area de Conservación Privada Huiquilla, Pajonal (Jalca), 3062 m, 13 IX 2009, *Chocce 5167*, digital image, AMO!

Junín: Tarma; Carpapata-Chanchamayo-Junín, 2300 m, I 2009, *Moron s.n.*, digital images, AMO!

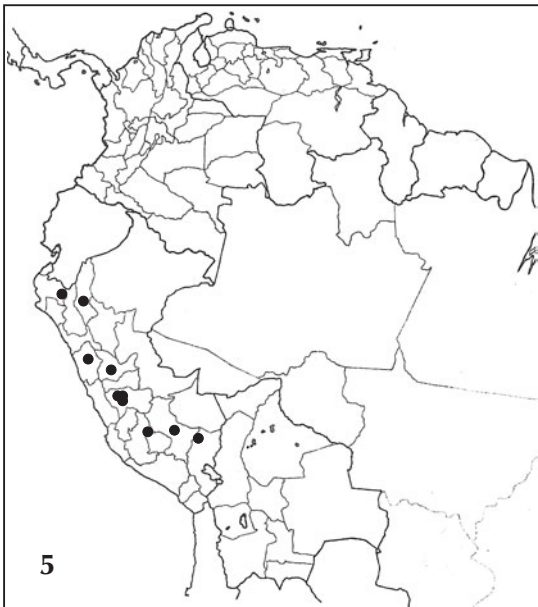
DISTRIBUTION AND ECOLOGY: Ranking along the Andes on both sides of the Marañón, in northern to central Peru, terrestrial at 2300-3450 [3900] m altitude. Flowering from December to August.

RECOGNITION: *Epidendrum inamoenum* belongs to the Andean Group, Renilabium Subgroup which is characterized by the tall plants, monopodial habit, generally large, bilobed leaves, racemose inflorescence, entire or 3-lobed lip with a channel at the base of the disc between the calli. The species is recognized by the sub-erect, oblong leaves, green to yellowish green flowers, sepals 9-10 mm long, and "Y" shaped fleshy keel on the lip, the lateral lobes of the lip longer than the midlobe. *Epidendrum jaramilloi* Hágsater & Dodson is vegetatively very similar, but the leaves are narrowly lanceolate, sepals 8-13 mm long, and the disc of the lip has a rounded fleshy thickening, the lateral lobes of the lip are ovate, nearly as long as the midlobe. *Epidendrum chioneum* Lindley is endemic to Colombia, has triangular-lanceolate, acute, apiculate leaves, the flowers are snow-white, sepals 6-8 mm long, and the disc of the lip has 3 low keels.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Latin *inamoenus*, disagreeable, ugly, horrible.

REFERENCE: Weberbauer, A., 1911. Die Pflanzenwelt der peruanischen Anden, in *Engler, A., and O. Drude (eds.) Die Vegetation der Erde*, 12(3): 246-248.



Authors: E. Santiago & E. Hágsater

Illustrator: R. Jiménez M.

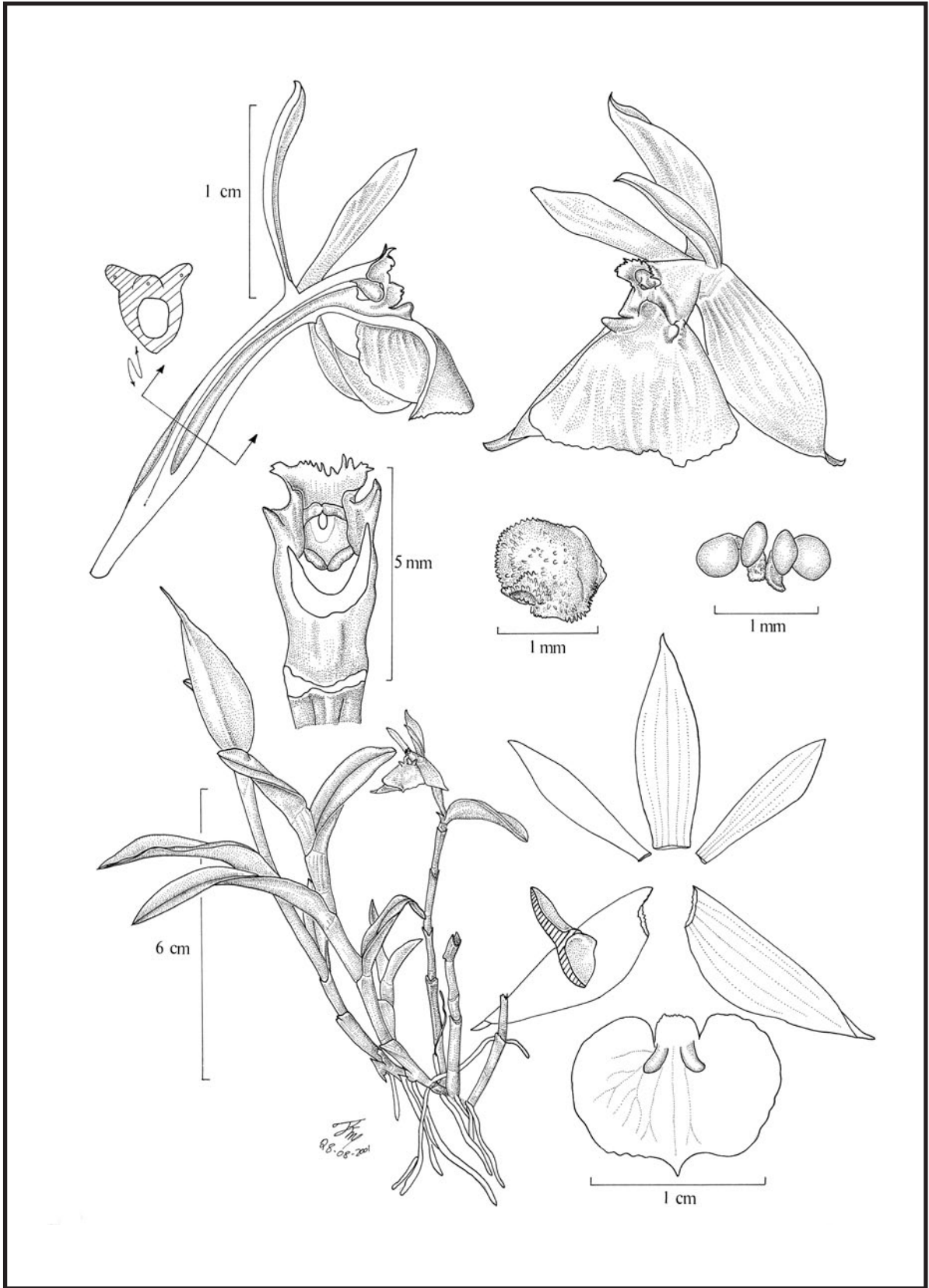
Editors: E. Hágsater & L. Sánchez S.

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ICONES ORCHIDACEARUM 12. 2009.

Plate 1255



EPIDENDRUM JEJUNUM Rchb.f.

Plate 1256

EPIDENDRUM JEJUNUM Rchb.f., Otia. Bot. Hamb. 12. 1878.

Type: [Ecuador: Prov. Guayas]: Río Yaguachi, 600 m, 1 April 1873, **F. C. Lehmann s.n.** Holotype: W-R!

Hierba epífita, simpodial, cespitosa, 5-20 cm de alto incluyendo la inflorescencia. **Raíces** basales, carnosas, filiformes, 0.5 mm de grosor. **Tallos** sencillos, tipo caña, lateralmente comprimidos, rectos a ligeramente flexuosos, 3-15 x 0.1-0.2 cm. **Hojas** 4-7, equidistantes a lo largo del tallo; vaina foliar lateralmente comprimida, lisa, no ornamentada, algo dilatada hacia la lámina, 1-2.5 cm de largo; lámina foliar angostamente elíptica a ligulada, ápice redondeado, coriácea, lisa, ligeramente carinada, 3-12 x 0.5-0.8 cm. **Inflorescencia** apical del crecimiento maduro, florece varias veces, sésil. **Bráctea floral** mucho más pequeña que el ovario, triangular, aguda, 1.0-1.5 mm de largo. **Flores** 1-5, resupinadas, sucesivas, blanco a blanco verdosas; fragancia no registrada. **Ovario** inflado longitudinalmente en la mitad apical, terete a algo triquetro, no ornamentado, 10-20 x 1.2-1.5 mm. **Sépalos** extendidos, glabros, libres, membranáceos, elípticos, acuminados, 5-nervados, margen entero, extendido, 9-13 x 3.0-3.5 mm; los **laterales** oblicuos, ligeramente falcados. **Pétalos** membranáceos, extendidos, angostamente rómbicos a oblanceolados, 3-nervados, ápice agudo, margen entero, extendido, 8-11 x 1.5-2.0 mm. **Labelo** unido a la columna, cordiforme, cordiforme, ápice agudo, ápice revoluto en posición natural, margen entero a ligeramente eroso, 5-6 x 8-9 mm; bicalloso, los callos pequeños, alargados, divergentes; disco engrosado hacia el centro formando una carina muy baja. **Columna** recta, obcónica, 5-6 mm de largo. **Clinandrio** prominente, sobrepasando el ápice de la columna, profunda e irregularmente dentado. **Antera** subesférica, papilosa, con una protuberancia en forma de pico cerca de la base, 4-localar. **Polinios** 4, subiguales, obovoides, lateralmente comprimidos; caudículas suaves y granuladas; viscidio viscoso, translúcido. **Rostelo** apical, rajado. **Nectario** profundo, penetrando la mitad del ovario. **Cápsula** ovoide, 9-9.5 x 6-6.4 mm.

Epiphytic, sympodial, caespitose **herb.** **Roots** basal, fleshy, filiform. **Stems** simple, cane-like, laterally compressed, erect to somewhat flexuose. **Leaves** 4-7, distributed throughout the stem; sheath laterally compressed, smooth, somewhat dilated towards the apex, leaf narrowly elliptic to ligulate, rounded, coriaceous, smooth. **Inflorescence** apical from the mature stem, flowering several times, sessile. **Floral bracts** smaller than the ovary, triangular, acute. **Flowers** 1-5, resupinate, successive, white to white-greenish. **Ovary** inflated longitudinally at the apical half, terete to somewhat triquetrous, unornamented. **Sepals** spreading, free, membranaceous, glabrous, elliptic, acuminate, 5-veined, margin entire, spreading; the **lateral** sepals somewhat falcate. **Petals** spreading, membranaceous, narrowly rhombic to oblanceolate, 3-veined, apex acute, margin entire, spreading. **Lip** united to the column, cordiforme, acute, apex revoluted in natural position, margin entire to somewhat erose; bicallose, the calli sub-globose, disc thickened to form a low keel. **Column** stright, obconical. **Clinandrium-hood** prominent, margin deeply and irregularly dentate. **Anther** spheric, papillose, ending in a beak-like point, 4-celled. **Pollinia** 4, sub-equal, obovoid, laterally compressed; caudicles soft and granulate; viscidium viscoso, translucent. **Rostellum** apical, slit. **Nectary** penetrating one half of the ovary. **Capsule** ovoid.

OTHER SPECIMENS: ECUADOR: Without locality, cultivated in Cuenca, 24 III 2001, *Hágsater 12458*, AMO! (Illustration voucher). **Esmeraldas:** Bilsa Biological Station, Macho Mountains, 400-600 m, 21 XI 1995, *Clarck 1681*, QCNE! MO! Lita to San Lorenzo, km 40, 220 m, 10 IX 1991, *Hirtz 5614*, MO! (Illust. AMO!) **Los Rios:** Río Palenque Biological Station, km 56 Quevedo-Sto. Domingo, 150-220 m, 12 III 1976, *Dodson 6016*, SEL! Río Palenque Biological Station, km 56 Quevedo-Sto. Domingo, 150-220 m, 2 X 1976, *Dodson 6393*, AMO! MO! QCA! SEL! El Centinela, Montañas de Ila, 22 VII 1979, *Dodson 8487*, SEL! Río Palenque Science Center, km 56 Quevedo-Sto. Domingo, 220 m, 7 I 1983, *Dodson 13563*, SEL! Cerro Centinela, Patricia Pilar, 540 m, 3 VI 1990, *Rubio 420*, MO! QCNE! Hda. San Fernando, km 5 via Santo Domingo, 1900 ft, 28 VII 1980, *Sauleda 3785*, AAU! AMES! MO! SEL! U! **Pichincha:** 10 km S of Sto. Domingo, 470 m, 25 V 1976, *Dodson 6059*, QCA! SEL! Illust. published: *Icones Plant. Trop.* 1: pl. 086. 1980. Santo Domingo, 550 m, 11 II 1986, *Dodson 16325*, MO! Centinela, 650 m, 5 XI 1988, *Dodson 17698*, MO! Río Baba, 400 m, 12 V 1989, *Dodson 18013*, MO! Finca Carlita, Santo Domingo de los Colorados-Chone, 550 m, 10 VI 1973, *Holm-Nielsen 7042*, AAU! **Oro:** km 3 Zaruma to Malvas, 1250 m, 14 XI 1989, *Dodson 17918*, MO!

OTHER RECORDS: COLOMBIA: Chocó: Bahía Solano, Misa 32, drawing by Guillermo Misa (xerox AMO!). Published in *Orquídeas de la Serranía del Baudó*, Chocó, Colombia, pp. 188-189. Bogotá 2005.

DISTRIBUTION AND ECOLOGY: Ranging along the Pacific lowlands in Colombia and Ecuador, epiphytic in wet forests at 150-1250 m altitude. Flowering from December to June.

RECOGNITION: *Epidendrum jejunum* belongs to the Difforme Group which is characterized by the caespitose, sympodial plants, fleshy, pale green to glaucous, leaves, apical inflorescence, sessile, rarely with a short peduncle, one-flowered to corymbose, without spathaceous bracts, fleshy, green to yellowish-green rarely white flowers. The species has laterally compressed stems, elliptic to ligulate leaves, 1-5 successive, white to white-greenish flowers, a cordiform lip, and deeply dentate clinandrium-hood. It is similar to *Epidendrum dentiferum* Ames & C.Schweinf., but that species has light green flowers, linear petals and a sub-orbicular lip. *Epidendrum stellidiforme* Hágsater & Dodson grows at 1200-1500 m altitude, has larger plants and flowers, lanceolate petals, and a sub-orbicular-cordiform lip with an acuminate apex. The species is, at first sight, superficially reminiscent of *Epidendrum cuatrecasii* Garay; however that species has both apical and lateral inflorescences with successive bracts on the inflorescence typical of the Albertii Group, has a triquetrous ovary; the type only has an apical inflorescence which probably led the author to later reduced it to synonymy of *E. jejunum*.

CONSERVATION STATUS: DD: Data deficient.

ETYMOLOGY: Unknown.



Authors: L. Sánchez S. & E. Hágsater

Illustrator: R. Jiménez M.

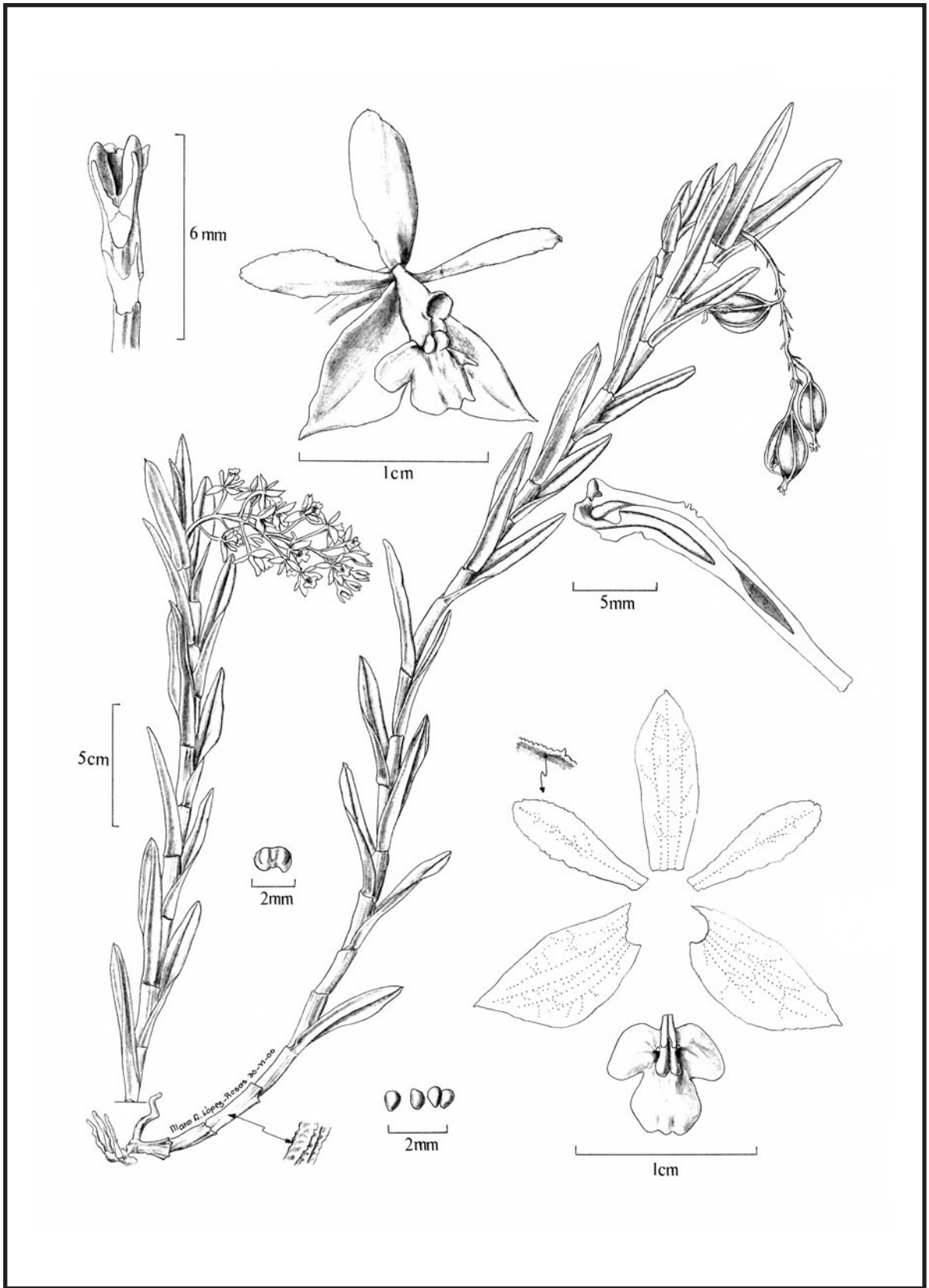
Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009.

Plate 1256



EPIDENDRUM KIRKBRIDEI Hágsater & E.Santiago

Plate 1257

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

Type: COLOMBIA: Magdalena: Sierra Nevada de Santa Marta; S of Laguna Río Frío, 3600 m, 30 July 1972, **Joseph H. Kirkbride, Jr. & Enrique Forero 1790**. Holotype: US! (Illustration voucher). Isotypes: COL x2! NY!

Epidendro zipaquirani Schltr. simile sed floribus roseis cum callis albis, bracteis floralibus parvis et foliis apice obtuso ad rotundato, differt.

Hierba epífita o terrestre, monopodial, ramificada subapicalmente, 40-100 cm de alto. **Raíces** basales en el tallo principal, carnosas, gruesas, blancas, 1-4 mm de grosor. **Tallos** tipo caña, teretes, erectos, rectos, ramificados subapicalmente; el principal de 20-50 x 0.45-0.65 cm; las ramificaciones casi paralelas al tallo principal, algo más cortas y su vez produciendo ramas ascendentes de menor tamaño, 7-20 x 0.3-0.6 cm; cubiertos en la base por 3 o 4 vainas tubulares no foliosas, parcialmente imbricadas, estriadas, finamente rugosas, escariosas y fibrosas con el tiempo, 3-25 mm de largo. **Hojas** 11-20 en el tallo principal; 6-14 en las ramificaciones, distribuidas a lo largo de los tallos, articuladas, dísticas, coriáceas, suberectas, desiguales en tamaño (las basales generalmente más pequeñas); vaina tubular, estriada, rugosa, 0.6-3.3 x 0.4-0.9 cm; lámina oblongo lanceolada, en ocasiones conduplicada, ápice obtuso, diminutamente apiculada, margen diminutamente crenado hacia el ápice, extendido, 1-6.5 x 0.7-1.5 cm. **Bráctea espátea** ausente. **Inflorescencia** apical, florece una sola vez, racemosa, arqueada nutante, pluriflora, densa, 4-7 cm de largo; pedúnculo corto, terete, delgado, 10-20 mm de largo; provisto de una bráctea triangular lanceolada, acuminada, abrazadora, 5-7 mm de largo. **Flores** 20, simultáneas, resupinadas, de color rosa con la antera amarilla y los callos blancos; sin datos de fragancia. **Bráctea floral** pequeñas, de menos de la mitad del largo del ovario, triangular lanceoladas, largamente acuminadas, abrazadoras, 3-6 mm de largo. **Ovario** terete, delgado, no inflado, no ornamentado, 11-14 mm de largo. **Sépalos** extendidos, carnosos, glabros, 5-nervados, margen entero, extendido, [6]10-12 x [4]5.5-6 mm; el **dorsal** libre, angostamente elíptico obovado, ápice obtuso; los **laterales** unidos de manera oblicua a la base de la columna, elípticos, agudos, algo oblicuos. **Pétalos** entreabiertos, libres, elíptico espatulados a oblanceolado espatulados, obtusos, 1-nervados, la nervadura central cortamente ramificada, margen papiloso, extendido, [6]11.5 x [2]13.5 mm. **Labelo** unido a la columna, trilobado, base cordada, margen diminutamente papiloso, [5]7 x [5]10 mm; bicalloso, los callos delgados, divaricados; disco tricarinado, las carinas laterales cortas e incipientes, la central intercallosa desvaneciéndose antes de llegar al ápice de la lámina; lóbulos laterales ovados a reniformes, [2]4 x [2]5 mm; lóbulo medio obpentado, truncado en el ápice, con un apículo diminuto, [3]4 x [2]4 mm. **Columna** recta, gruesa, 5-6 [8] mm de largo. **Clinandrio** prominente (aunque sin sobrepasar el ápice de la columna), entero, margen crenado. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** prominentes, ocupando más de la mitad de la cavidad estigmática. **Nectario** poco profundo, apenas penetrando el ovario justo detrás del perianto, no inflado, no ornamentado. **Antera** reniforme, 4-locular. **Polinios** 4, obovoides. **Cápsula** globosa; pedicelo terete, delgado, 6-10 mm de largo; cuerpo 20-32 x 13-27 mm; cuello apical ca. 3 mm de largo.

Epiphytic or terrestrial, monopodial **herb**, branching sub-apically. **Roots** basal from the main stem, fleshy, thick, white. **Stems** cane-like, terete, erect, straight, branching sub-apically, the main stem longer than the branches; base covered by 3-4 tubular, non-foliar, partly imbricating, striated, minutely rugose, sheaths, becoming scarioso and fibrous with age. **Leaves** 11-20 on the main stem, 6-14 on the branches, distributed throughout the stems, articulate, distichous, coriaceous, sub-erect, unequal in size (the basal leaves generally smaller); sheath tubular, striated, rugose; blade oblong-lanceolate, sometimes conduplicate, apex obtuse, minutely apiculate, margin minutely crenate towards the apex, spreading.

Inflorescence apical, flowering only once, racemose, arching-nutant, densely many-flowered; peduncle short, terete, thin; provided with a single triangular-lanceolate, acuminate amplexicaul bract. **Flowers** 20, simultaneous, resupinate, pink, anther yellow, calli white. **Floral bracts** small, less than half as long as the ovary, triangular-lanceolate, long-acuminate, amplexicaul. **Ovary** terete, thin, not inflated, smooth. **Sepals** spreading, fleshy, glabrous, 5-veined, margin entire, spreading; the **dorsal** sepal free, narrowly elliptic-obovate, apex obtuse; the **lateral** sepals obliquely united to the base of the column, elliptic, acute, somewhat oblique. **Petals** partly spreading, free, elliptic-spatulate to oblanceolate-spatulate, obtuse, 1-veined, the mid-vein short-branched, margin papillose, spreading. **Lip** united to the column, 3-lobed, base cordate, margin minutely papillose; bicallose, the calli narrow, divaricate; disc 3-carinate, the lateral keels short, the mid keel disappearing before reaching the apex of the lip; lateral lobes ovate to reniform; midlobe five-sided, widest slightly beyond the middle, apex truncate with a minute apicule. **Column** straight, thick, short. **Clinandrium-hood** prominent (without surpassing the body of the column), entire, margin crenate. **Rostellum** sub-apical, slit. **Nectary** shallow, slightly penetrating the ovary behind the perianth, not inflated, smooth. **Anther** reniform, 4-celled. **Pollinia** 4, obovoid. **Capsule** globose, pedicel terete, thin, apical neck short.

OTHER SPECIMENS: COLOMBIA: Magdalena: Páramo de Macotama, 3490 m, 12 II 1959, *Barclay 6921*, AMES! COL! Quebrada de la Laguna Río Frío, 3100-3250 m, *Forero 649*, AMES! COL! MO! NY! Sierra Nevada de Santa Marta, Transecto del Buritaca, (Filo La Cumbre), 3500 m, *Rangel 946*, COL x2! **VENEZUELA: Trujillo:** Guirigay, hacia Laguna La Parida, 3400 m, VIII 1958, *Aristeguieta 3582*, NY! US!

DISTRIBUTION AND ECOLOGY: Known from the Sierra Nevada de Santa Marta in northern Colombia, and the Cordillera de los Andes in Venezuela, epiphytic or terrestrial, at 3100-3600 m altitude. Flowering from February to August.



RECOGNITION: *Epidendrum kirkbridei* belongs to the Andean Group, Cernuum Subgroup, characterized by the monopodial habit, cane-like stems with sub-apical branching, the branches shorter than the main stem, coriaceous to sub-coriaceous leaves and fleshy flowers, the lip 3-lobed. The species is recognized by the sub-erect leaves, apically obtuse to rounded, pink-colored flowers with white calli, sepals [6]10-12 mm long, and very small floral bracts to 6 mm long. *Epidendrum zipaquirani* has acute leaves, green to yellow, fragrant flowers, very prominent floral bracts to 14 mm long, and the apex of the sepals obtuse with a dorsal keel. *Epidendrum chioneum* Lindl. has snow-white flowers, sepals 6-9 mm long, and prominent, 16 mm long-floral bracts.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In honor of the collector of the type, Joseph Harold Kirkbride Jr., (1943-), specialist in various neotropical plant families.

Authors: E. Hágsater & E. Santiago

Illustrator: M. López R.

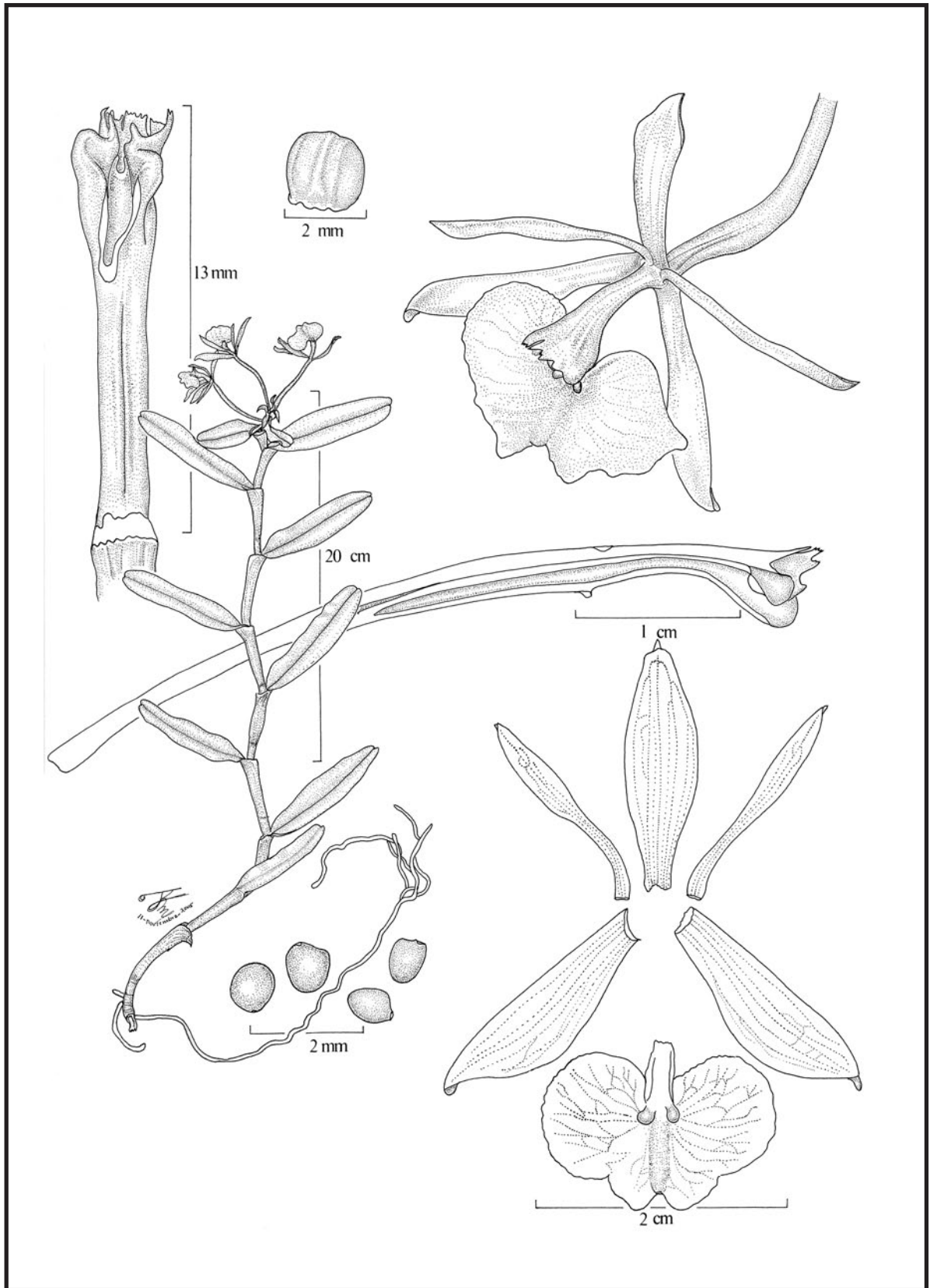
Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009.

Plate 1257



EPIDENDRUM KLUGII Hágsater & L.Sánchez

Plate 1258

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

Type: PERU: San Martín: Moyobamba, 1100-1600 m, July 1937, **G. Klug 10124**. Holotype: AMES 61684! (Illustration voucher). Isotype: US 1458834!

Epidendro chlorocorymbos Schltr. simile sed petalis lineari-ellipticis, labelli lobulis lateralibus margine undulato, lobulo medio trapezoidali cum sinu apicali duos lobulos semiovatos cum margine undulato formanti, abhorrens.

Hierba epífita, simpodial, cespitosa, 27-36.5 cm de alto incluyendo la inflorescencia. **Raíces** basales, carnosas, delgadas, 1-1.2 mm de grosor. **Tallos** sencillos, tipo caña, teretes, ligeramente flexuosos, 12-32 x 0.28-0.32 cm. **Hojas** 3-9, distribuidas a lo largo del tallo, vaina foliar tubular, lisa, 2-3.5 cm de largo; lámina angostamente elíptico lanceolada, coriácea, lisa, ápice retuso a asimétricamente bilobado, margen entero, extendido, con una quilla dorsal roma, verde, 4-7 x 1.0-1.5 (1.8) cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, del tallo maduro, subumbelada, pedúnculo inconspicuo. **Bráctea floral** de la mitad a un tercio del largo del ovario, angostamente elíptica, aguda, amplexicaula, 9-13 x 1-2 mm. **Flores** 3-4, simultáneas, resupinadas, concoloras, verde hierba a verde amarillentas, fragancia no registrada. **Ovario** terete, no inflado, no ornamentado, 33-40 x 1.0-1.2 mm. **Sépalos** extendidos, libres, elípticos, ápice obtuso, glabros, coriáceos, 5-nervados, margen entero, revoluto, quilla dorsal apical prominente, 16-19 x 3.8-4.3 mm; los **laterales** ligeramente oblicuos. **Pétalos** extendidos, lineal elípticos, agudos, membranáceos, 3-nervados, margen entero, extendido, 14-18 x 1.8-2.0 mm. **Labelo** unido a la columna, trilobado, base cordada, margen ondulado, ápice con un seno, 9.3-12 x 16-18 mm; bicalloso, los callos pequeños, subglobosos; lóbulos laterales semi-orbiculares, 7-10 x 6-8 mm; lóbulo medio transversalmente trapezoide con un seno formando dos lóbulos semiovados, 2.3-2.7 x 7.0-8.4 mm. **Columna** recta, delgada, 9-13 x 1.5-1.7 mm. **Clinandrio** prominente, margen irregularmente dentado. **Antera** subesférica, 4-locular. **Polinios** 4, obovoides, subiguales, lateralmente comprimidos; caudículas nos vistas; viscidio no visto. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** prominente, de un medio de la cavidad estigmática. **Nectario** penetrando un quinto del ovario, no ornamentado. **Cápsula** no vista.

Epiphytic, sympodial, caespitose **herb.** **Roots** basal, fleshy, thin. **Stems** simple, cane-like, terete, slightly flexuose. **Leaves** 3-9, distributed throughout the stem; foliar sheath tubular, smooth; blade narrowly elliptic-lanceolate, coriaceous, smooth, apex retuse to unequally bilobed, margin entire, spreading, with a low dorsal, rounded keel, green. **Inflorescence** apical, from the mature stem, sub-umbellate, peduncle inconspicuous. **Floral bract** half to 1/3 as long as the ovary, narrowly elliptic, apex acute, amplexicaul. **Flowers** 3-4, simultaneous, resupinate, concolor, herb-green to yellowish green. **Ovary** terete, not inflated, smooth. **Sepals** spreading, free, elliptic, apex obtuse, glabrous, coriaceous, 5-veined, margin entire, revolute, with a prominent, apical dorsal, the margin irregular dentate; the lateral sepals slightly oblique. **Petals** spreading, linear-elliptic, acute, membranaceous, 3-veined, margin entire, spreading. **Lip** united to the column, 3-lobed, base cordate, margin undulate, with an apical sinus; bicallose, the calli small, sub-globose; lateral lobes semi-orbicular; midlobe transversely trapezoid, formed by a pair of semi-ovate lobes with an apical sinus. **Column** straight, thin, long. **Clinandrium-hood** prominent, margin irregularly dentate. **Anther** sub-spherical, 4-celled. **Pollinia** 4, obovoid, sub-equal, laterally compressed. **Rostellum** apical, slit. **Nectary** penetrating 1/5th of the ovary, smooth.

OTHER SPECIMENS: PERU: Amazonas: Bongara, km 313-320, Olmos-Pomocochas road, 1200-1500 m, *Bennett 2009*, SEL! Bongara, trail above highway to Chiclayo and Rio Utcubamba, 3-10 km NW of Pedro Ruiz Gallo, ca. 1300-1400 m, 4 V 1981, *Young 287*, MO! Ibid. *Young 290*, MO! San Martín: Moyobamba, entre Moyobamba y Rioja, 800-900 m, 29 IX 1973, *Rauh 18248*, USM!

DISTRIBUTION AND ECOLOGY: Known only from the Amazon basin in northern Peru, epiphytic in evergreen forest, at 800-1600 m altitude. Flowering from May to September.

RECOGNITION: *Epidendrum klugii* belongs to the Difforme Group which is characterized by the caespitose, sympodial plants, fleshy, pale green to glaucous leaves, apical inflorescence, sessile, rarely with a short peduncle, one-flowered to corymbose, without spathaceous bracts, fleshy, green to yellowish-green rarely white flowers. The species is recognized by the tall terete stems, narrowly elliptic-lanceolate leaves, 3-4 flowered inflorescence, concolor green to yellowish green

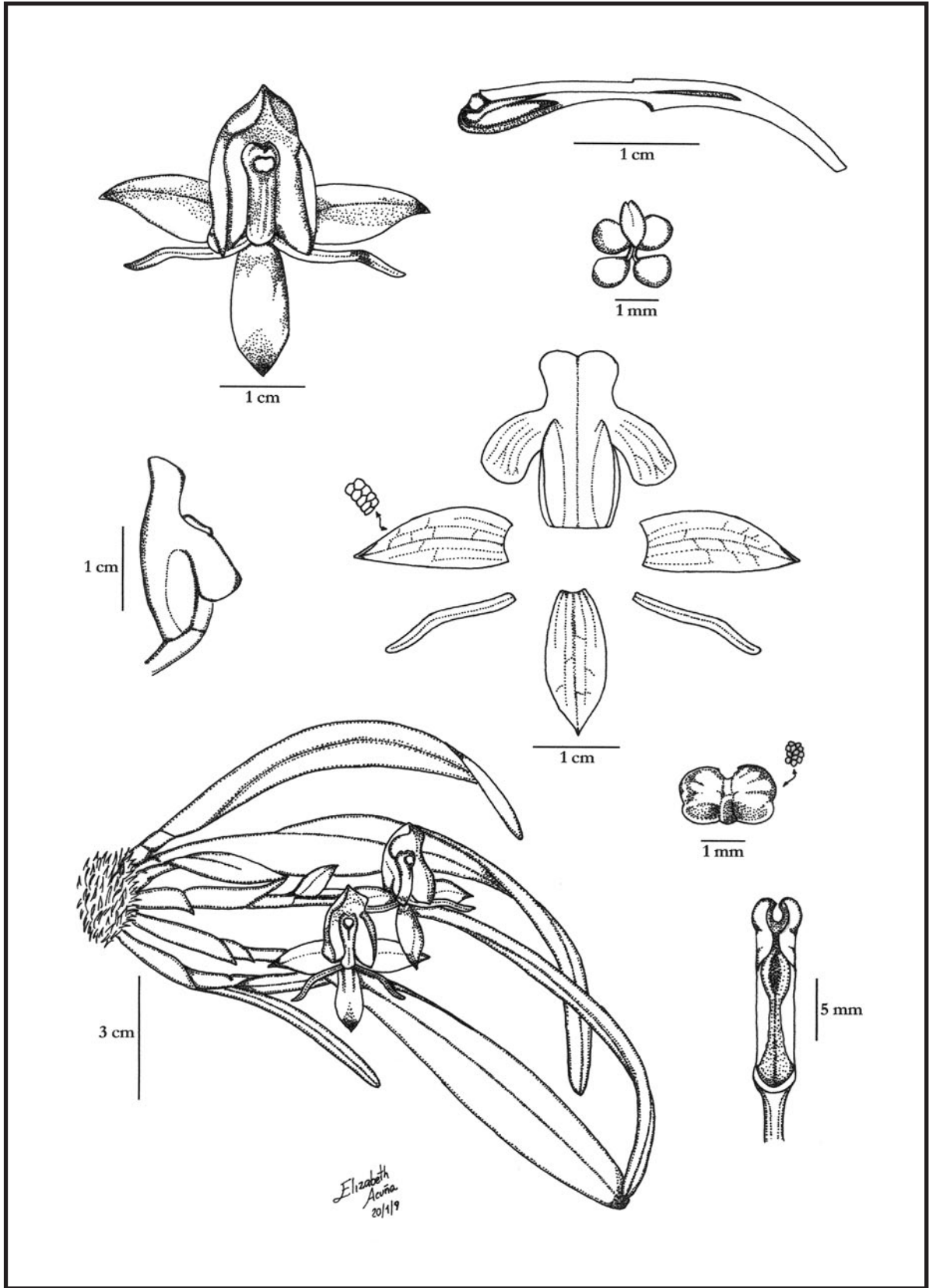


flowers, linear-elliptic petals, the 3-lobed lip with small, sub-globose calli, an undulate margin, semi-circular lateral lobes, and a trapezoid midlobe formed by two semi-ovate lobes with a sinus in the middle. It is similar to *Epidendrum chlorocorymbos* which is widely distributed in Mesoamerica and coastal Venezuela, and has 10-20 or more flowers per inflorescence, oblanceolate petals, the margin of the lip entire, and the midlobe transversely oblong. *Epidendrum carnevali* Hágsater & L.Sánchez, found in Colombia, Venezuela and Peru has somewhat laterally compressed stems, greenish white flowers, divergent calli, with the midlobe of the lip short and wide, formed by two divergent, acute lobes, the column and ovary are papillose. *Epidendrum campacci* Hágsater & L.Sánchez is endemic to Brazil, has wider leaves (1.6-2.6 cm wide, smaller flowers, sepals 14.5-15.4 mm long, and the lobes of the midlobe wide and short, rounded. *Epidendrum pseudodifforme* Hoehne, also from Brazil, also has wider leaves, 1.5-1.7 cm wide, the margin of the lip crenulate, and the column slightly arched.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In honor of the collector of the type, G. Klug, who collected plants during the 1930's in north-eastern Peru, in the provinces of Loreto & San Martín. Much of his orchid material is deposited at AMES and US.

REFERENCES: Sánchez, L. 2002. *Epidendrum chlorocorymbos* Schltr., *Orchids of Mexico*, **Icon. Orchid. (Mexico) 5-6:** pl. 570.



EPIDENDRUM LATORREORUM Chocce, Hágsater & Dalström

Plate 1259

EPIDENDRUM LATORREORUM Chocce, Hágsater et Dalström, *sp. nov.*

TYPE: PERU: Amazonas; Prov. Luya: Área de Conservación Privada Huiquilla, 2800-2900 m, 29 julio 2006, **M. Chocce, S. Castillo y S. Cruz 2231**, (Illustration voucher). Holotype: USM! Isotype: SEL!

Species haec *Epidendro kockii* Hágsater & Dodson similis, sed foliis longioribus, labello profunde trilobo, lobis lateralibus retrorsis rectangularibus curvatis, et lobo mediano subquadrato magnitudine quasi eadem atque lobis lateralibus.

Hierba epífita, cespitosa, de crecimiento horizontal, 18 cm de alto. **Raíces** delgadas, carnosas, basales, sencillas, 1.5 mm de grosor. **Tallos** horizontales, sencillos, tipo caña, algo lateralmente comprimidos, 1.0-4.0 x 0.3-0.4 cm, cubiertos por 2-3 vainas tubulares, no foliosas, estriadas, 5-30 mm de largo. **Hoja** 1, apical, articulada, carnosas, coriácea, oblongo elíptica, conduplicada en la base, con el ápice redondeado, margen entero, 9-11.5 x 1.0-1.2 cm. **Bráctea espatácea** 1, muy pequeña, de color rosa-amarillento, 14 x 6 mm. **Inflorescencia** apical, del tallo maduro, florece una sola vez, biflora; pedúnculo corto, terete, 20 mm de largo. **Brácteas florales** mucho más cortas que el ovario, muy reducidas. **Flores** 2, simultáneas, no resupinadas, sépalos y pétalos cobrizo verdosos, labelo cobrizo, vernicoso, columna teñida de morado en los dos tercios apicales, verdoso cobriza en la base, antera verde pálido, rostelo blanquecino; fragancia no registrada. **Ovario** terete, delgado, no inflado, no ornamentado, 7 mm de largo. **Sépalos** libres, extendidos, 5-nervados, margen entero, extendido; el **dorsal** elíptico, agudo, 17 x 7 mm, los **laterales** oblicuamente ovado elípticos, acuminados, con una quilla dorsal apical, 18 x 7.5 mm. **Pétalos** libres, extendidos, angostamente oblongos, ligeramente curvados en el tercio superior, 1-nervados, ápice obtuso, margen entero, extendido, 16 x 1.5 mm. **Labelo** unido a la columna, carnoso, profundamente trilobado, cóncavo en posición natural, margen entero, 21 x 24 mm; ecallose, sin quillas; lóbulos laterales rectangulares, retrorsos, los ángulos redondeados, 11 x 6 mm; lóbulo medio subcuadrado, los ángulos redondeados, ápice truncado, ligeramente emarginado, 7 x 9 mm. **Columna** geniculada en la base con respecto del ovario, recta, angosta, formando un cuerpo alto en la unión con el labelo, el ápice redondeado y ligeramente dilatado, 14 mm de largo. **Clinandrio** reducido, margen entero. **Rostelo** apical, hendido. **Antera** reniforme, 4-locular. **Polinios** 4, obovoides, lateralmente comprimidos; caudículas cortas, viscidio semilíquido. **Nectario** corto, sin penetrar el ovario, fondo redondeado. **Cápsula** no vista.

Epiphytic, caespitose, horizontal **herb.** **Roots** thin, fleshy, basal, simple. **Stems** horizontal, simple, cane-like, somewhat laterally compressed, covered by 2-3 tubular, striated sheaths. **Leaf** single, articulate, fleshy, coriaceous, oblong-elliptic, base conduplicate, apex rounded, margin entire. **Spathaceous bract** 1, very small, yellowish pink. **Inflorescence** apical, from mature stem, flowering only once, bi-flowered; peduncle short, terete. **Floral bracts** much shorter than the ovary, much reduced. **Flowers** 2, simultaneous, non-resupinate, sepals and petals greenish copper colored, lip copper, vernicose, basal two-thirds of the column purple tinged, base greenish copper, anther pale green, rostellum whitish. **Ovary** terete, thin, not inflated, smooth. **Sepals** free, spreading, 5-veined, margin entire, spreading, dorsal sepals elliptic, acute, lateral sepals obliquely ovate-elliptic, acuminate, with a dorsal, apical keel. **Petals** free, spreading, narrowly oblong, slightly curved at the apical third, 1-veined, apex obtuse, margin entire, spreading. **Lip** united to the column, fleshy, deeply 3-lobed, concave in natural position, margin entire; ecallose, without keels; lateral lobes rectangular, retrorse, corners rounded; midlobe sub-quadrate, corners rounded, apex truncate, slightly emarginate. **Column** geniculate at the base in relation to the ovary, straight, narrow, forming a high body together with the base of the lip, apex rounded, slightly dilated. **Clinandrium-hood** reduced, margin entire. **Rostellum** apical, slit. **Anther** reniform, 4-celled. **Pollinia** 4, obovoid, laterally compressed; caudicles short, viscidium semi-liquid. **Nectary** short, without penetrating the ovary, rounded at the end.

OTHER SPECIMENS: None seen.

DISTRIBUTION: Known only from the Province of Luya, Amazonas, Peru, where it is abundant. Epiphytic on tree trunk in montane forest, at 2800-2900 m altitude. Flowering in July.

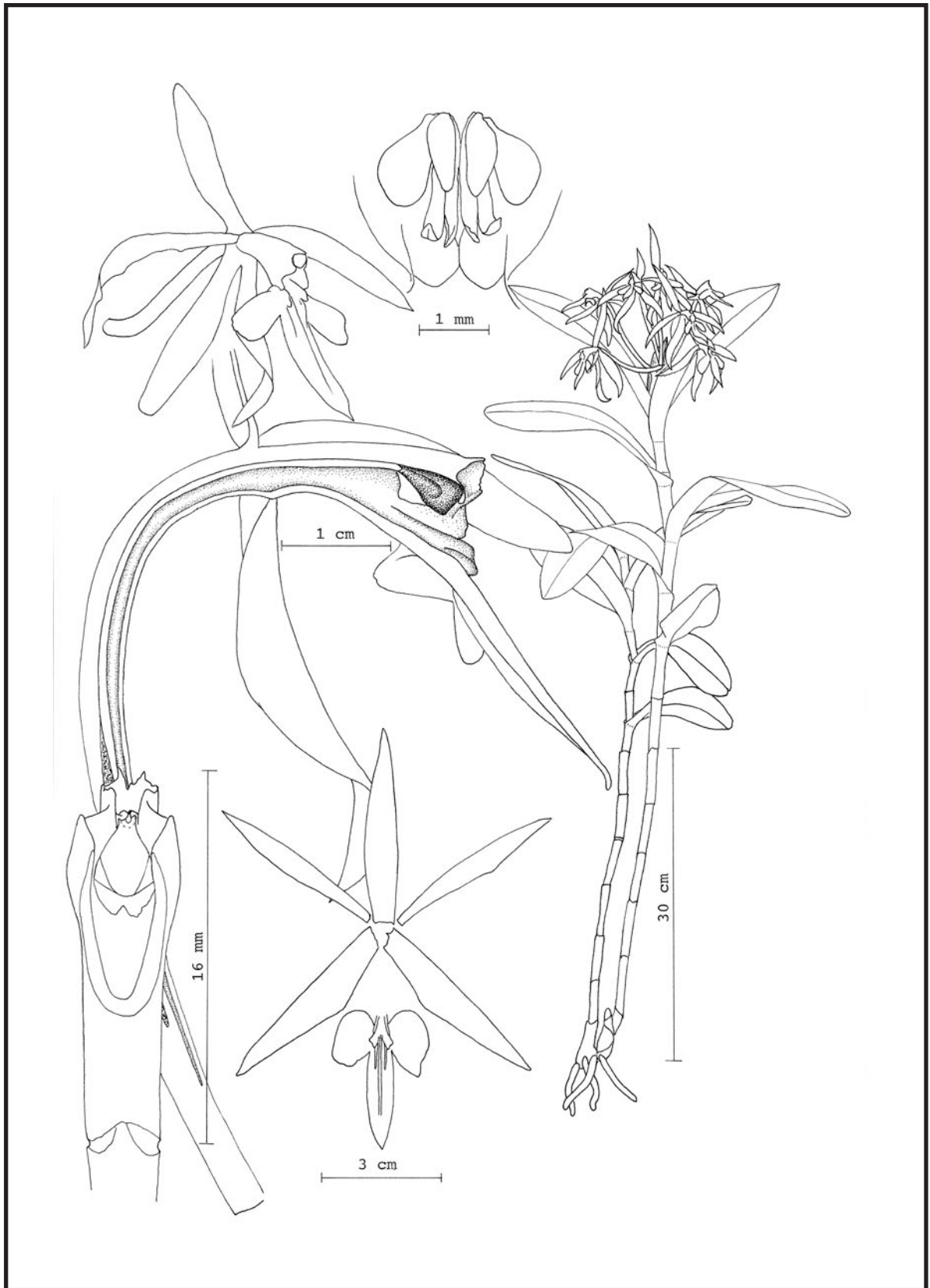
RECOGNITION: *Epidendrum latorrei* belongs to the *kockii* group, which is characterized by the caespitose habit, with 1-2 fleshy-succulent leaves, the inflorescence subtended by 1-2 spathaceous bracts, 1-3 flowers resupinate or not, with a prominent, fleshy, vernicose 3-lobed lip. The species is recognized by long, oblong-elliptic leaves, non-resupinate flowers, the deeply 3-lobed lip, the lateral lobes retrorse, rectangular, curved backwards, and the sub-quadrate midlobe of approximately the same size. *Epidendrum kockii* Hágsater & Dodson has much shorter leaves, to 6.5 cm long, resupinate flowers, obtuse-rounded sepals, and the lip obreniform, with large, sub-orbicular lateral lobes, and a small, triangular, obtuse midlobe; known only from southern Ecuador.

CONSERVATION STATUS: DD. Data deficient. Abundant, in the conservation area where the type was collected.

ETYMOLOGY: In honor of the La Torre family, owners of the property which has been turned into the Huiquilla Private Conservation Area that is now the sanctuary of this species.

ACKNOWLEDGEMENTS: We want to thanks to Dr. Carlyle Luer for your help in the Latin diagnosis.





EPIDENDRUM LEUCOCHILUM Link, Klotzsch & Otto

Plate 1260

EPIDENDRUM LEUCOCHILUM Link, Klotzsch & Otto, Allg. Gartenzeitung 11: 145. 1843.

Type: VENEZUELA: Caracas: Chacao, 4500 ft. **Eduard Otto**, B, destroyed. Neotype (here designated): N of Mérida, col. 1976, L. Latta, pressed 30 March 1983, **Hágsater 5938**, VEN! (Illustration voucher), Clono-neotype: pressed 22 March 1984, AMO! [Non *Epidendrum leucochilum* Lindl. (1846)=*E. lacustre* Lindl.]

Synonyms: *Epidendrum longiflorum* Kunth, Nov. Gen. et Sp. 1: 354. 1815. Type: COLOMBIA: [Nariño:], Crescit in declivitate montis Puruguary, inter Andes Novogranatensis emicantis, juxta villam Aguacillas, 2700 m, **Humboldt**, Holotype: P! Isotype: P! Non *E. longiflorum* K.D.Koenig, Retz. Obs. 6: 55. 1791, nec *E. longiflorum* Sessé & Mocino, Fl. Mexic. Ed 2: 206. 1894.

Epidendrum flavidum Lindl., Orch. Linden. pg. 8. 1846. Type: [COLOMBIA: Norte de Santander:] near Chitaga, prov. Pamplona, 9000 ft, IV 1843, **Linden 2213**. Holotype: K-L! Isotype: [locality annotated as C. la Toja] W-R!

Epidendrum spectatissimum Rchb.f., Bonpl. 3: 68. 1855. Holotype: COLOMBIA: [Norte de Santander:] San Pedro, 6000 ft, **Wagner**, W-R 4327!

Epidendrum splendidum Schltr., Repert. Spec. Nov. Regni Veg. Beih. 8: 87. 1921. Type: ECUADOR: [Pichincha:] montis Pielí, X 1886, **Sodirol**. Holotype: QPLS!

Hierba litófito o epífita, cespitosa, 60-120 cm de alto. **Raíces** basales, carnosas, gruesas, 3.5-7 mm de grosor. **Tallos** sencillos, tipo caña, teretes en la base, poco a muy comprimidos lateralmente hacia el ápice, ligeramente sinuosos, cubiertos por brácteas tubulares escariosas en el tercio basal, foliados en los dos tercios apicales, 25-87 cm de largo, 5-12 mm de grosor en la base, 9-13 mm de ancho arriba. **Hojas** 6-12, dísticas, desiguales, distribuidas en los dos tercios apicales del tallo, vaina tubular a lateralmente comprimida, lisa, de color verde frecuentemente manchada de morado, 2.5-7 cm de largo; lámina foliar articulada, oblonga, aguda, margen entero, más o menos revoluta, coriácea, lisa, verde; 7-27(30) x 2-7.7(10) cm (3:1-6:1). **Bráctea espatácea** una prominente, conduplicada, oblonga, subaguda, 7-19 x 1.0-2.1(3) cm. **Inflorescencia** apical, del crecimiento maduro, florece una sola vez, racemosa, erecta, 14-26 cm de largo, pedúnculo ancipitoso, raquis terete, no ornamentado. **Flores** simultáneas, 6-12(50), resupinadas, sépalos y pétalos verde amarillento, labelo blanco, los callos blancos, columna blanca, antera blanca; fragancia diurna a gardenia. **Bráctea floral** mucho más corta que el ovario, acuminada, 2-10 mm de largo. **Ovario** pedicelado, no inflado, de sección circular, no ornamentado, 6-12 cm de largo. **Sépalos** ligeramente reflexos, libres, quilla dorsal ausente, glabros. **Sépalos** angostamente elípticos a oblanceolados, acuminados, márgenes revolutos, 7-nervado; 48-52 x 7.5-9.0 mm. **Pétalos** extendidos, linear elípticos, acuminados, márgenes revolutos, membranáceos, 3-5-nervados; 46-51 x 4-5 mm. **Labelo** unido a la columna, trilobado, más o menos extendido en posición natural, 32-36 x 24-25 mm; bicalloso, callos laminares, ápice subagudo, con una carina central roma y delgada; lóbulos laterales ovados flabelados, 9-11 x 13-14 mm; lóbulo medio linear-ligulado, agudo, recto, 23-24 x 4.5-6 mm. **Columna** ligeramente arqueada, delgada en la base prominentemente dilatada verticalmente en la mitad apical, 20-25 mm de largo. **Clinandrio** corto, margen entero con dos dientes cortos y agudos arriba. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** prominentes, de la mitad del largo de la cavidad estigmática. **Nectario** profundo, penetrando 2/3 partes a casi todo el ovario, no ornamentado. **Antera** semiesférica, 4-locular. **Polinios** 4, obovoides, lateralmente comprimidos, subiguales; caudículas suaves y granulosas, del doble de largo de los polinios; viscidio semilíquido, transparente. **Cápsula** 12-12.5 cm de largo, cuerpo cerca de la base, pedicelo 2 cm, cuerpo elipsoidal, 6 x 1.5 cm, cuello apical 4.5 cm.

Caespitose lithophytic and epiphytic **herb**. **Roots** basal, thick. **Stems** simple, cane-like, terete at base, compressed near the apex, covered by scarios sheaths below. **Leaves** 6-12, along the apical 2/3 of the stem, oblong, acute, coriaceous, margins somewhat revolute. **Spathaceous bract**, oblong, sub-acute, prominent, conduplicate. **Inflorescence** erect, apical, racemose, from mature stem, flowers only once. **Floral bracts** very small, acuminate. **Ovary** long, not inflated. **Flowers** simultaneous, yellowish-green, lip, calli and column white, fragrant of gardenia in daytime. **Sepals** somewhat reflexed, narrowly elliptic to oblanceolate, acuminate, margins revolute, 7[8]-veined, the laterals oblique. **Petals** spreading, linear-elliptic, acuminate, margins revolute, 3-5-veined. **Lip** 3-lobed, spreading in natural position, bicallose, the calli laminar, with a central long, rounded keel; lateral lobes ovate to flabellate, mid-lobe linear-ligulate, acute. **Column** slightly arched, dilated. **Clinandrium-hood** short, entire with two short, acute teeth above. **Nectary** deep, penetrating 2/3 to nearly the whole ovary, unornamented. **Capsule** ellipsoid, with a short, thin pedicel and the apical neck about twice as long.

OTHER SPECIMENS: See appendix.

DISTRIBUTION AND ECOLOGY: Widely distributed in the northern Andes, from Caracas, on the Cordillera Costanera, the Andes of Venezuela, Serranía de Perijá, Sierra Nevada de Santa Marta, along the Cordillera Oriental of Colombia, and along the Cordillera Central from Antioquia through Popayán and Pasto and down the western slope of the Andes to southern Ecuador; 900-2700 m altitude. Flowering from mainly in March, April, May, August and November.

RECOGNITION: *Epidendrum leucochilum* is recognized by its large plants, coriaceous leaves, prominent spathaceous bract at the base of an erect, raceme of large, star-shaped, green flowers with white, column and 3-lobed lip. It is most similar to *E. lehmannii* Schltr., (the sister species from the eastern slopes of the Andes in Ecuador and Peru) which has wider leaves (2:1-5:1), smaller flowers (sepals 3 cm long) and floral fragrance of papaya. It is also related to *E. friderici-guillielmi* Warsc. ex Rchb.f. which has intensely fuchsia-colored, smaller flowers, (sepals 13-25 mm long). Some specimens of *E. steyermarkii* A.D. Hawkes have been misidentified as *E. longiflorum*, but *E. steyermarkii* (Cernuum Group) can be distinguished by the monopodial, sub-apically branching stems, much smaller leaves and the inflorescence without any spathaceous bract; the flowers are very similar, though smaller. *Epidendrum lacustre* Lindl. is recognized by the flattened, ancipitose stems, wide leaves (1.9:1-3.4:1), and the undivided lip; they are both found growing sympatric at least near Tulcán, Ecuador.

ETYMOLOGY: From the Greek, λευκον, white, in reference to the color of the lip.

LOCAL NAME: kuk'chuiimi, sarmosiya (SE Sierra Nevada de Santa Marta, *Plowman 3641*).



NOTES: The name *Epidendrum longiflorum* Kunth cannot be used because of the earlier K.D.Koenig name of 1791 for a species apparently from India. The illustration based on *Dunsterville 674* (AMES), and published as *E. longiflorum* in Romero & Carnevali (2000) is atypical in the few-flowers, small spathaceous bract, and relatively short and wide lip.

REFERENCES: *Epidendrum leucochilum* Kl. in Dodson, C.H., 1980, *Icones Pl. Trop.* 1:87. Dunsterville, G.C.K. and L.A. Garay, 1979, *Orchids of Venezuela*, pg. 246. Foldats, Ernesto, 1970, *Orchidaceae in Flora de Venezuela*, 15(3): 301-304. Dunsterville, G.C.K. and E., 1980, *Orchids of Venezuela: Epidendrum leucochilum*, Amer. Orch. Soc. Bull. 49(10): 1095-1097. Escobar, R., 1994, *Orq. Nat. Col.* 5: 768. Mutis, José Celestino, *Flora de la Real Expedición Botánica del Nuevo Reyno de Granada*, t. 31. 1985. Romero-G., G.A., & G. Carnevali F.-C., 2000. *Orchids of Venezuela, ill. Field Guide*, 2 ed. pg. 255.

Author: E. Hágsater

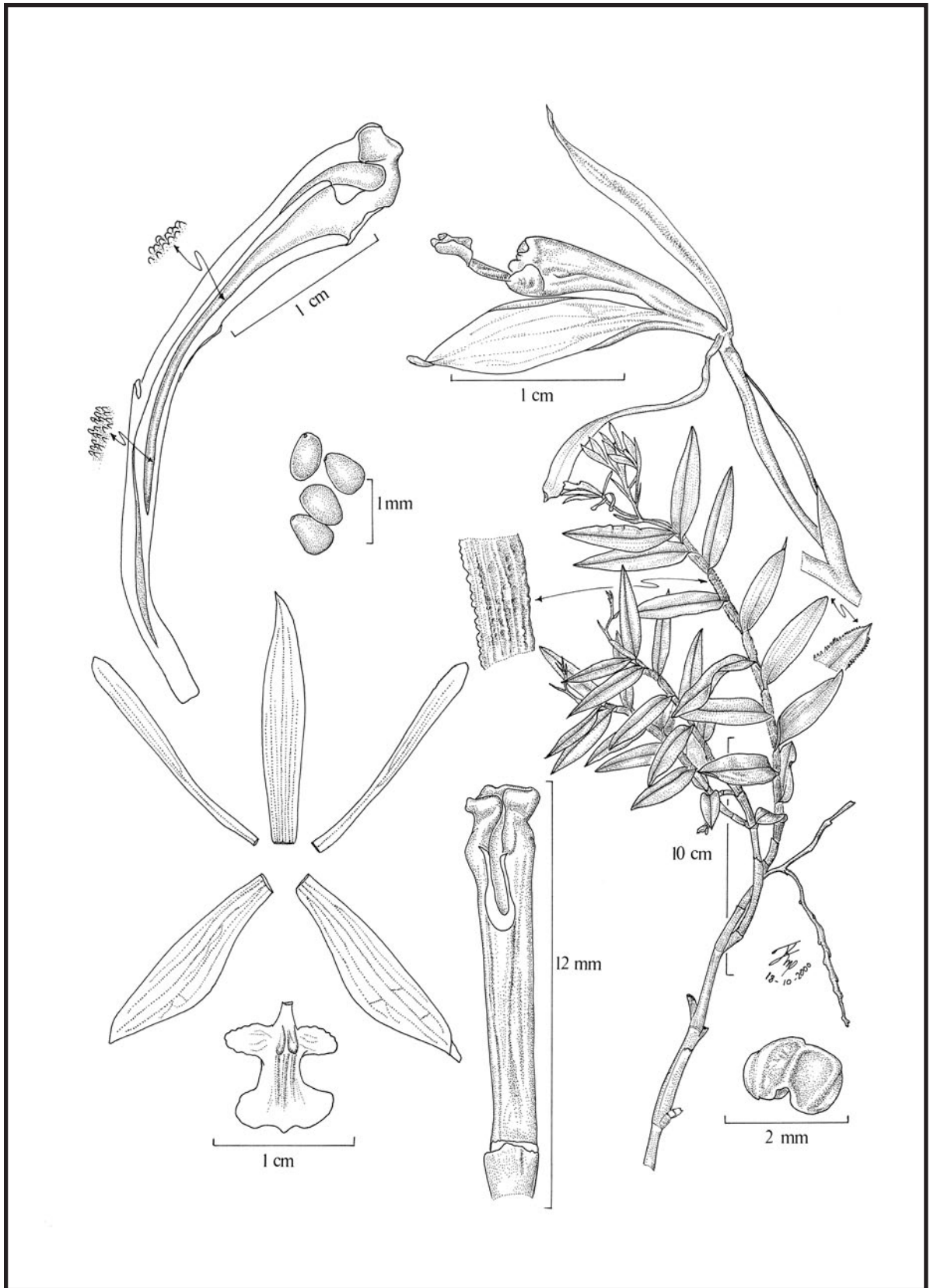
Illustrator: E. Hágsater

Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009. Plate 1260



EPIDENDRUM LIMA Lindl.

EPIDENDRUM LIMA Lindl., Fol. Orch. Epid.: 67. 1853.

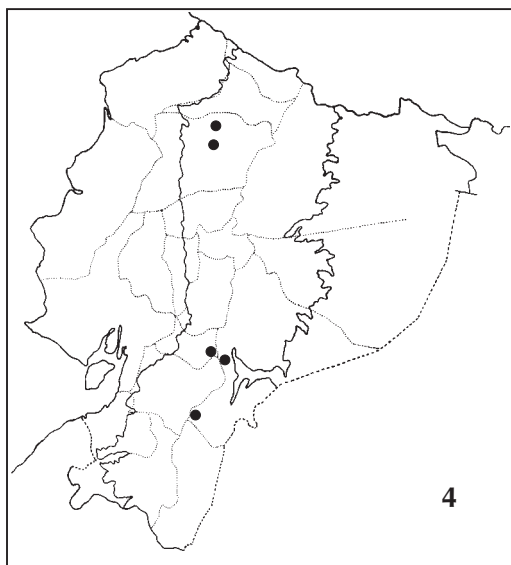
Type: "PERU" [ECUADOR]: in the ravines of Pichincha, **Jamieson 111**. Holotype: K-L! Fragments of holotype (flowers): AMES! W-R 50159!

Hierba epífita, monopodial, ramificados arriba. **Raíces** no vistas. **Tallos** tipo caña, erectos, rectos, lateralmente aplanados, ramificados hacia el ápice; el principal no visto, las ramificaciones 13-18 x 0.3-0.6 cm. **Hojas** 5-10 en las ramificaciones, distribuidas a lo largo de cada rama, alternas, articuladas, desiguales en tamaño (la basal generalmente más pequeña) y forma; vaina tubular, finamente estriada, rugosa, 1-3.2 x 0.3-0.6 cm; lámina ovado lanceolada a lanceolada, aguda a cortamente acuminada, margen apical papiloso, extendido, 1.6-7.5 x 0.7-2.1 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa a incipientemente paniculada, subrecta, pauciflora, laxa, florece una sola vez, 3-8.5 cm de largo; pedúnculo subterete, delgado, 12-20 mm de largo, provisto en la base de una bráctea semejante a las florales, 9 mm de largo. **Brácteas florales** más cortas que el ovario, triangular lanceoladas, largamente acuminadas, abrazadoras, 9-17 mm de largo. **Flores** 5-12, sucesivas, 2-5 abiertas de manera simultánea, resupinadas, verde claro a amarillentas, sin datos de fragancia. **Ovario** terete, delgado, no inflado, no ornamentado, 15-25 mm de largo. **Sépalos** lanceolados, 5-nervados, margen revolute, 15-16 x 4 mm; el **dorsal** extendido, libre, obtuso; los **laterales** entreabiertos, unidos de manera oblicua a la base de la columna, oblicuos, agudos. **Pétalos** entreabiertos, libres, linear-oblancoleados, subobtusos, 1-nervados, la nervadura ramificada hacia la mitad apical dando la apariencia de ser 3-nervados, margen entero, extendido, 14-15 x 1.5 mm. **Labelo** unido a la columna, trilobado, ligeramente cordado en la base, 7 x 8 mm; bicalloso, los callos delgados, subglobosos, alargados hasta la base del lóbulo medio; disco provisto de tres carinas, muy delgadas, que se desvanecen antes de llegar al seno apical; lóbulos laterales transversalmente elípticos, redondeados, margen eroso, 3.6 x 2.3 mm; lóbulo medio formando un istmo angosto en la base, bilobado arriba, los lóbulos extendidos, semicirculares, seno apical diminutamente apiculado, margen entero, 5.3 x 7 mm. **Columna** recta, delgada en la base y gradualmente más amplia hacia el ápice, 11 mm de largo. **Clinandrio** prominente (aunque sin sobrepasar el cuerpo de la columna), margen entero. **Antera** reniforme, 4-lócular. **Polinios** 4, ovoides, desiguales. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** prominentes, de más de la mitad de largo de la cavidad estigmática. **Nectario** penetrando 1/3 del ovario, papiloso. **Cápsula** elipsoide, con el perianto persistente.

Epiphytic, monopodial **herb** with sub-apical branching. **Stems** cane-like, erect, straight, laterally compressed, branched above. **Leaves** 5-10 on the branches, distributed throughout each branch, alternate, articulate, unequal in size and shape, the basal leaf generally smaller; sheath tubular, minutely striated, rugose; blade ovate-lanceolate to lanceolate, acute to short-acuminate, apical margin papillose, spreading. **Inflorescence** apical, racemose to paniculate, sub-erect, lax few-flowered, flowering only once; peduncle sub-terete, thin, provided at the base with a single bract similar to the floral bracts. **Floral bracts** much shorter than the ovary, triangular-lanceolate, long acuminate, amplexicaul. **Flowers** 5-12, successive, 2-5 open at one time, resupinate, pale green to yellowish. **Ovary** terete, thin, not inflated, smooth. **Sepals** lanceolate, 5-veined, margin revolute; the dorsal sepals spreading, free, obtuse; the lateral sepals partly spreading, obliquely united to the base of the column, oblique, acute. **Petals** partly spreading, free, linear-oblancoleate, sub-obtuse, 1-veined, the vein branching above the middle and thus appearing 3-veined, margin entire, spreading. **Lip** united to the column, 3-lobed, base slightly cordate; bicallose, the calli thin, sub-globose, elongate to the base of the midlobe; disc 3-keeled, the keels very narrow, disappearing before they reach the apical sinus; lateral lobes transversely elliptic, rounded, small, margin erose; midlobe forming a narrow isthmus at the base, bilobed above, the lobes spreading, semi-circular, apical sinus minutely apiculate, margin entire. **Column** straight, thin at the base, gradually thickened towards the apex. **Clinandrium-hood** prominent (without surpassing the body of the column), margin entire. **Anther** reniform, 4-celled. **Pollinia** 4, obovoid, unequal. **Rostellum** sub-apical, slit. **Nectary** penetrating 1/3 of the ovary, papillose. **Capsule** ellipsoid, perianth persistent.

OTHER SPECIMENS: Without data, [Lindley] 112, W-R 50159! **ECUADOR:** **Azuay:** between Sevilla de Oro and Méndez, 2700-3300 m, 30 X 1944, *Camp E-711*, AMES! NY! (Illustration voucher). S! **Cañar:** NE of Pindilig, 2900 m, 13 XII 1980, *Holm-Nielsen 29221*, AAU! **Morona-Santiago:** Parr. San Miguel de Cuyes, Huachapal, 2800 m, VII 1997, *Suin 257*, AMO! QCNE! **Pichincha:** Reserva Geobotánica del Pulumahua, 2800-3200 m, 26 XI 1990, *Cerón 12359*, QCNE!

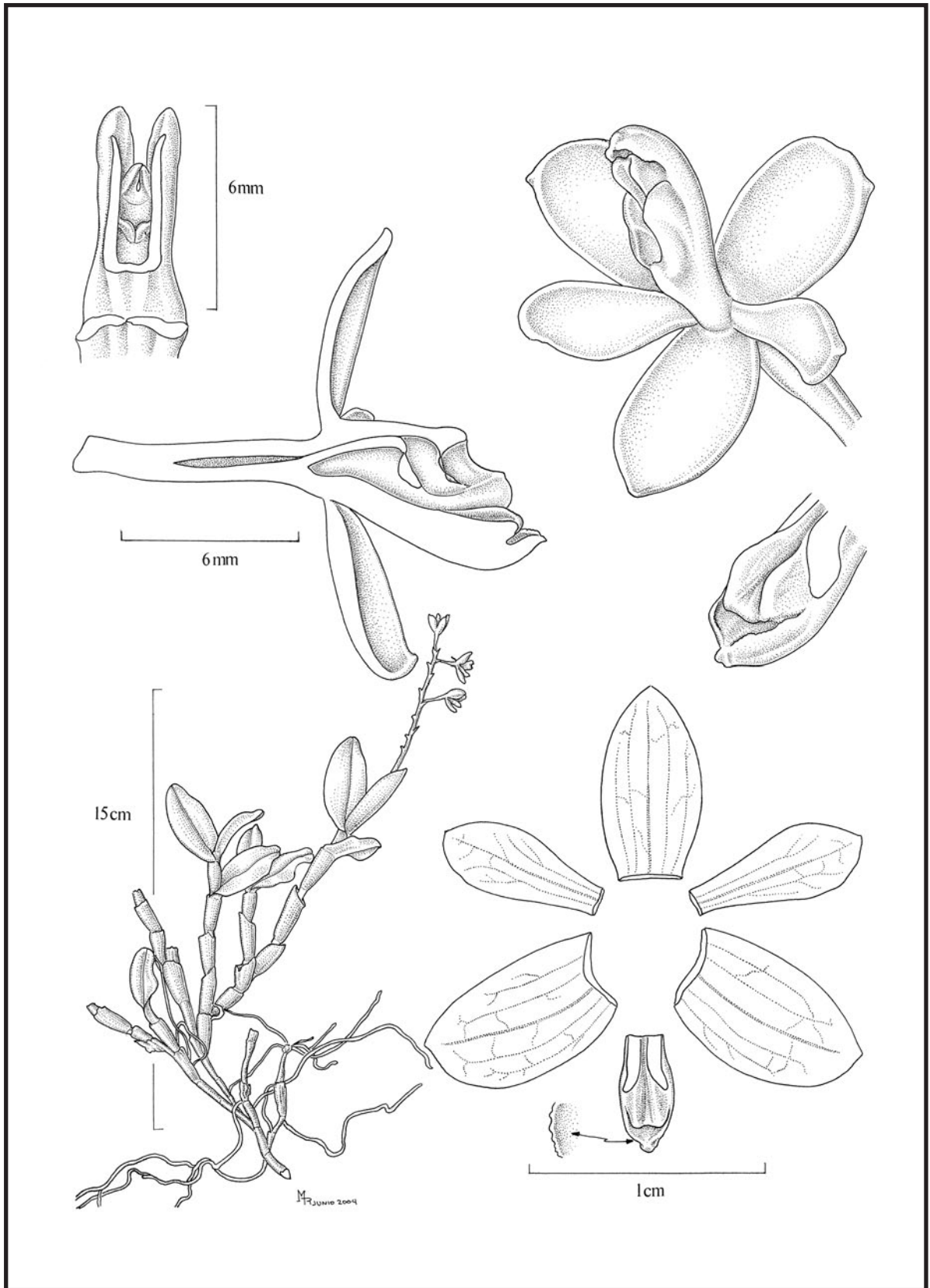
DISTRIBUTION AND ECOLOGY: Endemic to Ecuador, epiphytic at 2700-3300 m altitude. Flowering from July to December.



RECOGNITION: *Epidendrum lima* belongs to the Andean Group, Fritizianum Subgroup characterized by the monopodial stems branched above, the ovate to ovate-elliptic, acute to short-acuminate leaves, lateral sepals obliquely united to the base of the column, and clearly 3-lobed lip. The species is recognized by the much branching stems, the leaves unequal in shape and size, acute to acuminate, lax, few-flowered inflorescence, pale green to yellowish flowers, sepals 15-16 mm long, and the 3-lobed lip with the midlobe forming a narrow isthmus at the base, bilobed above, the lobes spreading, semicircular, apical sinus minutely apiculate. *Epidendrum trachylaena* Schltr. is very similar, but the leaves are larger, elliptic, the 12-15 cm long inflorescence many-flowered, sepals 16-18 mm long, and the midlobe of the lip obcuneate, emarginate and not apiculate. *Epidendrum fritizianum* Hoehne has ovate, sub-acute leaves similar in shape, a few-flowered inflorescence, flowers green with purple spots, sepals 8-9 mm long, and the midlobe truncate and truncate at the apex. *Epidendrum putidocardiophyllum* Hágsater & Dodson has elliptic to lanceolate, acute leaves, a many flowered-inflorescence, flowers purple-green, sepals 17-18 mm long, the lateral lobes of the lip very small, and the midlobe rectangular with a pair of minute lobes at the apex.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: Uncertain, possibly dedicated to Lima, the capital city of Peru; Ecuador was originally part of Peru.



EPIDENDRUM MANCUM Lindl.

Plate 1262

EPIDENDRUM MANCUM Lindl., Edward's Bot. Reg. 30: misc. 83, no. 3. 1844.

Type: "PERU" [ECUADOR]: On the Cordillera, near Loxa [Loja], flowering in July, **Hartweg 41**. Holotype: K-L!

Hierba epífita, simpodial, cespitosa, erecta, 15-25 cm de alto. **Raíces** basales, carnosas, delgadas, 0.5-1 mm de grosor. **Tallos** sencillos, tipo caña, rectos, lateralmente comprimidos, 7-11 x 0.3-0.7 cm. **Hojas** 2-3, agregados hacia el 1/4 apical del tallo, erectas; vaina tubular, lateralmente comprimida, estriada, 1.5-2.5 cm de largo; lámina ovada elíptica, desigualmente bilobada, coriácea, con una quilla dorsal, margen entero, 2-6 x 1.3-2.7 cm. **Bráctea espatácea** 1, oblonga, ancipitosa, aguda, 2-4 x 0.8-1.2 cm. **Inflorescencia** apical, racemosa, erecta, 6.5-15 cm de largo; pedúnculo lateralmente comprimido, recto, no ornamentado. **Brácteas florales** mucho más cortas que el ovario a obsoletas hacia el ápice, triangulares, acuminadas, 1-3 mm de largo. **Ovario** terete, no ornamentado, no inflado, 7-9 mm de largo. **Flores** 10-15(20), simultáneas, no resupinadas, de color naranja y amarillo (según el tipo), rojo-café, columna y labelo blanco; fragancia no registrada. **Sépalos** extendidos, ligeramente cóncavos, libres, ovados, obtusos, 5-6-nervados, margen entero, extendido, 6.5-7 x 5 mm; los **laterales** oblicuos. **Pétalos** extendidos, ligeramente cóncavos, libres, asimétricamente espatulados, obtusos, 3-nervados, margen entero a sinuado, 5-6 x 3-4 mm. **Labelo** unido a la columna, reducido, carnoso, entero, subcuadrado, redondeado en el ápice, margen entero, 4.8-5.0 x 2.4-3.5 mm; bicallose, los callos prominentes y alargados, lateralmente comprimidos, con una quilla pequeña y subglobosa en medio. **Columna** recta, corta, gruesa, terminada en un par de alas largas, redondeadas, de 4-6 mm de largo. **Clinandrio** corto, entero. **Antera** 4-locular, subsférica. **Polinios** 4, obovoides, lateralmente comprimidos. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** de 2/3 de largo de la cavidad estigmática. **Nectario** sin traspasar el perianto, cónico, no ornamentado. **Cápsula** no vista.

Epiphytic, sympodial, caespitose, erect **herb. Roots** basal, fleshy, thin. **Stems** simple, cane-like, straight, laterally compressed. **Leaves** 2-3, aggregate towards the apical 1/4 of the stem, erect; sheath tubular, laterally compressed, striated; blade ovate-elliptic, unequally bilobed, coriaceous, with a low dorsal keel, margin entire. **Spathaceous bract** single, oblong, ancipitose, acute. **Inflorescence** apical, racemose, erect; peduncle laterally compressed, straight, smooth. **Floral bracts** much shorter than the ovary to obsolete, triangular, acuminate. **Ovary** terete, smooth, not inflated. **Flowers** 10-15(20), simultaneous, non-resupinate, orange and yellow (according to the type), red-brown, column and lip white. **Sepals** spreading, somewhat concave, free, ovate, obtuse, 5-6-veined, margin entire, spreading; the **lateral** oblique. **Petals** spreading, slightly concave, free, asymmetrically spatulate, obtuse, 3-veined, margin entire to sinuate. **Lip** united to the column, reduced, entire, fleshy, sub-quadrate, apex rounded, margin entire; bicallose, the calli prominent, elongate, laterally compressed, with a sub-globose rounded keel in the middle. **Column** straight, short, thick, ending in a pair of long, rounded wings. **Clinandrium-hood** short, entire. **Anther** 4-celled, sub-spherical. **Pollinia** 4, obovoid, laterally compressed. **Rostellum** sub-apical, slit. **Nectary** short, without penetrating the ovary, conical, smooth.

OTHER SPECIMENS: Without locality, W-R 5781! **ECUADOR: Loja:** Nudo de Sabanilla, W slope on road to Yangana, 2600 m, 6 II 1985, *Harling 21696*, GB! South of Yangana, S of Vilcabamba, 2400 m, 22 IX 1980, *Luer 5534*, SEL! (Illustration, Icon. Pl. Trop. pl. 429. 1982.) Road east of Yangana, 2650 m, 4 III 1982, *Luer 7146*, SEL! Rd. Loja-Las Achira (Uritusinga), km 10 from Universidad Nacional de Loja, 2800 m, 20 V 2001, *Madsen 8065*, LOJA! **Zamora-Chinchipec:** Road Loja-Zamora, km 17, 2400 m, 16 IV 1973, *Holm-Nielsen 3605*, AAU! (Illustration voucher). AMES!

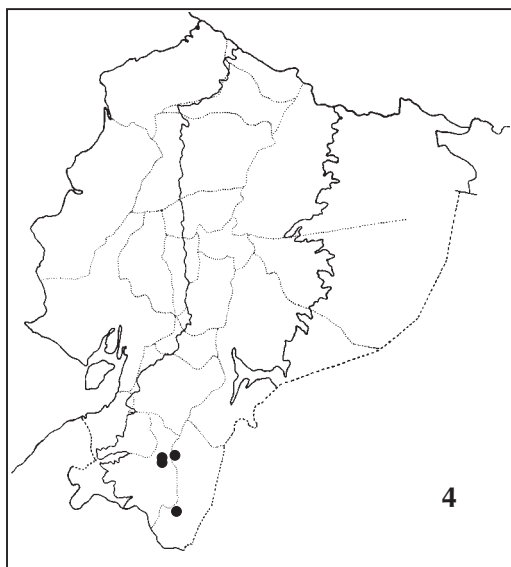
DISTRIBUTION AND ECOLOGY: Endemic to the eastern Andes of southern Ecuador, around of Loja, epiphytic at 2400-2800 m altitude. Flowering from February to May.

RECOGNITION: *Epidendrum mancum* Lindl. belongs to the Mancun group which is characterized by the sympodial habit, few-leaves stems, racemose inflorescence with 1-2 ancipitose, long, spathaceous bracts with parallel sides, and Mancun Subgroup which is non-resupinate, generally fleshy flowers and a reduced lip. The species can be recognized by its relatively small plants, short, wide leaves, spatulate petals with the margin entire to sinuate, a reduced, sub-quadrate lip, bicallose, the calli prominent, elongate and laterally compressed, with a short, sub-globose keel in the middle.

Epidendrum pseudomancum Hágsater & L.Sánchez has sub-orbicular-spatulate petals, the margin crenulate, and a trullate lip. *Epidendrum ancistrum* Hágsater & Dodson has much wider leaves, 2.5-3.5 cm wide, a 3-lobed lip, the lateral lobes sub-triangular, and the midlobe trapezoid to sub-quadrate. *Epidendrum rhombimancum* Hágsater & L.Sánchez has elliptic-lanceolate leaves, obovate petals, and a transversely elliptic lip, with the central keel formed by numerous thickenings. *Epidendrum microtum* (Lindl.) Hágsater & L.Sánchez has larger plants, 20-43 cm tall, longer leaves, 6-16 cm long, and a 3-lobed lip. *Epidendrum microglossum* Schltr. has narrower, linear-lanceolate leaves, 0.6-0.8 cm wide, a flexuose rachis and 3-lobed lip.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Latin *mancus* mutilated, a mutilated hand, in reference to the much reduced lip of this species.



Authors: L. Sánchez S. & E. Hágsater

Illustrator: M. López R.

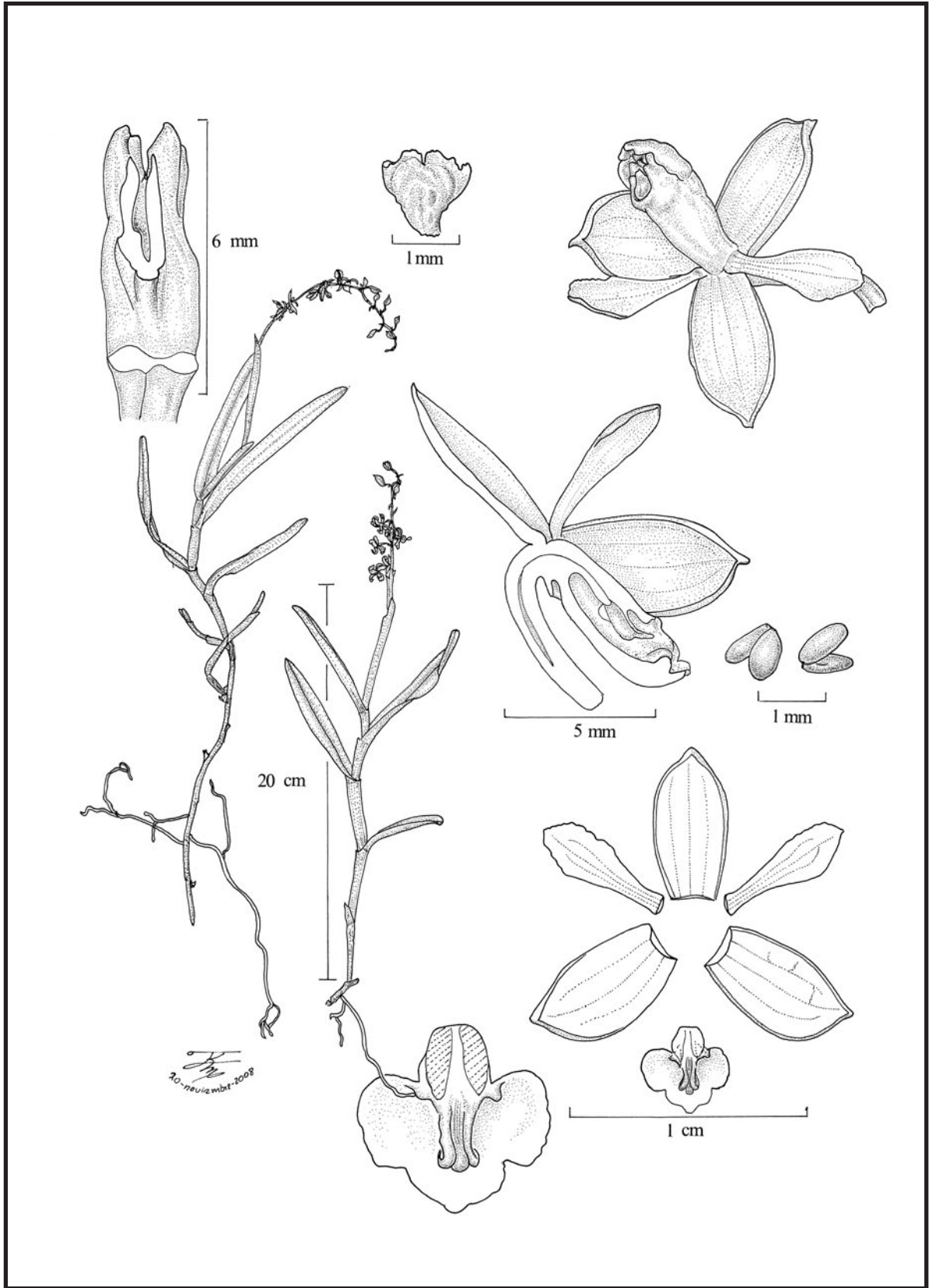
Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009.

Plate 1262



EPIDENDRUM MICROGLOSSUM Schltr.

EPIDENDRUM MICROGLOSSUM Schltr., Repert. Spec. Nov. Regni Veg. 15: 54. 1917.

Type: ECUADOR: [Pichincha]: In silvis montis Corazon, prope Canzacoto, blühend im Mai 1885, **A. Sodiro 57**.

Holotype: B destroyed. Lectotype: (designated by Dodson, 1999). QPLS! Isolectotype: BR!

Hierba rastrera, simpodial, epífita, 15-27 cm de alto. **Raíces** basales, gruesas, carnosas, 2-3 mm de grosor. **Tallo** tipo caña, producido de los nudos inferiores del tallo anterior, a 1-5.5 cm arriba de la base, 1-2 por tallo; erectos, rectos, lateralmente comprimidos, 6-14 x 0.25-0.5 cm. **Hojas** 2-3 por tallo, distribuidas en el tercio apical del tallo, cubierto en la base por 3 vainas no foliosas, escariosas, iguales a las foliares, estriadas y finamente rugosas en seco 7-23 x 3-5 mm; lámina lanceolado oblonga, ápice obtuso, aristado y cóncavo, generalmente rajándose al extenderse, margen diminutamente eroso, 30-84 x 6-8 mm. **Brácteas espatáceas** 1-2, ancipitosas, oblongas, agudas, 28-50 x 2.2-3.7 mm. **Inflorescencia** apical, racemosa, alargada, muy laxa, raquis flexuoso, 12-20 cm de largo; el pedúnculo erecto, 5-10 cm de largo, cubierto entre 1/3 y 3/4 por las espatas, arriba ocasionalmente con alguna bráctea linear acuminada de 5-20 mm de largo, el raquis arqueado, sinuoso, 7-10 cm de largo. **Flores** 9-20, simultáneas, no resupinadas, blancas con amarillo adentro; fragancia no registrada. **Brácteas florales** más cortas que el ovario, triangulares, agudas, 1-3 mm de largo. **Ovario** recto a incurvado, no ornamentado, 4-5 mm de largo. **Sépalos** extendidos, obovados, agudos, 3-nervados, margen entero, extendido; 5.0-6.0 x 2.5-3.0 mm los **laterales** con una quilla dorsal apical. **Pétalos** extendidos, espatulados, obtusos, 3-nervados, margen sinuado, extendido; 5.0-5.5 x 1.0-1.2 mm. **Labelo** unido a la columna, base cordada, trilobado, 3.0-3.5 x 3.5-4.0 mm; bicalloso, los callos alargados, disco con una quilla gruesa, ligeramente más larga que los callos; lóbulos del labelo de forma y tamaño subiguales, semiobliculares a transversalmente semielípticos, con margen entero a sinuado. **Columna** corta, gruesa, arqueada con respecto del ovario; 4.0-4.5 mm de largo. **Clinandrio** algo reducido, carnoso, entero. **Antera** reniforme, el ápice cónico. **Polinios** 4, obovoides, lateralmente comprimidos. **Nectario** sin llegar al perianto, no ornamentado. **Lóbulos laterales del estigma** ocupando 1/2 de la cavidad estigmática. **Cápsula** no vista.

Creeping, sympodial, epiphytic **herb**. **Roots** basal, fleshy, thick. **Stem** cane-like, produced from the lower nodes of the previous stem, somewhat above the base, erect, straight, laterally compressed. **Leaves** 2-3 per stem, distributed along the apical third of the stem, base covered by 3, non-foliar sheaths, scarios, equal to the foliar sheaths, striated, minutely rugose; blade lanceolate, oblong, apex obtuse, aristate, concave, generally slitting when extended, margin minutely erose. **Spathaceous bracts** 1-2, ancipitose, oblong, acute. **Inflorescence** apical, racemose, elongate, very lax, rachis flexuose; peduncle erect, 1/3-3/4 covered by the spathaceous bracts, sometimes with a linear-acuminate bract; rachis arching, sinuous. **Flowers** 9-20, simultaneous, non-resupinate, white, yellow inside. **Floral bracts** shorter than the ovary, triangular, acute. **Ovary** straight to incurved, smooth. **Sepals** spreading, obovate, acute, the lateral sepals with a dorsal, apical keel, 3-veined, margin entire, spreading. **Petals** spreading, spatulate, obtuse, 3-veined, margin sinuate, spreading. **Lip** united to the column, base cordate, 3-lobed; bicallose, the calli elongate, the calli elongate, slightly longer than the calli; lobes of the lip similar in size, semi-orbicular to transversely semi-elliptic, margin entire to sinuate. **Column** short, thick, arched with respect to the ovary. **Clinandrium-hood** somewhat reduced, fleshy, entire. **Anther** reniform, with a conical ending at the apex. **Pollinia** 4, obovoid, laterally compressed. **Nectary** shallow, without reaching the perianth, smooth.

DISTRIBUTION AND ECOLOGY: Ranging from northern Ecuador, along the upper Pacific slope of the Andes, epiphytic at 1800-3200 m altitude. Flowering from April to August.

OTHER SPECIMENS: ECUADOR: Pichincha: 5 km east of Tandayapa, on road Nono-Nanegalito, 1800 m, 9 VIII 1978, *Dodson 6990*, AAU (x2)! SEL! km 60, Quito-Santo Domingo, via Tandapi, 2600 m, 25 X 1984, *Dodson 15380*, MO! QCNE! La Iberia, km 4-6, Calacali-Hacienda Gallopelado a lado de la carretera, 2800 m, 4 IV 1985, *Dodson 15754*, MO! QCA! QCNE! Pululagua-La Liberia, I 1984, *Hirtz 1488*, AMO x2! Ibid. *Hirtz 1489*, AMO! Der Corazón, 8500 ft, VIII 1877, *Lehmann 107*, W-R! (Illustration voucher). Ibid. 2000 m, 14 I 1881, *Lehmann 361*, G! W-R! Below Lloa, 2700 m, 27 X 1979, *Luer 4345*, SEL!

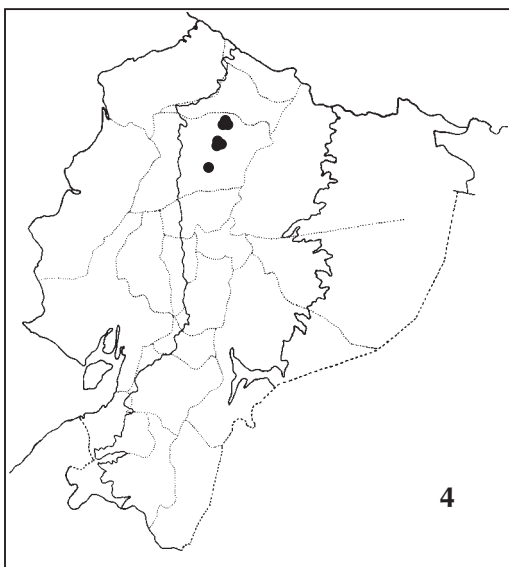
OTHER RECORDS: ECUADOR: Pichincha: Quito-Santo Domingo Road, 75 km south of Quito, 11 km south from jct. of road to Latacunga, 10500 ft, 4 VIII 1980, *Saulea 3839*, (flowers in spirit AMO!).

RECOGNITION: *E. microglossum* Schltr. belongs to the Mancun group which is characterized by the sympodial habit, few-leaved stems, racemose inflorescence with 1-2 ancipitose, long, spathaceous bracts with parallel sides, and Mancun Subgroup which has non-resupinate, flowers, and a generally reduced, fleshy lip. The species can be recognized by the laterally compressed stems, lax-flowered inflorescence, flexuose rachis, spatulate petals, 3-lobed lip, the lobes semi-orbicular to transversely semi-elliptic, calli elongate with a thick mid-keel slightly longer, and the ovary incurved. *Epidendrum microglossoides* Hágsater & Dodson has terete stems, a straight rachis, 1-veined petals, margin dentate, lateral lobes of the lip bilobed, apex of the midlobe 3-lobed. *Epidendrum microtum* (Lindl.) Hágsater & L.Sánchez has longer, wider leaves, 6-15.7 x 1.8-3.5 cm, the lobes of the lip are unequal, the lateral lobes very short, elliptic to sub-triangular, falcate, entire, the midlobe trapezoid, margin undulate. *Epidendrum brachyglossum* Lindl. has linear petals, the midlobe of the lip much reduced, transversely rectangular, entire. *Epidendrum mancum* Lindl. has wider, ovate-elliptic leaves, 1.3-2.7 cm wide, lip reduced, entire, sub-quadrate, the apex rounded.

CONSERVATION STATUS: DD: Data deficient.

ETYMOLOGY: From the Greek μικρος, small, and γλωσσα tongue, in reference to the relatively small lip of the flower.

REFERENCE: Dodson, C. H. 1999. *Orchidaceae* in Jørgensen, P. M. & S. León-Yáñez. Catalogue of the Vascular Plants of Ecuador. *Monogr. Syst. Bot. Missouri Bot. Gard.*, 75: 662-663.



Authors: L. Sánchez S. & E. Hágsater

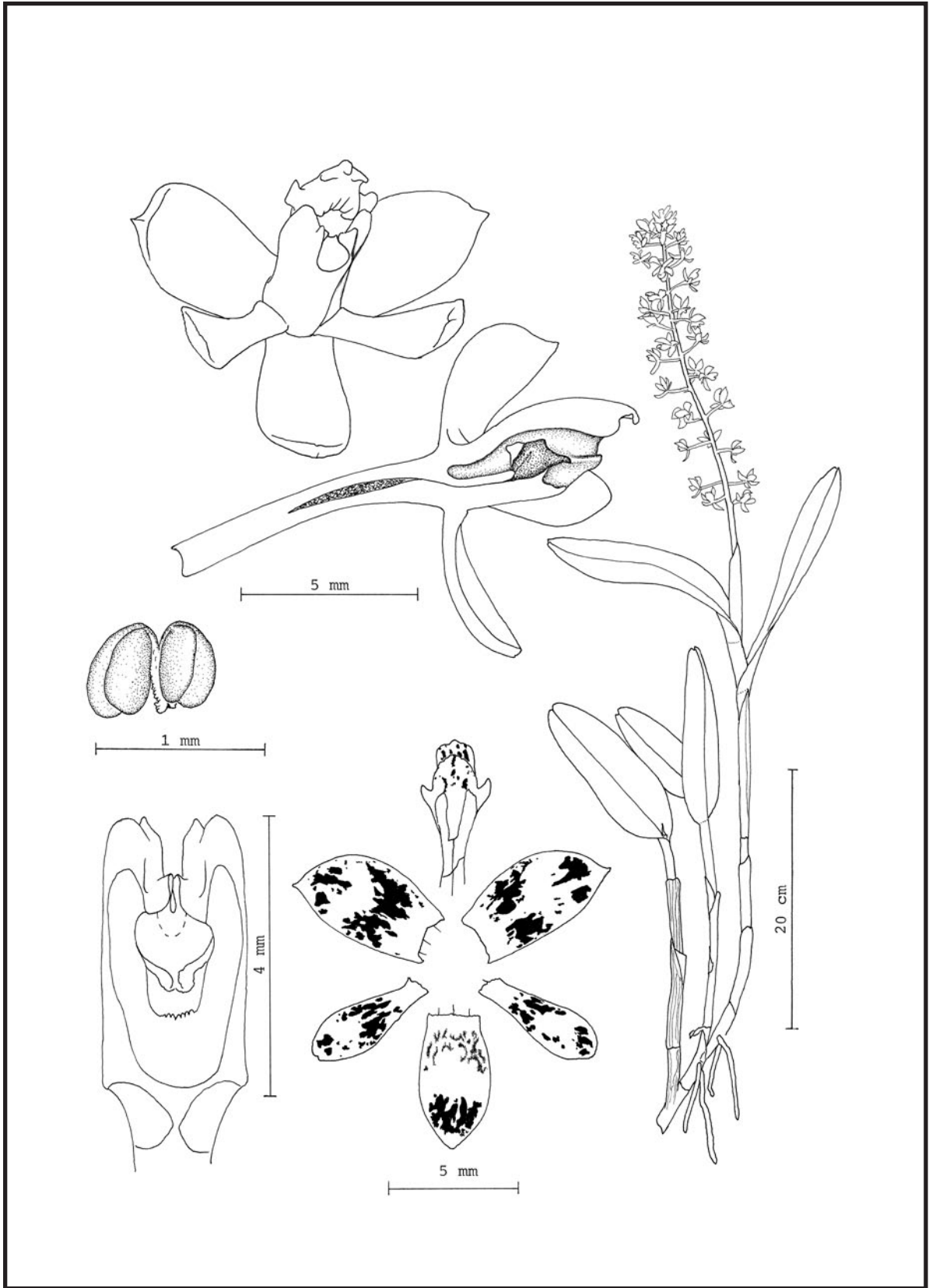
Illustrator: R. Jiménez M.

Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009. Plate 1263



EPIDENDRUM MICROTUM (Lindl.) Hágsater & L.Sánchez

Plate 1264

EPIDENDRUM MICROTUM (Lindl.) Hágsater et L. Sánchez, *comb. et stat. nov.*

Basionym: *Epidendrum brachyglossum* Lindl. var. *microtum* Lindl., *Fol. Orch. Epid.* p. 45. 140. 1853.

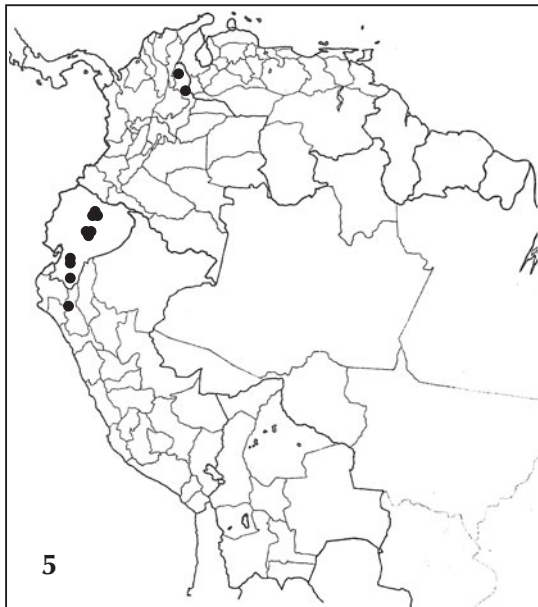
Type: COLOMBIA: [Norte de Santander]: In the province of Ocaña, at an elevation of 5800 ft, **Schlim 1029**. Holotype: W-R 4779 (slide at AMO)! Sketch of the type: W-R 5785, drawing on the right (slide at AMO)!

Hierba simpodial, rastrera, epífita, 20-43 cm de alto incluyendo la inflorescencia. **Raíces** de la base de cada tallo, gruesas, carnosas, 2-3 mm de grosor. **Tallo** producido de los nudos inferiores del tallo anterior, a 1-2 cm arriba de la base, cubierto en la base por 3 vainas no foliosas, escariosas, iguales a las foliares, estriadas y finamente rugosas; erectos, rectos, teretes en la base, lateralmente aplanados hacia el ápice, 9-16 x 0.25-0.5 cm. **Hojas** (2)3-4 por tallo, distribuidas en el tercio apical del tallo, vainas foliares, estriadas y finamente rugosas en seco 23-50 x 3-5 mm; lámina lanceolado oblonga, ápice obtuso, aristado y cóncavo, margen entero, 6-16 x 1.8-2.5 cm. **Brácteas espataceas** 1-(2), ancipitosas, oblongas, agudas, 7-9 x 1.7-1.9 cm. **Inflorescencia** apical, racemosa, alargada, más o menos compacta, algo laxa, 20-27 cm de largo; el pedúnculo erecto, 5-9 cm de largo, cubierto entre 1/2 a 3/4 por la espata, el raquis recto a ligeramente arqueado, 12-18 cm de largo. **Flores** 15-39, simultáneas, no resupinadas, sépalos y pétalos verdes con manchas pardo rojizas, labelo y columna crema con puntos rojos; fragantes de día y noche, siendo más evidente por el día. **Brácteas florales** mucho más cortas que el ovario, triangulares, agudas, 0.8-1.1 mm de largo. **Ovario** corto, no inflado, 8-10 mm de largo. **Sépalos** extendidos, elípticos, agudos, 5-nervados, 3 principales que se prolongan hasta cerca del ápice, las 2 laterales hasta la mitad, margen entero, 5.0-6.1 x 2.6-3.2 mm; los **laterales**, oblicuos, con una quilla dorsal apical. **Pétalos** extendidos, oblanceolados, obtusos, margen entero a ligeramente ondulado en el ápice, 3-nervados, la principal se prolonga hasta cerca del ápice, las 2 laterales hasta 1/3 de la longitud, 5.0-5.5 x 1.7-2.3 mm. **Labelo** trilobado, base truncada, 3.9-4.8 x 2.7-2.8 mm; bicalloso, los callos ocupando todo el ancho del disco, quilla central carnosas; lóbulos laterales muy cortos, elípticos a subtriangulares, falcados, enteros, redondeados a agudos; el lóbulo medio trapezoid, margen apical ondulado, con un apículo redondeado. **Columna** corta, gruesa, con un par de alas laterales carnosas, redondeadas a agudas en el ápice, 4.5-4.7 mm de largo. **Clinandrio** reducido, entero. **Antera** cordiforme. **Polinios** 4, obovoides, lateralmente comprimidos. **Nectario** no inflado, redondeado, ligeramente traspasando el perianto, no ornamentado. **Cápsula** no vista.

Epiphytic, sympodial, creeping herb. **Stems** terete at the base, laterally compressed toward apex. **Leaves** (2)3-4, lanceolate-oblong, obtuse, aristate. **Spathaceous bract** 1-(2), ancipitose, oblong, acute. **Inflorescence** apical, racemose, somewhat compact. **Flowers** non-resupinate, sepals and petals green marked and spotted with red-brown, lip and column cream-colored with red dots; fragrant day and night, more evident during daytime. **Floral bracts** much shorter than the ovary, triangular, acute. **Ovary** short, not inflated. **Sepals** spreading elliptic, acute, entire, 5-veined; the **laterals**, oblique with an apical keel. **Petals** spreading, oblanceolate, obtuse, margin entire to somewhat undulate, 3-veined. **Lip** united to the column, 3-lobed, truncate base; bicallose, the calli prominent; lateral lobes of the lip short, elliptic to sub-triangular, falcate, entire, rounded to acute; midlobe trapezoid, undulate apical margin, apex with a rounded apicule. **Column** short, with prominent lateral, fleshy wings. **Clinandrium-hood** reduced, entire. **Anther** 4-celled, cordiform. **Pollinia** 4, obovoid, laterally compressed. **Nectary** not inflated, rounded, somewhat penetrating the ovary, unornamented.

DISTRIBUTION AND ECOLOGY: Known from Colombia, Ecuador and Peru, on the Eastern slopes of the Andes. Epiphyte, from 1500 to 2900 m altitude. Flowering from March to September.

OTHER SPECIMENS: COLOMBIA: Norte de Santander: Toledo, Cordillera Oriental, región del Sarare, entre el Alto del Loro y el Alto de Santa Ines, 1800-2200 m, 18 X 1941, *Cuatrecasas 12467*, AMES! COL! Pamplona, *Schlim 135*, AMES! BR! W-R! **Antioquia:** Medellín, *Roehl s.n.*, W-R! **Cundinamarca:** Bogotá, Montes al E de Bogotá, ca. 3000 m, 17 II 1968, *Valdivieso 46*, COL! Zipaquirá, Cerro El Tunal, El Mortiño, ca. 2800 m, 23 I 1971, *Valdivieso 414*, HPUJ! **ECUADOR: Azuay:** Oriente border, Eastern Cordillera, between Oña and the Rio Yacuambi, west slope, 8000-9500 ft, 10-19 IX 1945, *Prieto 234*, AMES! NY! S! **Chimborazo:** Chontapampa, Road Puela-Baños, ca. 4 km North of Puela, 15 III 1969, *Lugo 782*, GB! **Loja:** Cerro Villanaco, 7-12 km west of Loja, 8000-9000 ft, (2400-2700 m), 9 X 1944, *Wiggins 10981*, AMES! CAS! **Napo:** Sierra Azul (Agrícola Industrial Río Aragón). Campamento Aragón, 2050 m, *Alvarez 571*, QCNE! Cordillera Guacamayo, slope towards Urcusiqui, 27 X 1939, *Asplund 9568*, AMES! Road Baeza-Tena, 7 km S of Baeza, 1800 m, *Bohlin 1542*, QCA! km 3, Baeza-Lago Agrio, 1500 m, 14 IV 1984, *Dodson 14283 sub Hágsater 7716*, AMO! (Illustration voucher) MO! Baeza-Tena, km 18, 1850 m, 4 XII 1986, *Hágsater 8834*, pressed cult. 14 IX 1988 AMO! Ibid, pressed cult. 14 VIII 1992, AAU! AMES! AMO! (Illustration, AMO!) COL! Ibid, pressed cult. 18 IX 1995, NY! SEL! Ibid. *Hágsater 8835*, AMO! Sendero al volcán El Reventador, 1600-1800 m, *Jaramillo 13095*, QCA! **Tungurahua:** Ambato, III 1984, *Hágsater 7730*, AMO! Baños, *Lehmann s.n.*, W-R! **Zamora-Chinchipec:** Road Yangana to Valladolid, beyond the pass, 2100 m, 24 VII 1985, *Dodson 16058*, MO! **PERU: Cajamarca:** Chorro Blanco, Cutervo National Park, ca. 15 km N of San Andres, 2350 m, 14 IX 1991, *Gentry 74828*, MO! USM!



OTHER RECORDS: COLOMBIA: Antioquia: Without locality, *Escobar 140*, slide of flowers AMO! Medellín, Cerro del Padre Amaya, 3000 m, *Escobar 715*, slide of flowers AMO! **Cundinamarca:** Bogotá, Montes al E de Bogotá, ca. 3000 m, 17 II 1968, *Valdivieso 46*, Illustration, xerox AMO! Zipaquirá, Cerro El Tunal, El Mortiño, ca. 2800 m, 23 I 1971, *Valdivieso 414*, Illustration, xerox AMO! **ECUADOR: Tungurahua:** Ambato, III 1984, *Hágsater 7730*, Illustration AMO! flowers in spirit AMO! **Napo:** Km 3, Baeza-Lago Agrio, 1500 m, 14 IV 1984, *Hágsater 7716*, slide of flowers AMO!

RECOGNITION: *Epidendrum microtum* belongs to the Mancum Group and Subgroup, which is characterized by the sympodial growth, narrow spathaceous bracts with parallel sides, erect raceme with non-resupinate flowers and a generally reduced, fleshy lip. The species has a somewhat compact inflorescence, erect rachis, 3-veined, oblanceolate petals, 3-lobed lip with reduced, elliptic to sub-triangular, falcate, lateral lobes, and trapezoid midlobe with undulate apical margin. It is similar to *Epidendrum brachyglossum* Lindl. which has smaller and narrower leaves, a smaller, rectangular lip, midlobe with entire margin. *Epidendrum microglossum* Schltr. has a flexuous rachis, spatulate petals, and sub-equal lobes of the lip. *Epidendrum adenoglossum* Lindl. has similar plants with longer and wider leaves and an entire lip. *Epidendrum mancum* Lindl. has smaller plants, shorter and wider leaves, sub-orbicular to spatulate petals and an entire lip.

CONSERVATION STATUS: DD. Data deficient. The species is widespread along the eastern slope of the Andes from northern Colombia to Ecuador.

ETYMOLOGY: From the Greek μικρός, small.

Authors: E. Hágsater & L. Sánchez S.

Illustrator: E. Hágsater

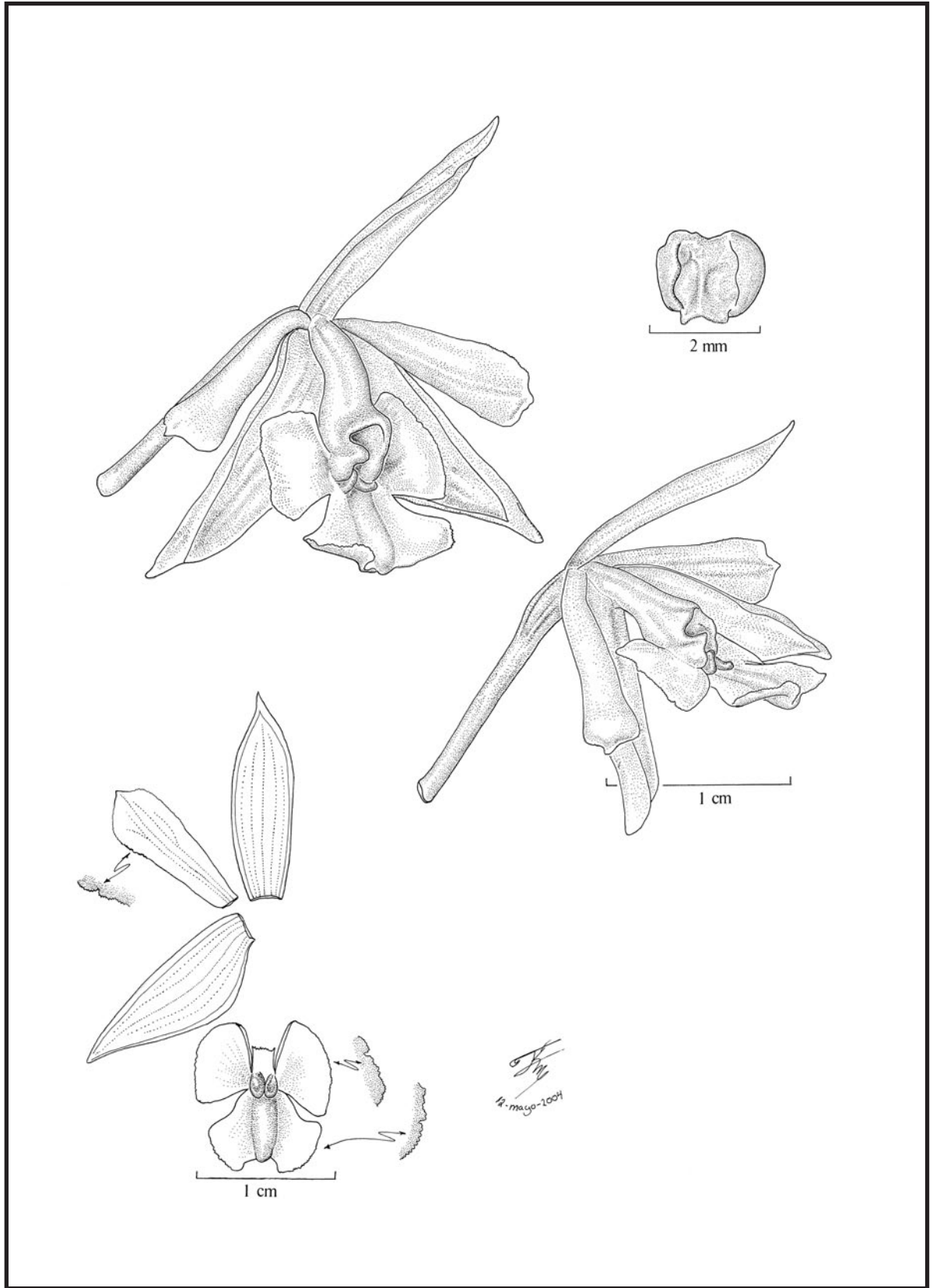
Editors: E. Hágsater & L. Sánchez S.

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México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009.

Plate 1264



EPIDENDRUM MOJANDAE Schltr.

Plate 1265

EPIDENDRUM MOJANDAE Schltr., Repert. Sp. Nov. Regni Veg. Beih. 8: 76. 1921.

Type: ECUADOR: Imbabura: in silvis andinis et subandinis montis Mojanda, 3000 m, **S. J. Mille 15**. Holotype: B, destroyed. tracing of original drawings, AMES! Lectotype (designated by Dodson, 1999): QPLS! (Illustration voucher).

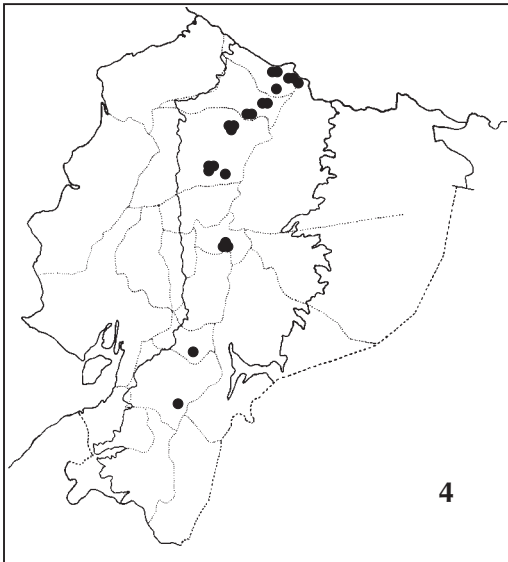
Herba terrestre a raramente epífita, monopodial, erecta, ramificación subapical, 40-150 cm de alto. **Raíces** basales en el tallo principal. **Tallos** ramificados arriba, tipo caña, teretes, erectos, rectos, el principal de 100 x 0.7-1.0 cm; las ramificaciones 5-13.5 x 0.4-0.7 cm. **Hojas** numerosas en el principal, 3-5 en las ramificaciones, distribuidas en la mitad apical de los tallos, dísticas, articuladas, erecto extendidas, coriáceas; vaina tubular (algo infundibuliforme cuando seca), estriada, rugosa, 2-3 cm de largo; lámina oblonga a oblongo elíptica, obtusa, ápice bilobado, margen entero, algo recurvado; las del tallo principal 4-5 x 2.3 cm; las de las ramas 2.5-6.3 x 1-2.0 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, florece una sola vez, racemosa, nutante, pluriflora, densa, 7 cm de largo; pedúnculo subterete, corto, 10-20 mm de largo. **Brácteas florales** más cortas que el ovario, lineares, acuminadas, abrazadoras, 8 mm de largo. **Flores** 15, simultáneas, resupinadas, muy carnosas, glabras, de color verde a blanco verdosas, los sépalos algo teñidos de púrpura rojizo hacia el ápice; sin datos de fragancia. **Ovario** terete, delgado, liso, 13 mm de largo. **Sépalos** entreabiertos, cortamente acuminados, 5-nervados, margen entero, extendido; el **dorsal** libre, oblongo elíptico, 14-15 x 4.5-6 mm; los **laterales** entreabiertos, unidos de manera oblicua a la parte basal de la columna, oblongo subovados, oblicuos. **Pétalos** entreabiertos, libres, oblongo oblancheolados, truncados, diminutamente apiculados, 3-nervados, margen subcrenulado, ligeramente revoluto, 11-12 x 4-4.5 mm. **Labelo** unido a la columna, trilobado, profundamente cordado en la base, margen apical de los lóbulos eroso, 10 x 10 mm; bicalloso, los callos laminares, prominentes; disco unicarinado, la carina engrosada, prominente, muy carnosa que se alarga hasta el seno apical de la lámina; lóbulos laterales flabelliformes, 4 x 7 mm; lóbulo medio cuneado, ápice emarginado, diminutamente apiculado, 4-6 x 6-9 mm. **Columna** ligeramente arqueada, gruesa, con un par de alas laminares subcuadradas, truncadas, 7 mm de largo. **Clinandrio** reducido, margen entero. **Antera** reniforme, 4-locular. **Polinios** no vistos. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma, nectario y cápsula** no vistos.

Terrestrial, rarely epiphytic, monopodial, erect, tall **herb** with sub-apical branching. **Roots** basal on the main stem. **Stems** cane-like, terete, erect, straight, with subapical branching, branches much shorter than the main stem. **Leaves** numerous on the main stem, 3-5 on the branches, distributed along the apical half of the stems, distichous, articulate, erect-spreading, coriaceous; sheath tubular (somewhat infundibuliform when dry), striated, rugose; blade oblong to oblong-elliptic, obtuse, apex bilobed, margin entire, somewhat recurved. **Inflorescence** apical, flowering only once, racemose, nutant, densely many-flowered; peduncle subterete, short. **Floral bracts** shorter than the ovary, linear, acuminate, amplexicaul. **Flowers** 15, simultaneous, resupinate, very fleshy, glabrous, green to greenish white, the sepals tinged reddish purple towards the apex. **Ovary** terete, thin, smooth, short. **Sepals** partly spreading, short-acuminate, 5-veined, margin entire, spreading; the dorsal sepals free, oblong-elliptic; the lateral sepals partly spreading, obliquely united to the basal part of the column, oblong-subovate, oblique. **Petals** partly spreading, free, oblong-oblancheolate, truncate, minutely apiculate, 3-veined, margin subcrenulate, slightly revoluted. **Lip** united to the column, 3-lobed, base deeply cordate, apical margin erose; bicallose, the calli laminar, prominent; disc single keeled, the keel thickened, prominent, very fleshy, reaching the apical sinus of the midlobe; lateral lobes flabelliform; midlobe cuneate, apex emarginate, minutely apiculate. **Column** slightly arching, thick, with a pair of laminar, subquadrate, truncate wings. **Clinandrium-hood** reduced, margin entire. **Anther** reniform, 4-celled. **Rostellum** subapical, slit.

OTHER SPECIMENS: ECUADOR: Without locality data, 10 VI 1983, *Thurston s.n.*, AMO 4191! **Azuay:** Cuenca to Loja, 3200 m, 23 VII 1985, *Dodson 16004*, MO! QCA! QCNE! SEL! **Cañar:** Pucpacshi, 16-17 km from Azogues, 3250-3300 m, 2 II 1988, *Molau 2848*, GB! QCA! QCNE! **Carchi:** Tulcán to Alegria via Carmelo and Santa Barbara, 2900 m, 5 II 1982, *Dodson 12100*, SEL! East of Gruta La Paz, 3200 m, 13 IX 2004, *Hirtz 9016*, AMO x2! El Carmelo, 3200 m, 17 V 1981, *Kuhn 134*, SEL! Tulcan-Maldonado, 3500 m, XI 1985, *Luther 866*, MO! (in part) SEL! Maldonado-Tulcan, ca. km 35, 3100-3400 m, 3 X 1981, *Werling 207*, QCA! **Imbabura:** Páramo de Mojanda, 3500-3800 m, 24 VI 1984, *Laegaard 52329*, QCA! QCNE! Carretera de Ibarra a Mariano Acosta, 3500 m, 8 VIII 1990, *Rubio 498*, MO! QCNE! in silv. suband. volc. Mojanda, *Sodiro s.n.*, QPLS! Hac. Mojanda on road to Otavalo, 3000 m, 12 XII 1966, *Sparre 13479*, MO! NY! S! Páramo de Mariano Acosta, 3100 m, 9 VII 1992, *Tipaz 1618*, QCNE! S of Las Toldadas, 10400 ft, *Wiggins 10398*, CAS! Ibid. 10500 ft, 15 VII 1944, *Wiggins 10399*, AMES! CAS! **Pichincha:** carretera antigua Quito-Santo Domingo, cerca a San Juan, 3355 m, 17 I 2001, *Álvarez 2872*, NY! QCNE! Quito-Santo Domingo, SW of San Juan, 3150-3300 m, 15 III 1979, *Løjtnant 11026*, AAU! GB! QCA! W of San Juan, 3270 m, 14 I 1971, *MacBryde 87*, AMES! MO! QCA! SEL! Runduloma, NE rim of the Cerro Pasochoa Crater, 3600-3700 m, 26 XII 1987, *Molau 2202*, GB! SW of (below) San Juan towards Chiriboga, 3300-3400 m, 12 I 1988, *Molau 2429*, GB! QCA! San Juan de Chillogallo, 3090 m, 29 I 2000, *Suin 505*, AMO! QCNE! carretera antigua Chillogallo-San Juan-Chiriboga-Empalme, 3180 m, 20 II 1986, *Zak 867*, JAUM! MO! QCA! **Sucumbios:** El Playón de San Francisco, 3050-3300 m, 23 V 1985, *Jaramillo 7693*, MO! QCA! **Tungurahua:** 1 km al S de Baños, 2800-3000 m, 25 X 1983, *Boysen 45365*, AAU! QCA! QCNE! SW Tungurahua, Agua de Oro, 3600-3800 m, 5 IV 1933, *Heinrichs 840*, G! NY! Z x2! In Andibus Ecuadorensibus, 7500-9500 ft, III 1838, *Spruce 5391*, K x2! (in part) W-R!

OTHER RECORDS: ECUADOR: Pichincha: km 27 old road to Quito, 1500-2100 m, 14 IV 1984, *Hágsater 7773*, spirit, AMO!

DISTRIBUTION AND ECOLOGY: Known only from Ecuador, in the interandean valley, terrestrial or epiphytic, at 2900-3800 m altitude. Flowering throughout the year.



RECOGNITION: *Epidendrum mojandae* belongs to the Andean Group, Cernuum Subgroup, characterized by the monopodial habit, cane-like stems with sub-apical branches which are considerably shorter than the main stem, coriaceous to subcoriaceous leaves, apex bilobed, and fleshy flowers, the lip 3-lobed. The species is recognized by the green to greenish white flowers somewhat tinged reddish purple, the 4-4.5 mm wide, oblong-oblancheolate, minutely apiculate petals, sepals 14-15 mm long, lateral lobes of the lip flabellate, less wide than the cuneate midlobe, which is very narrow at the base and widely sinuate apically. *Epidendrum torquatum* Lindl. is vegetatively very similar but the lateral lobes of the lip are wider than the midlobe which is obdeltoid with a tridentate apex. *Epidendrum fagerlindii* Hágsater & Dodson has elliptic, 7 mm wide petals with the apex rounded, not apiculate, and the midlobe of the lip is narrower than the lateral lobes. *Epidendrum cotacachiense* Hágsater & Dodson has creamy white to greenish cream colored flowers, the sepals somewhat dorsally tinged with brownish purple, sepals 13.6-16 mm long, petals obovate spatulate, lateral lobes of the lip dolabriform (nearly as wide as the midlobe), and the midlobe widely subdeltoid, emarginate and forming a pair of apical, obliquely sub-rectangular lobes.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In reference to Cerro Mojanda in northern Ecuador, the mountain on which the type was collected.

REFERENCES: Dodson, C. H. 1999. Orchidaceae in Jørgensen et al. (eds.), Catalogue of the Vascular Plants of Ecuador, **Monogr. Syst. Bot. Missouri Bot. Gard.** 75: 663.

Authors: E. Santiago & E. Hágsater

Illustrator: R. Jiménez M.

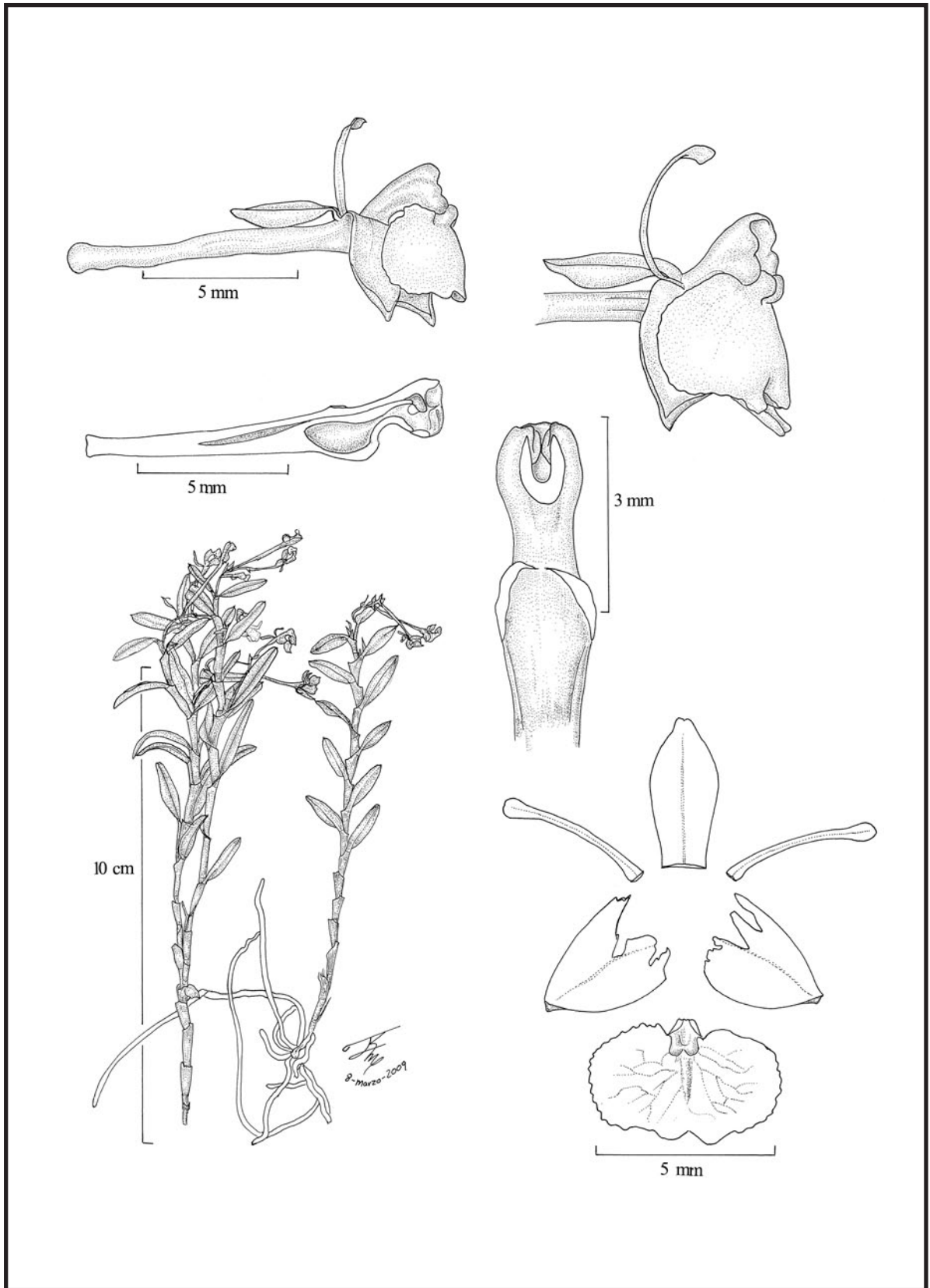
Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009.

Plate 1265



EPIDENDRUM MOSCOZOI Hágsater & E.Santiago

Plate 1266

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

Type: PERU: Cusco: Paucartambo: entre Bs. Aires y Morro Leguía-Cosñipata, 2300 m, **D. Moscozo Z. 902.**

Holotype: MO! (Illustration voucher).

Epidendro obliqui Schltr. simile sed planta minore, foliis brevioribus, floribus albis non resupinatis, columna arcuata et labello cum margine crenato, distinctum.

Hierba epífita, monopodial, erecta, ramificada, 9-11 cm de alto. **Raíces** basales del tallo principal, carnosas, delgadas, 1 mm de grosor. **Tallos** ramificados, tipo caña, teretes en la base y lateralmente aplanados en el ápice, muy delgados; el principal 8-10 x 0.1-0.2 cm; algunas ramificaciones muy cortas (aparentando ser inflorescencias laterales), 0.3-3.5 cm de largo. **Hojas** 10-13 en el tallo principal, distribuidas hacia los dos tercios apicales del tallo, 1-6 en las ramificaciones, alternas, articuladas; vaina algo infundibuliforme, estriada, verrugosa, 4-10 x 1-2 mm, con una lígula muy pequeña del lado opuesto de la lámina, triangular, subaguda, conduplicada; lámina linear-lanceolada, obtusa, diminutamente apiculada, margen entero, subcoriácea, [0.3] 0.8-1.7 x 0.2-0.4 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, florece una sola vez, corta, 1-1.3 cm de largo; pedúnculo terete, delgado, 5-8 mm de largo; con una bráctea angostamente triangular, acuminada, 3 mm de largo. **Bráctea floral** mucho más corta que el ovario, triangular lanceolada, acuminada, abrazadora, 2-3 mm de largo. **Flores** 3, simultáneas, no resupinadas, de color blanco; sin datos de fragancia. **Ovario** terete, delgado, liso, inflado ventralmente desde la mitad basal de la columna hasta detrás del perianto, 10-14 mm de largo. **Sépalos** obtusos, 1-nervados, margen entero, extendido; el **dorsal** extendido, libre, angostamente obovado, 4 x 2 mm; los **laterales** entreabiertos, ovados, agudos, con una quilla dorsal baja, 3.7 x 2.8 mm. **Pétalos** entreabiertos, libres, linear filiformes, ligeramente dilatados hacia el ápice, redondeados, 1-nervados, margen entero, extendido, 4 x 0.6 mm. **Labelo** unido a la columna, reniforme, convexo en posición natural, ligeramente cordado en la base, emarginado en el ápice, margen crenado, 3 x 5 mm; bicalloso, los callos globosos, cortos; disco con una quilla intercallosa, baja, que se desvanece antes de llegar al ápice de la lámina. **Columna** estrecha a la mitad, corta, 3 mm de largo. **Clinandrio** corto, margen entero. **Antera** y **Polinios** no vistos. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** pequeños, ocupando 1/3 del largo de la cavidad estigmática. **Nectario** poco profundo, penetrando el ovario justo detrás del perianto y formando una vesícula prominente. **Cápsula** no vista.

Epiphytic, monopodial, erect, small, branching **herb**. **Roots** basal from the main stem, fleshy, thin. **Stems** branching, cane-like, terete at the base, laterally compressed towards the apex, very thin, branches very short. **Leaves** 10-13 on the main stem, distributed along the apical 2/3 of the stem, 1-6 on the branches, alternate, articulate; sheath infundibuliform, striated, verrucose, with a small ligule opposite the blade, triangular, subacute, conduplicate; blade linear-lanceolate, obtuse, minutely apiculate, margin entire, sub-coriaceous. **Inflorescence** apical, racemose, flowering only once, short; peduncle terete, thin, with a small, narrowly triangular acuminate bract. **Floral bract** much shorter than the ovary, triangular-lanceolate, acuminate, amplexicaul. **Flowers** 3, simultaneous, non-resupinate, white. **Ovary** terete, thin, smooth, ventrally inflated from the basal half of the column to behind the perianth. **Sepals** obtuse, 1-veined, margin entire, spreading; dorsal sepals spreading, free, narrowly obovate; the lateral sepals partly spreading, ovate, acute, with a low dorsal keel. **Petals** partly spreading, free, linear-filiform, slightly dilated towards the apex, rounded, 1-veined, margin entire, spreading. **Lip** united to the column, reniform, convex in natural position, base slightly cordate, apex emarginate, margin crenate; bicallose, the calli short, globose; disc with a low mid-keel that disappears before reaching the apex of the lip. **Column** narrowed in the middle. **Clinandrium-hood** short, margin entire. **Rostellum** apical, slit. **Nectary** shallow, penetrating the ovary just behind the perianth and forming a prominent vesicle.

OTHER SPECIMENS: PERU: Cusco: Paucartambo: entre Bs. Aires y Morro Leguía-Cosñipata, 2300 m, *Moscozo 908*, MO!

DISTRIBUTION AND ECOLOGY: Known only from southern Peru, on the eastern slopes of the Andes, epiphytic at 2300 m altitude.

RECOGNITION: *Epidendrum moscozoi* belongs to the Soratae 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 sub-capitate inflorescence on a short, thin peduncle, and the bicallose lip. The species is recognized by the small plants with thin stems and very short branches, leaves linear-lanceolate, short, 3 small, white flowers, sepals 3.7-4 mm long, and a reniform lip slightly cordate at the base, the margin crenate. *Epidendrum soratae* Rchb.f. has taller plants, 22-27 cm tall, lanceolate leaves 1.7-4.7 cm long, 8-12 yellowish green flowers, sepals 6.7-7 mm long, and a reniform lip, the base deeply cordate, the margin entire. *Epidendrum obliquum* Schltr. has plants up to 57 cm tall, lanceolate leaves 2-4 cm long, and a reniform lip with entire margin, the column straight and the ovary is not inflated.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In honor of the collector of the type, D. Moscozo Z.



Authors: E. Hágsater & E. Santiago

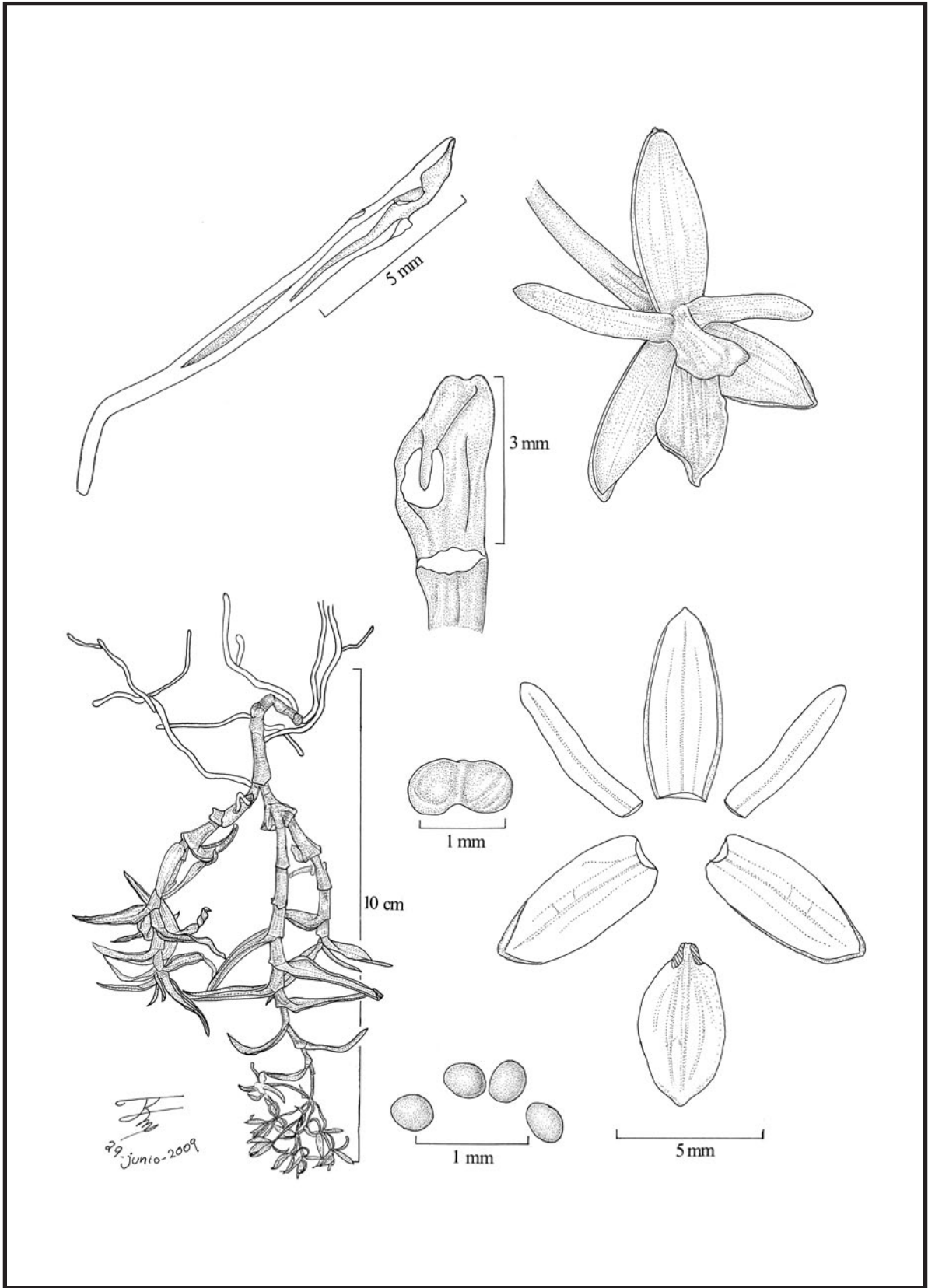
Illustrator: R. Jiménez M.

Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009. Plate 1266



EPIDENDRUM NANOECALLOSUM Hågsater & E.Santiago

Plate 1267

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

Type: COLOMBIA: [Putumayo:] Am Bäumen bei La Cruz, Weg von Pasto nach der Cocha, 10,000 ft, Seltsen, **F. C.**

Lehmann s.n. Holotype: W-R 62212! (Illustration voucher).

Epidendro nanodentali Hágsater & Dodson simile sed floribus numerosioribus et parvis, petalis oblongis rotundatis, labello elliptico et clinandrio carnosio integro prominenti, separabile.

Hierba epífita, subcespitosa, colgante, pequeña, 8-9 cm de alto. **Raíces** basales, muy delgadas, ca. 0.5-1 mm de grosor. **Tallos** tipo caña, cortos, originándose de los entrenudos basales de tallos anteriores, teretes, colgantes, rectos a ligeramente arqueados, 3-7 x 0.1-0.3 cm; cubiertos en la base por vainas tubulares no foliares, infundibuliformes, 8 x 4.5 mm. **Hojas** 7, distribuidas en la mitad apical del tallo, alternas, articuladas, algo suculentas; vainas foliares cortas, infundibuliformes, 4-7.5 x 2-3.5 mm; lámina angostamente lanceolada, aguda, margen apical diminutamente eroso, 1-2.3 x 0.2-0.4 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, corta, ca. 1.2-1.5 cm de largo; pedúnculo corto, lateralmente aplanado, ligeramente ancipitoso, 6-7 mm de largo. **Brácteas florales** más cortas que el ovario, angostamente lanceoladas, agudas, abrazadoras, 1-2 mm de largo. **Ovario** terete, delgado, no inflado, no ornamentado, 10-11 mm de largo. **Flores** 8-9, simultáneas, en pares opuestas, no resupinadas, de color blanco rojizo; sin datos de fragancia. **Sépalos** extendidos, libres, carnosos, elípticos, subredondeados, 3-nervados, margen entero, extendido, 6-6.5 x 2.5-2.7 mm. **Pétalos** extendidos, libres, oblongos, redondeados, 1-nervados, margen entero, extendido, 5.7 x 1 mm. **Labelo** unido a la columna, entero, elíptico, algo cuneado en la base, subobtusos en el ápice, margen entero, extendido, 5.5 x 3 mm; ecallose; disco con 5 veñas engrosadas evidentes, las tres centrales alargadas hasta cerca del ápice de la lámina, el par lateral más corto. **Columna** recta, gruesa, 3 mm de largo. **Clinandrio** muy prominente, carnosio, margen subentero. **Antera** reniforme, 4-locular. **Polinios** 4, sublenticulares, algo lateralmente aplanados. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** ocupando ½ del largo de la cavidad estigmática. **Nectario** penetrando ¼ del ovario, no inflado, no ornamentado. **Cápsula** no vista.

Epiphytic, sub-caespitose, pendent, small herb. **Roots** basal, very thin. **Stems** cane-like, short, originating from the basal internodes of the previous stems, terete, pendent, straight to slightly arching; base covered by tubular, non-foliar, infundibuliform sheaths. **Leaves** 7, distributed along the apical half of the stem, alternate, articulate, somewhat succulent; foliar sheaths short, infundibuliform; blade narrowly lanceolate, acute, apical margin minutely erose. **Inflorescence** apical, racemose, short; peduncle short, laterally compressed, slightly ancipitose. **Floral bracts** much shorter than the ovary, narrowly lanceolate, acute, amplexicaul. **Ovary** terete, thin, not inflated, smooth. **Flowers** 8-9, simultaneous, in opposite pairs, non-resupinate, reddish white. **Sepals** spreading, free, fleshy, elliptic, somewhat rounded, 3-veined, margin entire, spreading. **Petals** spreading, free, oblong, rounded, 1-veined, margin entire, spreading. **Lip** united to the column, entire, elliptic, base somewhat cuneate, apex sub-ovate, margin entire, spreading; ecallose; disc with 5, evident, thickened veins, the 3 central veins elongate to near the apex of the lip, the lateral pair shorter. **Column** straight, thick, short. **Clinandrium-hood** very prominent, fleshy, margin sub-entire. **Anther** reniform, 4-celled. **Pollinia** 4, sublenticular, somewhat laterally compressed. **Rostellum** sub-apical, slit. **Nectary** penetrating ¼ of the ovary, not inflated, smooth.

OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: Known only from southern Colombia, on the Cordillera Central near the border with Ecuador; epiphytic at about 3000 m altitude, described as scarce. Time of flowering unknown.

RECOGNITION: *Epidendrum nanoecallosum* belongs to the Nanum Group, which is characterized by the *Dichaea*-like pendent stems, the inflorescence produced by pairs of opposite flowers, without spathaceous bracts, but with prominent floral bracts, and the Nanoecallosum Subgroup which has an ecallose, entire lip. The species is recognized by the short, pendent, branching habit, 8-9 small flowers, the sepals 6-6.5 mm long, an elliptic, ecallose, entire lip, and a very prominent, fleshy, entire, clinandrium-hood. *Epidendrum nanodentatum* has two, opposite, non-resupinate, pinkish colored flowers, a triangular, ecallose lip, and the short, lanceolate, acute petals, with an acute tooth on either side of the apex of the column. *Epidendrum renzii* Garay & Dunst., has longer stems, 4, pale green and wine-red (lip) flowers in two opposite pairs, a prominent vesicle on the underside of the ovary, resupinate flowers, oblong to oblanceolate petals. *Epidendrum nanosimplex* Hágsater & Dodson is also similar, but has 6-7, resupinate, pale green and white flowers in



opposite pairs, shorter sepals (4-6 mm long), narrowly oblanceolate petals, a truncate column, and the triangular, ovate lip with a pair of prominent globose calli.

CONSERVATION STATUS: DD. Data deficient. Known only from the type collected in the second half of the 18th century.

ETYMOLOGY: From the Greek *νανος*, dwarf, and the Latin prefix *e-*, without, lacking, and *callus*, calli, in reference to the dwarf-like habit, and similarity of the plant habit to that of *Epidendrum nanum* C.Schweinf., and the lack of calli on the lip, which distinguish that species.

Authors: E. Hágsater & E. Santiago

Illustrator: R. Jiménez M.

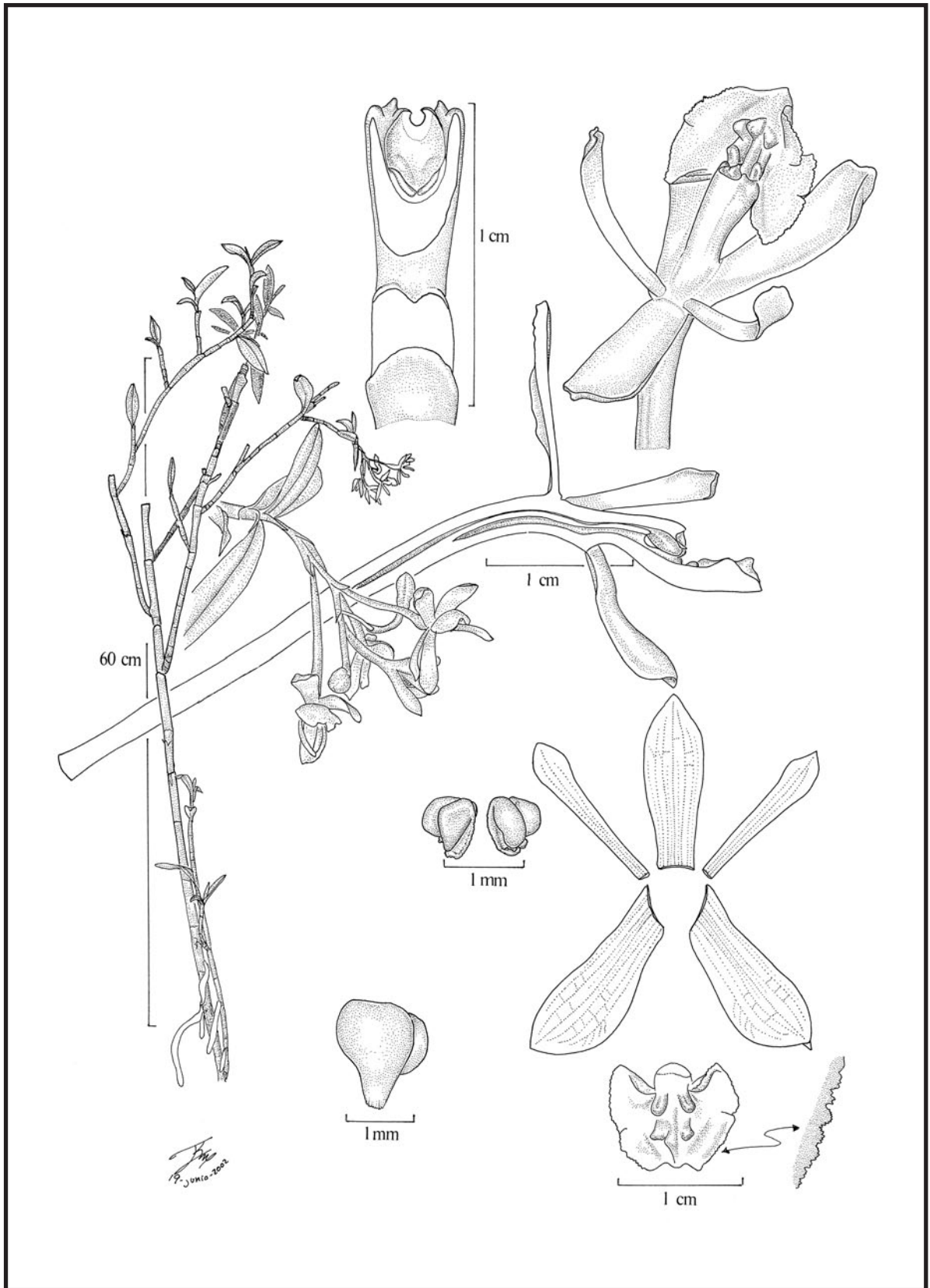
Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009.

Plate 1267



EPIDENDRUM ORGYALE Lindl.

Plate 1268

EPIDENDRUM ORGYALE Lindl., Ann. Mag. Nat. Hist. 15: 256. 1845.

Type: COLOMBIA: Cundinamarca: near Santa Fé de Bogotá, *Theodor Hartweg s.n.* Holotype: K-L 261. tracing W-R 5858! Isotype: (two flowers mounted on the lower part of the sheet) W-R 49949!

Hierba monopodial, ramificada arriba, erecta, 70 a 150 cm de alto. **Raíces** de los entrenudos basales del tallo inicial. **Tallos** tipo caña, teretes, rectos, el principal ca. 50 x 0.35-0.7 cm. **Hojas** 3-8, dísticas, articuladas, subcoriáceas; vaina tubular, 10-25 mm de largo; lámina ovado oblonga, obtusa, margen entero, extendido, 2.8-5 x 1-1.2 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, florece una sola vez, suberecta, pluriflora, laxa, 6.5 cm de largo; pedúnculo muy corto. **Brácteas florales** mucho más cortas que el ovario, subuladas, acuminadas, abrazadoras, 6-13 mm de largo. **Flores** [6]15-25, no resupinadas, simultáneas, carnosas, de color amarillo; sin datos de fragancia. **Ovario** terete, delgado, ligeramente inflado en la mitad apical, 35-45 mm de largo. **Sépalos** ligeramente reflexos, libres, angostamente ovados, agudos, aristados, 12-15 x 4-6 mm; los **laterales** oblicuos. **Pétalos** ligeramente reflexos, libres, linear espatulados, obtusos, diminutamente apiculados, margen serrulado, 12-14.5 x 3 mm. **Labelo** unido a la columna, entero, reniforme, agudo a truncado en el ápice, margen serrulado, ca. 6-8.5 x 7-9.5 mm; bicalloso, los callos subglobosos; disco con tres protuberancias cortas y carnosas a la mitad de la lamina. **Columna** recta, delgada, ligeramente arqueada, 8-10 mm de largo. **Clinandrio** corto, margen entero. **Antera** ovoide, con el ápice truncado con el margen denticulado. **Polinios** 4, obovoides, lateralmente aplanados; caudículas suaves y granulosas casi tan largas como los polinios. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** ocupando ½ del largo de la cavidad estigmática. **nectario** poco profundo, apenas penetrando el ovario justo detrás del perianto, no inflado, no ornamentado. **Cápsula** no vista.

Terrestrial, monopodial, erect **herb**, with sub-apical branching. **Roots** basal. **Stems** cane-like, terete, straight, the main stem tall. **Leaves** 3-8 on the main stem, distichous, articulate, sub-coriaceous; sheath tubular; blade obvate-oblong, obtuse, margin entire, spreading. **Inflorescence** apical, racemose, flowering only once, sub-erect, lax, many-flowered; peduncle very short. **Floral bracts** much shorter than the ovary, subulate, acuminate, amplexicaul. **Flowers** [6]15-25, non-resupinate, simultaneous, fleshy, yellow. **Ovary** terete, thin, the apical half slightly inflated, long. **Sepals** slightly reflexed, free, narrowly ovate, obtuse, aristate; the lateral sepals oblique, acute. **Petals** slightly reflexed, free, linear-spatulate, obtuse, minutely apiculate, margin serrulate. **Lip** united to the column, entire, reniform, acute to truncate apex, margin serrulate; bicallose, the calli sub-globose, disc with three short, fleshy thickenings on the middle of the lip. **Column** straight, thin, slightly arching. **Clinandrium-hood** short. **Anther** ovoid, the apex truncate, denticulate. **Pollinia** 4, obovoid. **Rostellum** apical, slit. **Nectary** shallow, barely penetrating the ovary behind the perianth, not inflated, unornamented.

OTHER SPECIMENS: COLOMBIA: Without locality data, *Triana* 298, W-R 49948! (the specimen on the left hand side of the sheet, next to the holotype of *Epidendrum vernixium*) **Cundinamarca:** San Miguel, 2700 m, 1 I 1940, *Renz* 3150, RENZ! **ECUADOR: Loja:** Loja to Zamora, km 20, 7500 ft, 11 IX 1999 pressed cult. 28 VI 2002, *Hágsater* 12350, AMO! (Illustration voucher).

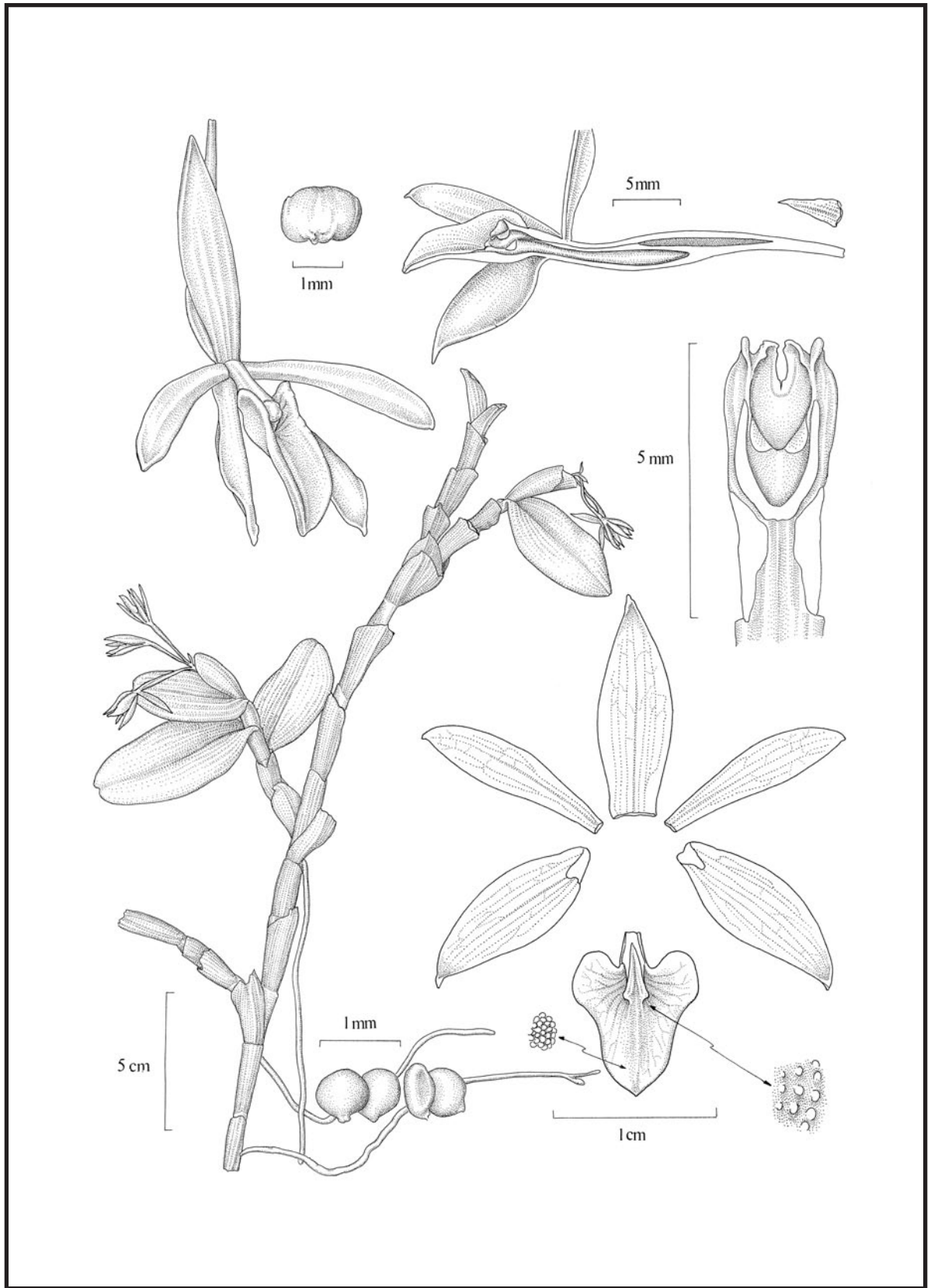
DISTRIBUTION AND ECOLOGY: Known from the neighborhood of Bogotá and road Loja to Zamora, Ecuador, at 2000-2500 m altitude. Flowering in September and January.

RECOGNITION: *Epidendrum orgyale* belongs to the Andean Group, Orgyale Subgroup which is characterized by the monopodial, sub-apical branching habit, erect to sub-erect inflorescences, lax, non-resupinate flowers, the lip entire. The species is recognized by the yellow flowers, the floral segments slightly reflexed, 12-15 mm long, the ovary elongate, slightly inflated, the lip entire, reniform, the margin serrulate. *Epidendrum jimburensense* Hágsater & Dodson has ovate to elliptic leaves, brown flowers, the lip yellow, sepals and petals spreading, 14-20 mm long, floral bracts nearly as long as the ovary, and a reniform, emarginate lip. *Epidendrum quadrangulatum* A.D. Hawkes is vegetatively very similar, but the flowers are large, the floral segments partly spreading, and the lip sub-quadrate.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek *οργυα*, revels, probably in reference to the 5 feet tall, branching plants of this species, which revel in their growth.





EPIDENDRUM OTUZCENSE Hágsater & E.Santiago

Plate 1269

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

Type: PERÚ: La Libertad: Prov. Otuzco: Casmiche-Otuzco, 2400 m, 7 diciembre 1966, **Abundio Sagástegui A.**

6267. Holotype: HUT! Isotypes: AMO 24017! (Illustration voucher) AMO! MO! SEL!

Epidendro rotundifolii Hágsater & Dodson simile sed differt foliis ellipticis angustioribus, petalis lineari-lanceolatis, bractea spathacea majore et angustiore, labello trilobato, distinguendum.

Hierba litófito, simpodial, rastrera, de 12.5 cm de alto. **Raíces** basales, producidas en cada tallo nuevo, carnosas, gruesas, blancas, 1.5-3 mm de grosor. **Tallos** sencillos, tipo caña, teretes, rectos, 12.5 x 0.3-0.6 cm. **Hojas** 3, agregadas hacia el ápice de los tallos, alternas, articuladas, coriáceas; vaina infundibuliforme, finamente estriada, 0.5-2.5 x 0.5-1.4 cm; lámina elíptica, desigualmente bilobada, con una quilla dorsal baja, margen entero y ligeramente revoluto, 4.5-5.7 x 2.0-2.6 cm. **Brácteas espatáceas** 1 a 2, angostamente obovadas, redondeadas, conduplicadas, ancipitosas, imbricadas, 2.3 x 0.8 cm. **Inflorescencia** apical, racemosa, erecta, pauciflora, 2.5-3 cm de largo; pedúnculo totalmente oculto por las brácteas espatáceas, 2.0-2.5 mm de largo; raquis muy corto, terete, delgado, 5-6 mm de largo. **Brácteas florales** mucho más cortas que el ovario, angostamente triangulares, acuminadas, abrazadoras, 4 mm de largo. **Ovario** terete, delgado, ligeramente más grueso hacia la mitad apical, no inflado, no ornamentado, 20-23 mm de largo. **Flores** 3, simultáneas, no resupinadas, de color vino; sin datos de fragancia. **Sépalos** libres, entreabiertos, elípticos, ápice agudo, con una quilla dorsal, 6-nervados, margen extendido, entero, 12-13 x 4-4.5 mm. **Pétalos** libres, entreabiertos, angostamente oblanceolados, ligeramente unguiculados, agudos, 3-nervados, las nervaduras ramificadas dando la apariencia de ser 5-nervados, margen entero, 12 x 3 mm. **Labelo** unido a la columna, trilobado, base cordada, margen entero, 9 x 8 mm; bicalloso, los callos laminares, delgados y ligeramente divergentes, alargados cerca de la base del lóbulo medio; disco desprovisto quillas; lóbulos laterales hemielípticos suborbiculares, 2.6 x 3.4 mm; lóbulo medio campaniforme invertido, subagudo, 5.5 x 5.7 mm. **Columna** corta, recta, ancha en el ápice, 5 mm de largo. **Clinandrio** corto, entero. **Antera** reniforme, 4-locular. **Polinios** 4, lenticulares, subiguales. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** prominentes, de la mitad de largo de la cavidad estigmática. **Nectario** penetrando la mitad del ovario, no inflado, no ornamentado. **Cápsula** no vista.

Lithophytic, sympodial, long, creeping **herb.** **Roots** basal at each new growth, fleshy, thick, white. **Leaves** 3, aggregate towards the apex of the stems, alternate, coriaceous; sheath infundibuliform, minutely striated; blade elliptic, unequally bilobed, with a low dorsal keel, margin entire and somewhat revolute. **Spathaceous bracts** 1-2, tubular-conduplicate, imbricated, narrowly obovate, rounded, ancipitose. **Inflorescence** apical, racemose, erect, few-flowered; peduncle completely hidden within the spathaceous bracts; rachis very short, terete, thin. **Floral bracts** much shorter than the ovary, narrowly triangular, acuminate. **Ovary** terete, thin, the apical half slightly thicker, smooth. **Flowers** 3, simultaneous, non-resupinate, wine-colored. **Sepals** free, partly spreading, elliptic, apex acute, with a dorsal keel, 6-veined, margin entire and spreading. **Petals** free, partly spreading, narrowly oblanceolate, slightly unguiculate, acute, 3-veined, the veins branching so as to appear 5-veined, margin entire. **Lip** united to the column, 3-lobed, base cordate, margin entire; bicallose, the calli laminar, thin and somewhat divergent, elongate to near the base of the midlobe; lateral lobes hemieliptic, sub-orbicular; midlobe an inverted bell, sub-acute. **Column** short, straight, dilated at the apex. **Clinandrium- hood** short, entire. **Anther** reniform, 4-celled. **Pollinia** 4, lentil-shaped, sub-equal. **Rostellum** apical, slit. **Nectary** penetrating half the ovary, narrow, smooth.

OTHER SPECIMENS: PERU: **Cajamarca:** Chota, Dtto. La Paccha, Bosque de Chadim, 2650 m, 22 VII 1993, *Cabanillas* 782, AMO! F!

OTHER RECORDS: PERU: illustration, "lamina 495", *Bennett* 3923, xerox, AMO!

DISTRIBUTION AND ECOLOGY: From the western slopes of the Andes in central Peru, at 2400-2850 m altitude. Flowering from July to December.



RECOGNITION: *Epidendrum otuzcense* belongs to the Geminiflorum Group and Subgroup characterized by the sympodial habit, creeping rhizome, unbranched stem, 1-2 spathaceous bracts and a few-flowered inflorescence, the flowers non-resupinate, more than 2 cm in diameter, the disc of the lip is not excavate, with a pair of laminar calli. The new species has 3 simultaneous flowers, sepals 12-13 mm long, and the lip deeply cordate and narrowed in the middle to produce a somewhat 3-lobed lip, the flowers are vinaceous, or wine-colored. It is somewhat similar to *E. rotundifolium* Hágsater & Dodson which has much wider leaves, (to 3.4 cm), narrower, oblong petals, and a triangular, cordate lip. *Epidendrum geminiflorum* Kunth, from Colombia (Popayán) has acuminate tepals. *Epidendrum cajamarcae* Schltr. has obtuse sepals, sub-cordate-rounded base of the lip, and the midlobe ovate-triangular, obtuse.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In reference to the town of Otuzco, La Libertad, Peru, near which the type was collected.

Authors: E. Hágsater & E. Santiago

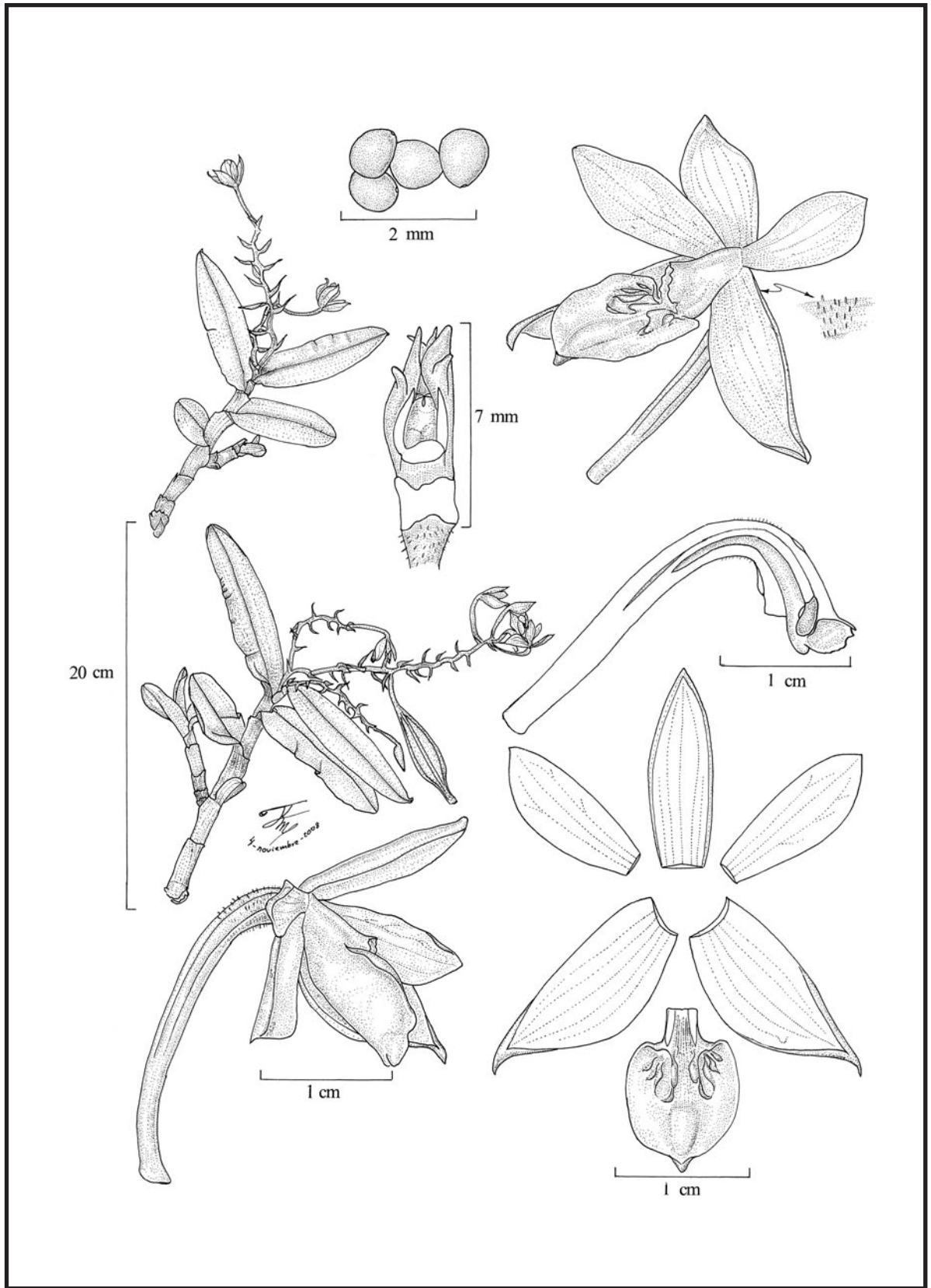
Illustrator: M. López R.

Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009. Plate 1269



EPIDENDRUM PALLATANGAE Schltr.

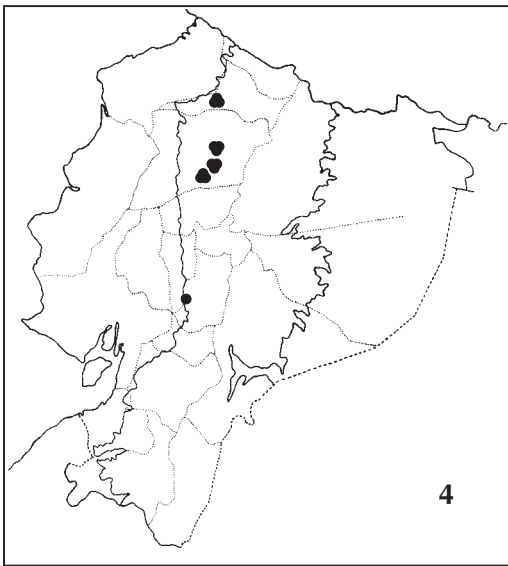
EPIDENDRUM PALLATANGAE Schltr., *Repert. Sp. Nov. Regni Veg.* 15: 56. 1917.

Type: ECUADOR: In valle Pallatanga, regionis subandinae, September 1891. **A. Sodiro 1691**. Holotype: B, destroyed, illustration AMES 42599! Lectotype (designated by Dodson, 1999): QPLS! Isotype: BR!

Hierba terrestre, monopodial, ramificada subapicalmente, hasta de 3 m de alto. **Raíces** basales en el tallo principal, raramente en la base de algunas ramificaciones, carnosas, gruesas, 3-5 mm de grosor. **Tallos** tipo caña, ramificados cerca del ápice, erectos, rectos, teretes; el principal de más de 25 x 0.5-1.5 cm; las ramificaciones 6.5-20 x 0.4-0.7 cm. **Hojas** 9 o más en el tallo principal; 4-7 en las ramificaciones, distribuidas en la mitad apical de cada tallo, erecto extendidas; vainas tubulares, finamente estriadas, rugosas, 33-70 mm de largo; lámina oblongo a oblongo lanceolada, ápice obtuso, diminutamente bilobado, con una quilla dorsal baja, 2.5-17 x 1.7-4 cm. **Bráctea espátea** ausente. **Inflorescencia** apical, racemosa a paniculada, con 1-2 ramas cortas, arqueado nutante, laxa, 4-15 cm de largo; pedúnculo corto, terete, 12 mm de largo; raquis ligeramente flexuoso. **Bráctea floral** más cortas que el ovario, triangular lanceoladas, acuminadas, 5-12 [25-30] mm de largo. **Ovario** terete, delgado, no inflado, ligeramente pubescente justo detrás del perianto, 25-47 mm de largo. **Flores** 12-40, sucesivas, resupinadas, carnosas, amarillas a amarillo verdosas, sin datos de fragancia. **Sépalos** entreabiertos, libres, cortamente acuminados, con un apículo prominente, 5-nervados, dorsalmente pubescentes, margen entero, extendido, 15-21 x 5-8 mm; el **dorsal** obovado elíptico; los **laterales** oblicuamente ovados. **Pétalos** entreabiertos, libres, angostamente obovados, subobtusos, 3-nervados, margen entero, ligeramente revoluto, 11-16 x 4-7 mm. **Labelo** unido a la columna, entero a subtrilobado, anchamente ovado, ligeramente cordado en la base, 10-11 x 10-12 mm; formando un par de lóbulos laterales incipientes, hemielípticos, 2-3 x 4-6 mm; un lóbulo medio anchamente subovado, diminutamente apiculado, 5-6 x 5-8 mm; bicalloso, callos prominentes, laminares; disco unicarinado, la carina prominente y engrosada, alargada hasta el ápice de la lámina, con 2 a 3 pares de quillas laminares cortas, radiantes. **Columna** ligeramente arqueada, gruesa y ensanchada hacia el ápice, 7-9 mm de largo. **Clinandrium** prominente (aunque sin sobrepasar el cuerpo de la columna), en forma de embudo, margen eroso denticulado. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** pequeños de 1/2 de la cavidad estigmática. **Nectario** poco profundo, penetrando 1/4 del ovario, no inflado, no ornamentado. **Antera** ovoid, con el ápice alargado y agudo, 4 locular. **Polinios** 4, obovoides, lateralmente comprimidos, subiguales. **Cápsula** elipsoidal, 65 mm de largo; cuerpo 35 x 35 mm; pedicelo terete, delgado, 20 mm de largo; cuello apical, 9 mm de largo.

Terrestrial, monopodium, tall **herb**, branching sub-apically. **Roots** basal from the main stem, rarely from the base of some branches, fleshy, thick. **Stems** cane-like, terete, erect, straight, branching near the apex. **Leaves** 9 or more on the main stem, 4-7 on the branches, distributed throughout the apical half of the stems, erect-spreading; sheaths tubular, minutely rugose, striated; blade oblong to oblong-lanceolate, apex obtuse, minutely bilobed, with a low dorsal keel. **Inflorescence** apical, racemose to paniculate, with 1-2 short branches, arching-nutnant, lax-flowered; peduncle short, terete, rachis slightly flexuose. **Floral bracts** shorter than the ovary, triangular-lanceolate, acuminate. **Ovary** terete, thin, not inflated, slightly pubescent just behind the perianth, long. **Flowers** 12-40, successive, resupinate, fleshy, yellow to greenish yellow. **Sepals** partly spreading, free, short acuminate, with a prominent apicule, 5-veined, dorsally pubescent, margin entire, spreading; the dorsal sepal obovate-elliptic, the lateral sepals obliquely ovate. **Petals** partly spreading, free, narrowly obovate, subobtusely, 3-veined, margin entire, slightly revoluted. **Lip** united to the column, entire to sub-3-lobed, widely ovate, base slightly cordate; with a pair of shallow hemi-elliptic lateral lobes; midlobe widely sub-ovate, minutely apiculate; bicallose; the calli prominent, laminar; disc with a central, prominent and thickened keel, widened towards the apex, with 2-3 pairs of small, radiating, thickened keels. **Column** slightly arching, thick, dilated towards the apex. **Clinandrium-hood** prominent (but without surpassing the body of the column), funnel-shaped, margin erose-denticulate. **Rostellum** subapical, slit. **Nectary** shallow, without penetrating the ovary, rounded. **Anther** ovoid, the apex elongate, acute, 4-celled. **Pollinia** 4, obovoid, laterally compressed, sub-equal. **Capsule** ellipsoidal, pedicel terete, thin, with a short apical neck.

OTHER SPECIMENS: ECUADOR: Pichincha: El Corazón, 2800-3000 m, 18 I 1944, *Acosta 7033*, F! carretera Quito-Santo Domingo de los Colorados, 1000 m, 16 II 1950, *Acosta 16203*, F! San Juan towards Chiriboga, ca. 2900 m, 26 IV 1955, *Asplund 16051*, AMES! NY! P! US! (Illustration voucher) Z! *Ibid.* ca. 3200 m, 31 XII 1955, *Asplund 18963*, AMES! G! K-L! NY! Lloa valley (W of Quito) 15 km below Lloa, ca. 2200, 2 II 1981, *Balslev 1935*, NY! NW of Quito, 2650 m, 22 I 1996, *Billiet 6628*, MO! road Quito-San Juan, Cerro Pichincha, 2500-3000 m, 15 VI 1983, *Bohlin 484*, GB! MO! Santo Domingo road, 7000 ft, 6 VI 1949, *Calhoun 8*, F! between Alóag and Santo Domingo, 2530 m, 8 X 1983, *Croat 56944*, NY! MO! W of Alóag, 2800 m, 21 II 1983, *Dodson 13671*, QCA! MO! SEL! El Paso, 3150 m, 10 XI 1984, *Dodson 15440*, AMES! MO! NY! QCA! *Ibid.* 11 II 1985, *Dodson 15524*, MO! km 44 Quito-Sto. Domingo via Tandapi, 3000 m, 18 V 1985, *Dodson 15844*, MO! QCA! W of Lloa, 2950 m, 16 I 1987, *Dodson 16762*, MO! camino Alóag-Sto. Domingo, km 6, ca. 11000 ft, 9 VI 1983, *Hágsater 7528*, AMO! km 21 de Cuicocha-Selva Alegre, 2900 m, 6 XII 1986, *Hágsater 8952*, AMO! Tandapi, 7 V 1968, *Harling 9361*, GB! W of Nono, 2200-2400 m, 27 I 1977, *Harling 14866*, GB! U! road Alóag-Tandapi, 3150 m, 4 VII 1979, *Holm-Nielsen 18394*, AAU! Lloa valley, 2600 m, 18 V 1980, *Holm-Nielsen 23567*, AAU! between San Juan and Chiriboga, 3150-3300 m, 15 III 1979, *Løjtman 11020*, AAU! GB! Alizal, 3100-3150 m, 20 III 1979, *Løjtman 11231*, AAU! GB! between Alóag and Cornejo Astorga, ca. 3150 m, 29 V 1979, *Løjtman 13958*, AAU! GB! Quito to Santo Domingo, ca. 2700 m, 13 III, *Luer 846*, SEL! Cerro Guarumoes, 2700 m, 7 IX 2001, *Mites 418*, MO! Río Saloya Valley, 3300 m, 3 II 1985, *Molau 7123*, GB! QCA! San Juan Towards Chiriboga, 2500-2750 m, 12 I 1988, *Molau 2440*, AAU! GB! QCA! Chillogallo-Chiriboga, 2900 m, 7 VI 1967, *Sparre 16935*, S! *Ibid.* *Sparre 16935*, S! carretera antigua Chillogallo-Empalme, 3180 m, 22 II 1986, *Zak 941*, JAUM! MO! QCA! **Imbabura:** Otavalo to Apuela, ca. 2400 m, 5 XII 1976, *Davis 322*, AMES! Otavalo to Selva Alegre, 2400-2700 m, 5 II 1986, *Dodson 16319*, MO! QCA! Cotacachi, 2970 m, *Dodson 16409*, MO! QCNE! SEL! Tablachupa, 2500-3000 m, 26 XI 1992, *Gudiño 1959*, QCNE! km 42, Otavalo to Selva Alegre via Apuela, 2950 m, 6 XII 1986, *Hágsater 16681*, MO! SEL! Sector San Luis de la Delicia, 2600-3000 m, 6 XII 1986, *Jaramillo 9275*, COL x2! Fx2! MO! NY! QCA! road Cotacachi (Intac valley), 2900-2950 m, 11 VIII 1976, *Oelgaard 8730*, AAU! F! MO! NY!



OTHER RECORDS: ECUADOR: Pichincha: Quito to Nono, 4 VI 1983, *Thurston 2948*, slide, AMO!

DISTRIBUTION AND ECOLOGY: Endemic to western Ecuador, from the provinces of Pichincha and Imbabura, terrestrial at 2100-3300 m altitude, on roadside banks. Flowering apparently throughout the year.

RECOGNITION: *Epidendrum pallatanga* belongs to the Andean Group, Cernuum Subgroup, characterized by the monopodial habit, cane-like stems with sub-apical branches which are considerably shorter than the main stem, coriaceous to sub-coriaceous leaves, apex bilobed, and fleshy flowers, the lip 3-lobed. The species is recognized by the racemose to paniculate, lax-flowered inflorescence, the rachis flexuose, flowers successive, sepals dorsally pubescent, 15-21 mm long, petals narrowly obovate, 4-7 mm wide, clinandrium-hood prominent, the margin erose-denticulate, lip entire to sub-entire, with a fleshy, prominent, rounded keel, and short radiating keels. *Epidendrum megaloclinium* Hágsater & Dodson also has paniculate inflorescences, with simultaneous flowers, pubescent sepals 18-22 mm long, and narrowly oblanceolate petals 3.4 mm wide, the lip with 3 thin keels just in front of the calli; it grows on the Amazon side of the Andes. *Epidendrum cuicochaense* Hágsater & Dodson, has a generally short, few-flowered inflorescence with a straight rachis, the flowers apple-green somewhat tinged with purple-brown, the sepals are glabrous, petals linear-oblancheolate, 3-4.5 mm wide, and the lip is 3-lobed, with multiple radiating keels on the whole surface.

ETYMOLOGY: in reference to the town of Pallatanga, in the province of Chimborazo, central Ecuador, where the type specimen was collected.

REFERENCES: Dodson, C. H. 1999. Orchidaceae in P. Jørgensen et al. León (eds.), *Catalogue of the Vascular Plants of Ecuador, Mönögen. Syst. Bot. Missouri Bot. Gard.* 75: 664. Dodson, C. H. & P. M. Dodson. 1989. *Epidendrum pallatanga* in *Orchids of Ecuador, Icon. Pl. Trop.* ser. 2 (5): pl. 479.

Authors: E. Santiago & E. Hágsater

Illustrator: R. Jiménez M.

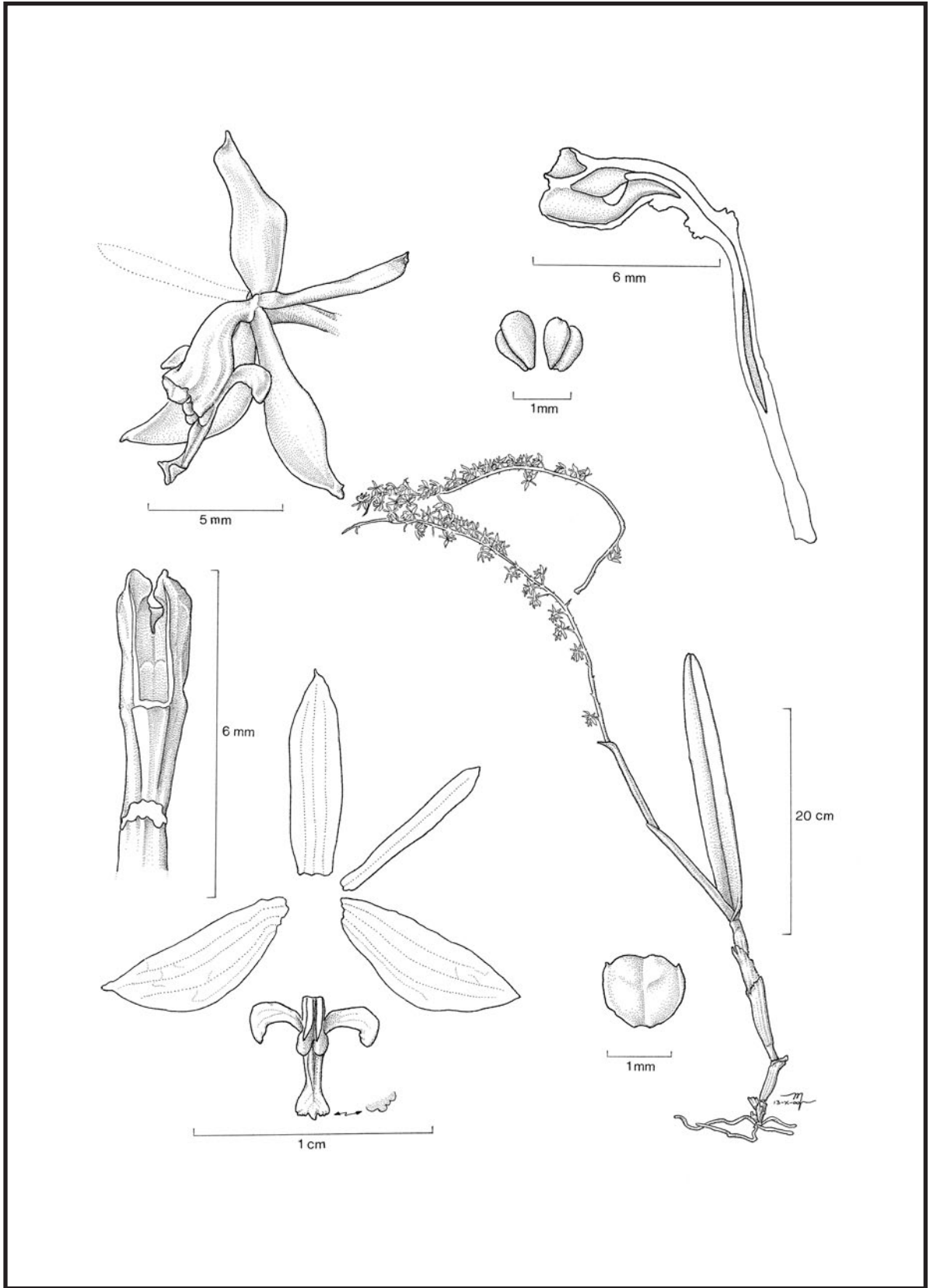
Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009.

Plate 1270



EPIDENDRUM PARVILABRE Lindl.

Plate 1271

EPIDENDRUM PARVILABRE Lindl., in Benth. Pl. Hartw. 150. 1845.

Type: [ECUADOR]: Juxta El Porotillo et El Sisme, **Hartweg s.n.** Holotype: K-L (photo at AMES!)

Synonym: *Epidendrum brachybulbum* F.Lehm. & Kraenzl., Bot. Jahrb. Syst. 26: 463. 1899. Type: ECUADOR: Epiphytica in silvis haud densis prope Chayal Molleturo et Huacohuaico, in Andibus occid. ditionis Cuenca, **F. Lehmann 6465**. Holotype: K-L! Isotypes: L! LE! NY! (Illustration voucher). US! (added copy of type-written note shows a different low-altitude locality).

Hierba epífita, simpodial, subcespitosa, 26-77 cm de alto incluyendo la inflorescencia. **Raíces** basales, carnosas, gruesas, 2-3 mm de grosor. **Tallos** sencillos, tipo caña, lateralmente comprimidos, 7.7-20 X 0.4-0.7 cm, cubiertos casi en su totalidad por 2 o 3 vainas, parcialmente imbricadas, conduplicadas, tubulares, agudas, papiráceas, 4.6-6.5 cm de largo; el segmento apical carnoso, grueso, 4-6 X 0.7-0.9 cm. **Hojas** [1]2, las láminas agregadas en el ápice del tallo, vaina tubular, lateralmente comprimida, lámina, elíptico oblonga, bilobada, con una quilla dorsal, margen eroso, coriácea, 7-16 X 2.0-3.3 cm. **Bráctea espatácea** 1, persistente, de lados casi paralelos, aguda, 5-7 x 0.5-2 cm. **Inflorescencia** apical, racemosa, la base erecta, arriba arqueada, 19-58 cm de largo; pedúnculo provisto de 2 brácteas semejantes a la espatácea, oblonga, ancipitosa, aguda, mas angostas que la espata 4-10 x 0.4-0.7 cm, la segunda en ocasiones mucho menor, hasta similar a las florales, triangular, acuminada, 9 mm de largo; raquis lateralmente comprimido, no ornamentado. **Brácteas florales** mucho más cortas que el ovario, triangulares, agudas, 3-4 mm de largo. **Ovario** ligeramente dilatado hacia el ápice, terete, no ornamentado, 7-10 mm de largo. **Flores** 20-50, simultáneas, resupinadas, distribuidas a lo largo de la mitad apical de la inflorescencia, sépalos y pétalos verde cremoso, labelo punteado de pardo; fragancia herbácea por la mañana. **Sépalos** libres, elípticos, agudos, margen entero, 5-nervados, 7-11 x 2.5-5.6 mm; el **dorsal** algo reflexo, ligeramente incurvado; los **laterales** extendidos. **Pétalos** extendidos, oblongo oblanceolados, obtusos, margen entero, (1)3-nervados, 7.0-10 x 0.8-2 mm. **Labelo** unido a la columna, trilobado, cordado, 5.0-8.6 x 5.5-9.0 mm, bicalloso, los callos carnosos, extendiéndose hasta la mitad del disco, con una quilla engrosada a la mitad del lóbulo medio; lóbulos laterales falciformes, agudos, margen finamente eroso; lóbulo medio, angostamente rectangular, ápice pequeño, flabeliforme a romboide, margen finamente eroso. **Columna** arqueada, gruesa, 7-9 mm de largo. **Clinandrio** corto, en forma de embudo, margen casi entero. **Antera** 4-locular, reniforme. **Polinia** 4, obovoides, lateralmente comprimidos, caudículas granuladas, más cortas que los polinios. **Restelo** apical, hendido. **Lóbulos laterales del estigma** de ½ de largo de la cavidad estigmática. **Nectario** sin traspasar el perianto, no ornamentado. **Cápsula** no vista.

Epiphytic, sympodial, sub-caespitose **herb.** **Roots** basal, fleshy, thick. **Stems** simple, cane-like, fleshy, thickened, laterally compressed, nearly completely covered by 2-3 sheaths. **Leaf** 1-2, apical, oblong-elliptic, bilobed, coriaceous, margin finely erose. **Spathaceous bract** 1, oblong, acute. **Inflorescence** apical, racemose, erect below, arching above, peduncle with a sheath-like, ancipitose bract above the spathaceous bract, and a smaller acuminate bract near the first flower. **Floral bracts** much shorter than the ovary, triangular, acute. **Ovary** terete, slightly thickened near the apex. **Flowers** 20-50, simultaneous, resupinate, distributed throughout the apical half of the inflorescence, sepals and petals creamy green, column and lip white, lip dotted with brown spots, with a herbaceous fragrance during the morning. **Sepals** spreading, incurved, free, elliptic, acute, 5 veined. **Petals** spreading, incurved, oblong-oblanceolate, obtuse, margin entire, (1) 3 veined. **Lip** united to the column, cordate, 3-lobed, bicallose, the calli fleshy, extending to the middle of the disc, with a central keel in the middle; lateral lobes falcate, acute, margin finely erose; midlobe narrowly rectangular, apex small, flabelliform to rhomboid, margin finely erose. **Column** arched, thick. **Clinandrium-hood** short, funnel-shaped, margin nearly entire. **Anther** reniform, 4-celled. **Pollinia** 4, obovoid, caudicles granulose, shorter than the pollinia. **Nectary** without penetrating the ovary.

OTHER SPECIMENS: Hort., without locality, *Hágsater 5075*, AAU! AMES! AMO! F! GB! MOx2! NY! QCA! SEL! US! **ECUADOR:** Without locality, *Andreetta 1651*, AMO! S of Baños on way to Cuenca, cult. *Hágsater 7697*, AMO! QCA! Ibid. *Hágsater 9942*, AMES! AMO! **Azuay:** Cuenca, El Sural (Finca del señor Juan Galarza), 2650 m, *Castellanos 293*, AMO! MO! QCA! QCNE! Cuenca to Pasaje, Asunción, 1200 m, 30 XI 1957, *Dodson [343]343A*, SEL! Ibid. *[378]378A*, SEL! **Bolivar:** Carretera Guaranda-Caluma, km 10, 3100 m, 15 VII 2000, *Álvarez 2690*, QCNE! Pallatanga, 1500 m, 7 X 1981, *Dodson 11675*, SEL! Babahoyo-Guaranda, km 68, 1650 m, *Dodson 18689*, MO! QCNE Guaranda, 3000 m, 18 VII 1985, *Hágsater 7722*, AMO! Guaranda, 3000 m, 1 III 1984, *Hágsater 7723*, AMO! Guaranda-Chillanes, 2800m, 1 III 1984, *Hágsater 7727*, AMO! Guaranda to Caluma, 2800 m, 10 V 1982, *Luer 7258*, SEL! **Carchi:** Tulcan to El Carmelo, 3200 m, 16 II 1959, *Harling 4228*, GB! **Chimborazo:** Sacramento, 6500 ft, *Wiggins 11123*, DS! US! **El Oro:** 5 km W of El Cisne, 2700 m, *Dodson 18002* MO! El Cisne to Zaruma, km 52, 450 m, 23 XI 1984, *Jørgensen 56357*, AAU! **Loja:** Jeronimo Guermani, *André s.n.*, K-L! photo, MO! 2 km S of El Cisne on road to Loja, 2500 m, *Molau 3110*, GB! Illustration AMO! **PERU:** **Piura:** Huancabamba, entre km 15 y 25, carretera entre Canchaque y Huancabamba, 21 III 1989, *Díaz 3376*, MO! USM! road to Huancabamba, 18 km above Canchaque, 2150 m, 12 IX 1964, *Hutchison 6561*, UC! US x2!

OTHER RECORDS: **ECUADOR:** Illustration, Lindley, Fol. Orch. Epid. 102, *Hartweg s.n.*, W-R 5759 (slide at AMO!) **PERU:** **Piura:** Huancabamba, entre km 15 y 25, carretera entre Canchaque y Huancabamba, *Díaz 6561*, (illustration, Dodson et al. 1989).

DISTRIBUTION AND ECOLOGY: Known from the western slopes of the Andes in central to southern Ecuador and northern Peru. Epiphytic in disturbed shrubby montane forest, from 1900 to 3000 m altitude. Flowering throughout the year.

RECOGNITION: *Epidendrum parvilabre* belongs to the Mancum group which is characterized by the sympodial habit, few-leaves stems, racemose inflorescence with 1-2, ancipitose, long, spathaceous bracts with parallel sides and Cylindraceum subgroup which has resupinate flowers with linear



to linear-spatulate petals and the lateral lobes of the lip falcate. The species is recognized by the long and wide leaves (7-16 x 2.0-3.3 cm), the elongate, arching, inflorescence, the 7-10 mm long ovaries and the intermediate sized flowers (sepals 7-11 mm long). It closely resembles *Epidendrum cylindrostachys* Rchb.f. & Warsc., which has much longer, narrower leaves (12-27 x 0.9-1.4 cm), a still longer, narrower, arching inflorescence, with the ovaries shorter (5-7 mm), and the flowers smaller (sepals 4-7 mm long). *Epidendrum cylindraceum* Lindl., has shorter, wider leaves (6-10 x 2.5-3.5 cm), a short, compact, erect, stocky, inflorescence, the ovaries notably longer (12-22 mm), and larger flowers (sepals 10-12 mm long). The following two species have somewhat dissimilar flowers: *Epidendrum löjtnantii* Hágsater & Dodson, has successive flowers, narrow leaves, 1.8-2.0 cm wide, an unornamented, 12-15 mm long ovary, the lateral lobes of the lip crenulate, and the midlobe prominently bilobed. *Epidendrum cylindrostenophyllum* Hágsater & Dodson, has fewer, simultaneous flowers, about 20, narrow leaves, ca. 1 cm wide, a shorter inflorescence, 15 cm long, the shortest ovaries (3-5 mm long), small flowers (sepals 3.5-5.0 mm long), lateral lobes of the lip retrorse and narrow at the base, transversely elliptic at the rounded apex.

CONSERVATION STATUS: DD. Data deficient. The species is common in Ecuador.

ETYMOLOGY: From the Latin *parvus*, little, small, puny, and *labium*, the lip, thus small-lipped.

REFERENCES: C. H. & P. M. Dodson. 1980. *Epidendrum cylindraceum* in C. H. Dodson. **Icon. Pl. Trop.** 4: pl. 375. C. H. Dodson & D. Bennett. 1989. *Epidendrum parvilabre* in C. H. Dodson, **Icon. Pl. Trop.** II 1, pl. 69.

Authors: L. Sánchez S. & E. Hágsater

Illustrator: M. López. R.

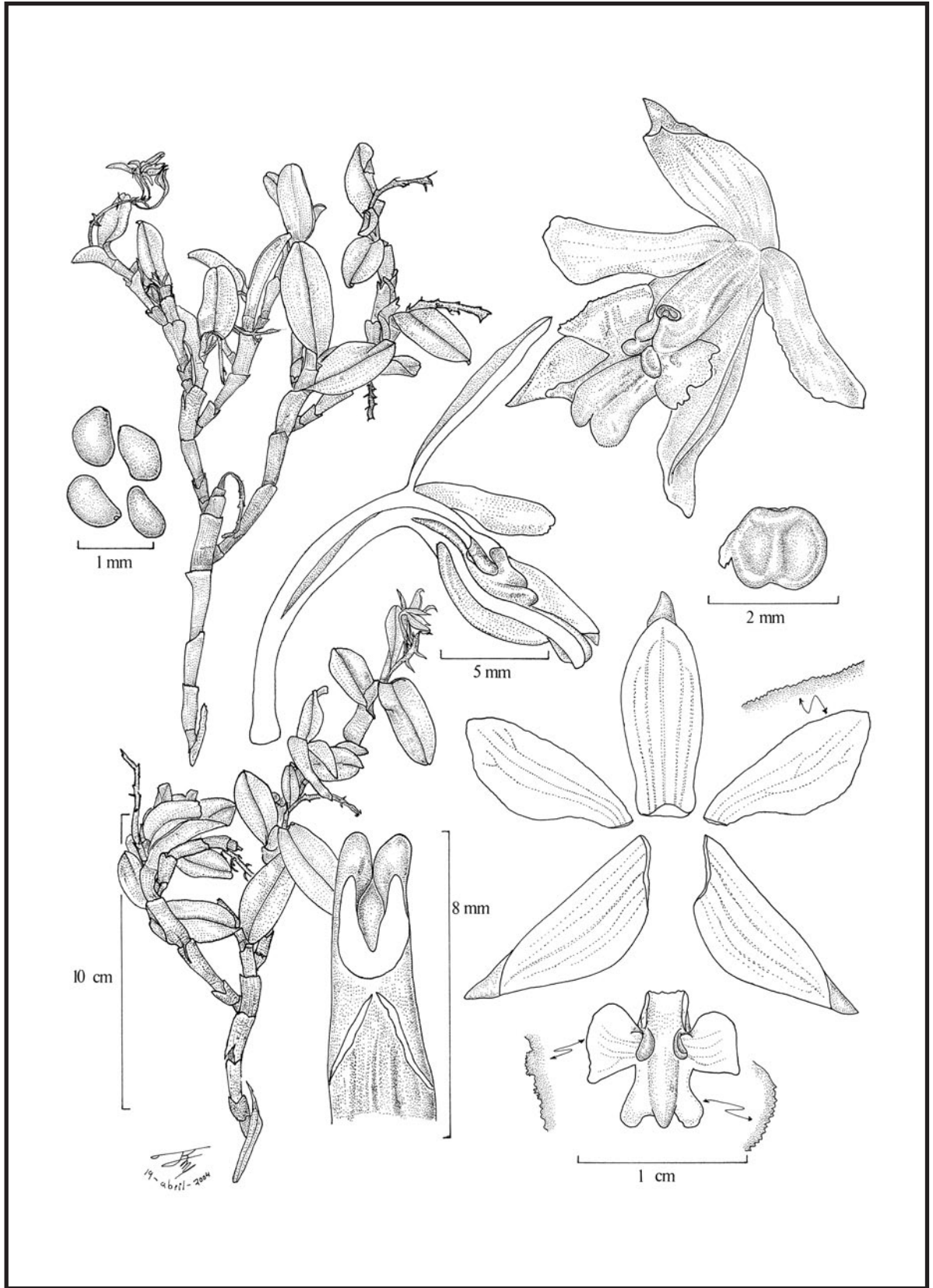
Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009.

Plate 1271



EPIDENDRUM PASTOËNSE Schltr.

EPIDENDRUM PASTOËNSE Schltr., Repert. Spec. Nov. Regni Veg., Beih. 7: 142. 1920.

Type: COLOMBIA: Cauca [Nariño]: Alto de Cobellos [Cebollas] bei Pasto, 3000-3300 m, **F. C. Lehmann 6150**. Holotype: B (destroyed). Lectotype (here designated): NY! (Illustration voucher). Isolectotypes: AMES! K-L!

Hierba terrestre, monopodial, ramificada arriba, 60-200 cm de alto. **Raíces** de los internodos basales en el tallo principal y ocasionalmente de la base de alguna rama, carnosas, gruesas, 3-5.5 mm de grosor. **Tallos** tipo caña, teretes, erectos, rectos, ramificados arriba, el principal de 60 x 0.8-1.6 cm; las ramificaciones 4-13 x 0.2-0.55 cm. **Hojas** numerosas en el principal, 2-5 en las ramificaciones, distribuidas en la mitad apical de los tallos, dísticas, erecto extendidas, coriáceas; vaina tubular, finamente rugosa, 1-5 cm de largo; lámina oblonga a oblongo elíptica, ápice obtuso, bilobado, margen entero, las del tallo principal 3-10.5 x 1.5-4 cm; las de las ramas 1.5-6 x 1.0-1.9 cm. **Bráctea espátea** ausente. **Inflorescencia** apical, florece una sola vez, racemosa, arqueada, 2-7 cm de largo; pedúnculo subterete, corto, 10-20 mm de largo; ocasionalmente provisto de una bráctea basal, triangular lanceolada, acuminada, 7-11 mm de largo. **Brácteas florales** más cortas que el ovario, ovado lanceoladas, acuminadas, abrazadoras, 4-8 mm de largo. **Flores** 8-30, simultáneas, resupinadas, carnosas, de color blanco a blanco cremoso, la parte apical de los sépalos con manchas amarrotadas; sin datos de fragancia. **Ovario** terete, delgado, liso, 10-20 mm de largo. **Sépalos** con una arista dorsal muy prominente, 5-nervados, margen entero, extendido, 11-14 x 3.5-6.0 mm; el **dorsal** parcialmente extendido, libre, oblongo obovado, obtuso; los **laterales** entreabiertos, adnados de manera oblicua a la parte basal de la columna, oblongo triangulares, muy oblicuos. **Pétalos** entreabiertos, libres, elípticos, unguiculados, obtusos, 3-nervados, oblicuos, margen eroso, ligeramente revoluta, 10-12 x 5-6 mm. **Lábelo** unido a la columna, trilobado, cordado en la base, 7-9 x 8-10 mm; bicalloso, los callos prominentes, carnosos, sublaminares, divaricados, ligeramente cóncavos; disco con un par de cuniculos ubicados en la parte externa de los callos; unicarinado, la carina engrosada, muy carnosas generalmente terminada en un mucrón prominente que sobrepasa el ápice de la lámina; lóbulos laterales dolabriformes, margen eroso, 3-4 x 4-5 mm; lóbulo medio anchamente cuneado, con un mucrón prominente en el seno apical, margen apical eroso, 4-6 x 5-7 mm. **Columna** ligeramente arqueada, gruesa, con un par de alas prominentes, redondeadas, 7-8 mm de largo. **Clinandrio** reducido, margen entero. **Antera** reniforme, 4-locular. **Polinios** 4, obovoides, lateralmente comprimidos, caudículas suaves y granuladas. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** pequeños, ocupando de un tercio del largo de la cavidad estigmática. **Nectario** muy corto, sin traspasar el perianto, delgado, no inflado, no ornamentado. **Cápsula** globosa.

Terrestrial, monopodial **herb**, branching above. **Roots** from basal internodes of the main stem, occasionally from the base of a branch, fleshy, thick. **Stems** cane-like, terete, erect, straight, branching above, the main stem much longer than the branches. **Leaves** numerous on the main stem, 2-5 on the branches, distributed along the apical half of the stems, distichous, erect-spreading, coriaceous; sheath tubular, minutely rugose; blade oblong to oblong-elliptic, apex obtuse, bilobed, margin entire, those of the main stem larger than those of the branches. **Inflorescence** apical, flowering only once, racemose, arching; peduncle sub-terete, short, occasionally provided with a basal, triangular-lanceolate, acuminate bract. **Floral bracts** shorter than the ovary, ovate-lanceolate, acuminate, amplexicaul. **Flowers** 8-30, simultaneous, resupinate, fleshy, white to creamy white, the sepals apically purple tinged. **Ovary** terete, thin, smooth. **Sepals** with a very prominent dorsal awn, 5-veined, margin entire, spreading; dorsal sepals partly spreading, free, oblong-obovate, obtuse; lateral sepals partly spreading, obliquely adnate to the base of the column, oblong-triangular, very oblique. **Petals** partly spreading, free, elliptic, unguiculate, obtuse, 3-veined, oblique, margin erose, slightly revolute. **Lip** united to the column, 3-lobed, base cordate; bicallose, the calli prominent, fleshy, sub-laminar, divaricate, slightly convex; disc with a pair of cunicula outside the calli, with a single, fleshy, thickened, low keel ending in a prominent mucro; lateral lobes dolabriform, margin erose; midlobe widely cuneate, with a prominent mucro at the apex, apical margin erose. **Column** slightly arching, thick, with a pair of prominent, rounded wings. **Clinandrium-hood** reduced, margin entire. **Anther** reniform, 4-celled. **Pollinia** 4, obovoid, laterally compressed, caudicles soft and granulate. **Rostellum** subapical, slit. **Nectary** very short, without penetrating the ovary, thin, not inflated, smooth. **Capsule** globose.

OTHER SPECIMENS: COLOMBIA: Cauca: Valle de Las Papas, 2800-3100 m, 26 IX 1958, *Idrobo 3795*, COL! NY! P! U! de Puracé al volcán, 3100-3200 m, 11 VII 1939, *Pérez 5919*, COL x2! US! **Huila:** La Plata, 22 III 1939, *Sneidern 2004*, S! **Nariño:** Paramo Galeras, 10 km de Pasto, 3130 m, 13 XI 1982, *Albert de Escobar 2922*, HUA! MO! Pasto, 3200 m, 15 V 1876, *André 3206*, K-L! km 18-22 road from Pasto to Laguna Cocha (Sindamonoy), 2000-2200 m, 23 VI 1989, *Dodson 18100*, AMO! Near Laguna La Cocha, along main road from Pasto to Mocoa, 25 VII 1960, *Garay 53*, AMES! COL! faldas del Volcán Galeras, 3428 m, 14 I 1966, *Guzmán 174*, COL! Alto de Cebollas, *Lehmann 279*, AMES! K-L! L! NY! Vulkan von Pasto, 3000 m, 14 II 1880, *Lehmann 482*, G! W-R! University of Nariño property, vicinity Granja Botana, 3.5 km down road from entrance which is about 7 km S of Pasto, 2895 m, 24 I 1976, *Luteyn 5003*, CAS! COL! MO! NY! Páramo de El Tábano, cerca a Pasto, 3200 m, *Uribe 5368*, COL! NY! **Putumayo:** Páramo de Tabano, S of Pasto, 12400 ft, 11 VIII 1939, *Balls 7499*, K-L! between La Cocha and Sibundoy, ca. 2700 m, 30 VII 1978, *Luer 3075*, SEL! **ECUADOR: Carchí:** Huaca, Estación Biológica Guandera, 3400-3500 m, 12 I 2001, *Álvarez 2854*, NY! QCNE! Carretera El Carmelo-Tulcán, a través del páramo "El Guagua Negro", 2850-2930 m, 9 III 1992, *Gavilanes 900*, QCA x2! QCNE! km 48.3, camino Tulcán-Maldonado, 3190 m, 29 IV 1993, *Hágsater 11257*, AMO! **Imbabura:** km 7 Cuicocha-Selva Alegre, 3220 m, *Hágsater 8940*, AMO x2! Lago Cuicocha, 3190 m, 2 V 1993, *Hágsater 11299*, AMO x4! Ibid. *Hágsater 11349*, AMO! **Napo-Pastaza:** Laguna de Papallacta, 23 V 1947, *Fosberg 27578*, AMO!

DISTRIBUTION AND ECOLOGY: Known from the interandean valley of southern Colombia and northern Ecuador, terrestrial, at 2800-3700 m altitude. Flowering throughout the year.

RECOGNITION: *Epidendrum pastoense* belongs to the Andean Group, Cernuum Subgroup, characterized by the monopodial habit, cane-like stems with sub-apical branches which are considerably shorter than the main stem, coriaceous to sub-coriaceous leaves, apex bilobed, and fleshy flowers, the lip 3-lobed. The species is recognized by the white to creamy white, the sepals somewhat dorsally tinged with purple, sepals 11-14 mm long, with a prominent dorsal awn, petals elliptic, obtuse, 5-6 mm wide, the lateral lobes of the lip dolabriform, midlobe emarginate with a prominent mucro. *Epidendrum suaveolens* Ames has greenish white to creamy yellow flowers, the lateral sepals with a low, erose awn, 14-16 mm long, elliptic to oblong-oblancheolate petals apically rounded and minutely apiculate, 5-7 mm wide, the lateral lobes of the lip sub-orbicular, and the midlobe widely and shortly apiculate. *Epidendrum torquatum* Lindl. has yellow to greenish white, somewhat smaller flowers, sepals 11-12 mm long, petals oblancheolate-spatulate, 3-4 mm wide, and the lateral lobes of the lip very large, dolabriform, the midlobe cuneate, somewhat tridentate. *Epidendrum fagerlindii* Hágsater & Dodson has flowers nearly the same size but greenish yellow, elliptic, rounded petals 7 mm wide, and the lateral lobes of the lip semi-ovate, nearly as wide as the midlobe which is emarginate but without any mucro in the sinus.



CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In reference to the city of San Juan de Pasto, the capital of the southern province of Nariño, Colombia, near which the species was collected.

Authors: E. Santiago & E. Hágsater

Illustrator: R. Jiménez M.

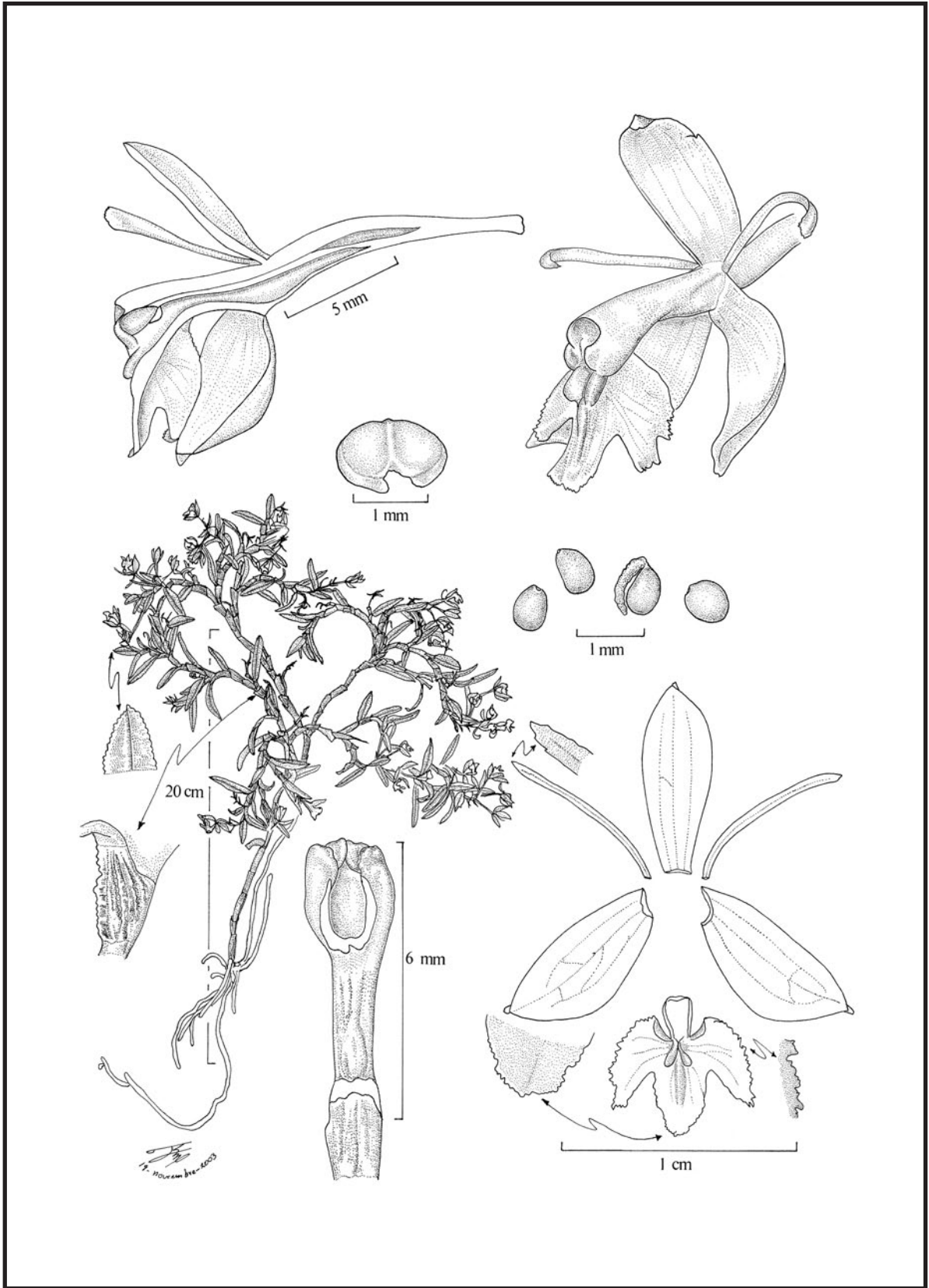
Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009.

Plate 1272



EPIDENDRUM PHYSOPUS Kraenzl.

EPIDENDRUM PHYSOPUS Kraenzl., Repert. Spec. Nov. Regni Veg. 12(1): 87-88. 1905.

Type: PERU: Junin: Tarma, Berge von Yanangu, östlich von Huacapistana, **A. Weberbauer s.n.** Holotype: HBG, cited by Christenson, 1994. Isotype: B (destroyed), photo AMES! F! NY!

Synonyms: *Epidendrum trimeroglossum* Schltr. Repert. Sp. Nov. Regni Veg., Beih. 7: 153. 1920. Type: COLOMBIA: Cauca, 2600 m, **M. Madero s. n.** Holotype: B, destroyed; sketch of flower published in Repert. Sp. Nov. Regni Veg., Beih. 57: nr. 209. 1929; AMES 36091!

Epidendrum schneideri Hágsater, Icon. Orchid. (Mexico) 4: pl. 484. 2001. Type: COLOMBIA: Páramo von Bogotá, 3000-3100 m, 17 July 1944, **M. Schneider 281**. Holotype: S! Isotypes: COL x2!

Hierba epífita, erecta, monopodial, ramificada arriba, 12-20 cm de alto. **Raíces** basales, filiformes, carnosas, 0.5-1 mm de grosor. **Tallos** ramificados subapicalmente, tipo caña, lateralmente comprimidos, flexuosos; el principal 7-11 x 0.1-0.2 cm, las ramificaciones más cortas. **Hojas** 9-12 distribuidas a lo largo del tallo, suberectas, articuladas, coriáceas; vaina tubular o ligeramente infundibuliforme, lateralmente comprimida, estriada, rugosa, ca. 10 mm de largo; lámina linear a linear lanceolada, diminutamente apiculada, margen apical crenado, 1.2-3 x 0.2-0.35 cm. **Bráctea espátacea** ausente. **Inflorescencia** apical, racemosa, arqueada nutante, pauciflora, laxa, corta, 1.5 cm de largo; pedúnculo delgado, corto, 3-5 mm de largo. **Bráctea floral** de la mitad del largo del ovario, oblongas, agudas, 2-3 mm de largo. **Flores** 2-5, pequeñas, sucesivas, glabras, de color verde a amarillo verdosas, algo teñidas de rojo violeta, sin datos de fragancia. **Ovario** terete, delgado, no inflado, no ornamentado, 4-7 mm de largo. **Sépalos** libres, entreabiertos, oblongo oblanceolados, obtusos, 3-nervados, margen entero, extendido, 6-8 x 1.5-3 mm; los **laterales** oblicuos. **Pétalos** entreabiertos, libres, linear filiformes, obtusos, 1-nervados, margen entero, extendido, 6-7.7 x 0.3-0.4 mm. **Labelo** unido a la columna, trilobado, base ligeramente cordada, margen eroso, extendido, 2.5-5 x 4-6 mm; bicalloso, los callos pequeños, suborbiculares; disco provisto de una quilla intercallosa, delgada; lóbulos laterales generalmente tan largos como el lóbulo medio, oblicuamente semiovalados, obtusos, 1.6-2.6 x 2-4 mm; lóbulo medio angostamente triangular, obtuso, 1.7-2.8 x 1.9-2.5 mm. **Columna** ligeramente arqueada, delgada, el ápice bidentado y con un par de alas redondeadas, 4-5 mm de largo. **Clinandrio** corto, margen entero. **Antera** reniforme, 4-locular. **Polinios** 4, obovoides; caudículas suaves y granulosas, casi tan largas como los polinios. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** de la mitad del largo de la cavidad estigmática. **Nectario** penetrando la mitad del ovario, algo dilatado a la altura del perianto. **Cápsula** no vista.

Epiphytic, erect, monopodial **herb**, branching sub-apically. **Roots** basal, filiform, fleshy, thin. **Stems** branching sub-apically, cane-like, laterally compressed, flexuous, the branches shorter than the main stem. **Leaves** 9-12, distributed throughout the stems, sub-erect, articulate, coriaceous; sheath tubular or infundibuliform, laterally compressed, striated, rugose; blade linear to linear-lanceolate, minutely apiculate, apical margin crenate. **Inflorescence** apical, racemose, arching-nutant, lax, few-flowered; peduncle thin, short. **Floral bracts** half as long as the ovary, oblong, acute. **Flowers** 2-5, small, successive, glabrous, green or yellow-green, somewhat tinged with purple. **Ovary** terete, thin, not inflated, smooth. **Sepals** free, partly spreading, oblong-oblanceolate, obtuse, 3-veined, margin entire, spreading; lateral sepals oblique. **Petals** partly spreading, free, linear-filiform, obtuse, 1-veined, margin entire, spreading. **Lip** united to the column, 3-lobed, base slightly cordate, margin erose, spreading; bicallose, the calli small, sub-orbicular; disc provided with a central, thin keel; lateral lobes generally as long as the midlobe, obliquely semi-ovate, obtuse; midlobe narrowly triangular, obtuse. **Column** slightly arching, thin, apex bidentate, with a pair of rounded wings. **Clinandrium-hood** short, margin entire. **Anther** reniform, 4-celled. **Pollinia** 4, obovoid; caudicles soft and granulose, nearly as long as the pollinia. **Rostellum** apical, slit. **Nectary** penetrating half the ovary, slightly dilated towards the perianth.

OTHER SPECIMENS: COLOMBIA: Santander: Edge of Páramo de Las Vegas, 3300-3700 m, 20 XII 1926, *Killip 15708*, AMES! (Illustration voucher). US!

DISTRIBUTION AND ECOLOGY: Ranging along the Eastern Cordillera of the Andes in Colombia, and southern Peru, epiphytic at 2600-3700 m altitude. Flowering July to January.

RECOGNITION: *Epidendrum physopus* belongs to Andean Group, Soratae Subgroup which is characterized by the branching



habit starting on a primary stem, infundibuliform, rugose leaf-sheaths, lanceolate, aristate, acute leaves, racemose sub-capitate inflorescence on a short, thin peduncle, and the bicallose lip. The species is recognized by the small sized plants, to 20 cm tall, linear to linear-lanceolate leaves 1.2-3 x 0.2-0.35 cm, 2-5 green or yellow-green flowers tinged with reddish, sepals and petals 6-8 mm long, and the 3-lobed lip with lateral lobes obliquely semiovate obtuse and midlobe narrowly triangular. *Epidendrum soratae* Rchb.f. is vegetatively similar, but the leaves are lanceolate, 1.7-4.7 x 0.4-0.8 cm; has 8-12 flowers per raceme, and the lip is slightly 3-lobed, with the midlobe very short. *Epidendrum pachyphylloides* Hágsater & E.Santiago has narrowly lanceolate leaves ca. 1 cm long, yellow flowers with 4-5 mm long sepals and petals, and a 3-lobed lip with the lateral lobes shorter than the midlobe. *Epidendrum colliculosum* Hágsater & E.Santiago has up to 10, white colored flowers diffused with purple, sepals 5-6 mm long, and a 3-lobed lip with dolabriform lateral lobes and a rectangular midlobe, the apex truncate.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek φυσσα, bellows, bladder, and -πους, footed, in reference to the somewhat inflated base of the column.

REFERENCE: Christenson, Eric. 1994. Significant collections of Orchidaceae conserved in Herbarium Hamburgense, *Brittonia* 46(4): 344-354.

Authors: E. Santiago & E. Hágsater

Illustrator: R. Jiménez M.

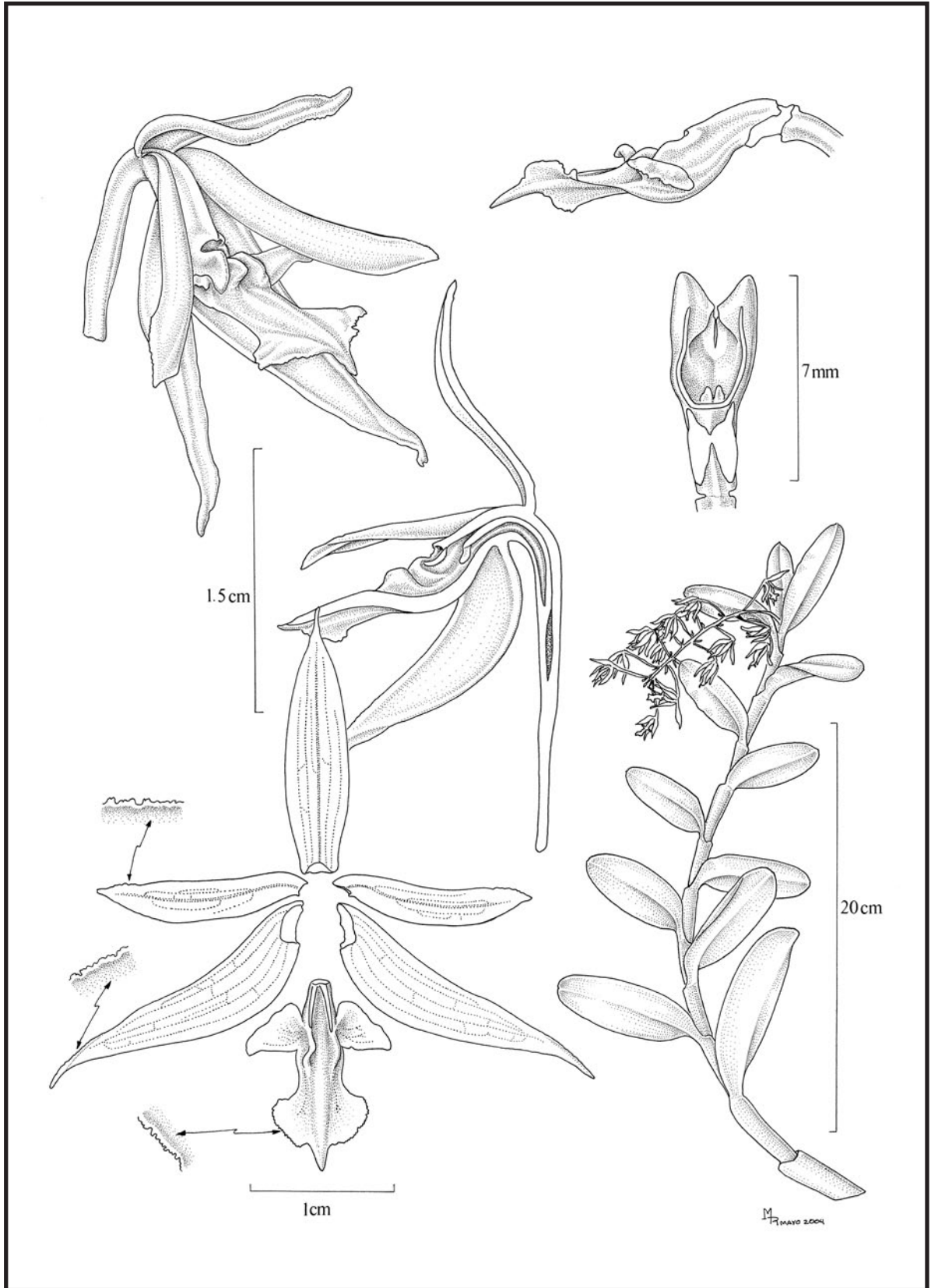
Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009.

Plate 1273



EPIDENDRUM PICHINCHAE Schltr.

Plate 1274

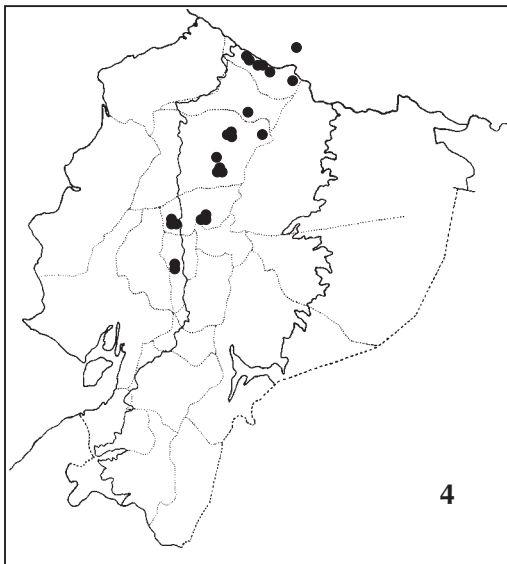
EPIDENDRUM PICHINCHAE Schltr., Repert. Sp. Nov. Regni Veg., Beih. 8: 80. 1921.

Type: ECUADOR: Pichincha: In silvis occidentalibus montis Pichincha, **Sodiro s.n.** Holotype: B, destroyed. Lectotype: (designated by Dodson, 1999): QPLS! Isotype: BR!

Hierba terrestre, monopodial, ramificada arriba, de 70-200 cm de alto. **Raíces** de la base del tallo principal (aunque ocasionalmente muy escasas en la base de algunas ramificaciones), carnosas, gruesas, blancas, 2-3 mm de grosor. **Tallos** tipo caña, teretes, erectos, rectos, ramificados cuando maduros; 70-200 x 0.5-1.1 cm; las ramas 5-35 x 0.3-1.0 cm; totalmente cubiertos en los 2/3 basales por vainas tubulares, no foliares. **Hojas** 12-15 en el tallo principal; 4-8 en las ramas, distribuidas hacia el tercio apical de los tallos, erecto extendidas a extendidas, dísticas, articuladas; vainas tubulares en el tallo principal e infundibuliformes en las ramificaciones cuando secas, estriadas a finamente rugosas, 1.5-5 cm de largo; lámina oblonga a oblongo lanceolada, obtusa, incipientemente bilobada en el ápice, coriácea, margen apical crenado; las del tallo principal 3.5-13.5 x 1.8-3 cm; las de las ramificaciones 2-8.5 x 0.8-2.0 cm. **Bráctea espátacea** ausente. **Inflorescencia** apical, florece una sola vez, racemosa, arqueada nutante, densa, multiflora, 5-12 cm de largo; pedúnculo terete, delgado, 10-30 mm de largo; provisto cerca de la base de una bráctea lanceolada, acuminada, 12 mm de largo. **Brácteas florales** de tamaño variable, desde más cortas que el ovario hasta casi tan largas como este, linear lanceoladas, largamente acuminadas, abrazadoras, 8-18 mm de largo. **Flores** 16-30, simultáneas, resupinadas, de color amarillo cremoso a blancas, en ocaciones manchadas de violeta en la superficie dorsal de los sépalos; sin datos de fragancia. **Ovario** terete, delgado, no inflado, no ornamentado, 15-21 mm de largo. **Sépalos** entreabiertos, libres, angostamente lanceolados a angostamente elípticos, acuminados, 5-nervados, margen crenulado en el ápice, extendido, [15]18-21 x [2] 4-4.5 mm; los **laterales** oblicuos, falcados. **Pétalos** entreabiertos, libres, linear lanceolados a linear oblongos, oblicuos, acuminados, 1-nervados, la nervadura ramificada a todo lo largo, margen irregularmente denticulado, [12]14.5-17 x 1.5-2.5 mm. **Labelo** unido a la columna, trilobado, cordado en la base, 10-13.5 x 9-10 mm; bicalloso, los callos prominentes, laminares; disco con una quilla intercallosa, subaguda, que sobrepasa el ápice del labelo y forma un mucrón prominente; lóbulos laterales oblicuamente ovados a dolabriformes, margen apical eroso, 4.0-4.5 x 4-6 mm; lóbulo medio con un istmo de lados paralelos en la base; el ápice subrómico y con un apículo prominente, el margen eroso-dentado, 8-10 x 5-6.5 mm. **Columna** recta, delgada, algo dilatada hacia el ápice, 6-7 mm de largo; el ápice con un par de alas prominentes, subrectangulares, subobtusas. **Clinandrio** reducido, margen entero. **Antera** anchamente ovoide, 4-locular. **Polinios** 4, obovoides; caudículas mucho más cortas que los polinios, suaves y granulosa. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** pequeños, ocupando 1/3 del largo de la cavidad estigmática. **Nectario** corto, penetrando 1/5 del ovario, delgado, no inflado, no ornamentado. **Cápsula** elipsoide, 7 x 5 cm; pedicelo, terete, 12 mm de largo; cuerpo 6 x 5 cm; cuello apical, obsoleto, con el perianto persistente.

Terrestrial, monopodial **herb**, branching towards the apex of the stems. **Roots** from the base of the main stem, occasionally scarce at the base of some branches, fleshy, thick. **Stems** cane-like, terete, erect, straight, branching when mature, the main stem much longer than the branches, the basal 2/3 totally covered by tubular, non-foliar sheaths. **Leaves** 12-15 on the main stem, 4-8 on the branches, distributed throughout the apical 1/3, erect-spreading, distichous, articulate; sheaths tubular on the main stem, infundibuliform on the branches when dry, striated to minutely rugose; blade oblong to oblong-lanceolate, obtuse, apically slightly bilobed, coriaceous, apical margin crenate; those on the main stem larger than those on the branches. **Inflorescence** apical, flowering only once, racemose, arching-nutant, dense, many-flowered; peduncle terete, thin; provided near the base with a lanceolate, acuminate bract. **Floral bracts** variable in size, shorter to nearly as long as the ovary, linear-lanceolate, long-acuminate, amplexicaul. **Flowers** 16-30, simultaneous, resupinate, cream-colored to white, occasionally spotted with purple on the dorsal surface of the sepals. **Ovary** terete, thin, not inflated, smooth. **Sepals** partly spreading, free, narrowly lanceolate to narrowly elliptic, acuminate, 5-veined, apical margin crenulate, spreading; the **lateral** sepals oblique, falcate. **Petals** partly spreading, free, linear-lanceolate to linear-oblong, oblique, acuminate, 1-veined, the vein branching throughout, margin irregularly denticulate. **Lip** united to the column, 3-lobed, base cordate; bicallose, the calli prominent, elongate, laminar; disc with a thickened, rounded, fleshy keel running down to form a prominent mucro at the apex of the midlobe; lateral lobes obliquely ovate to dolabriform, apical margin erose; midlobe with a long, parallel-sided isthmus at the base, the apex sub-rhombic, with a prominent apicule, margin erose-dentate. **Column** straight, thin, somewhat dilated towards the apex, with a pair of prominent, sub-rectangular, sub-obtusate wings. **Clinandrium-hood** reduced, margin entire. **Anther** widely ovoid, 4-celled. **Pollinia** 4, obovoid; caudicles much shorter than the pollinia, soft and granulate. **Rostellum** apical, slit. **Nectary** short, penetrating 1/5 of the ovary, thin, not inflated, smooth. **Capsule** ellipsoid, pedicel terete, apical neck obsolete, perianth persistent.

OTHER SPECIMENS AND RECORDS: See appendix.



DISTRIBUTION AND ECOLOGY: central Ecuador and neighboring Colombia, in the interandean valley and the upper Pacific slope of the Andes, terrestrial, growing at 1700-3500 m altitude. Flowering from January to July.

RECOGNITION: *Epidendrum pichincae* belongs to the Andean Group, Cernuum Subgroup, characterized by the monopodial branching habit, cane-like stems, branching sub-apically, the branches shorter than the main stem, leaves coriaceous to sub-coriaceous and fleshy flowers, the lip 3-lobed. The species is recognized by the tall plants, to 2 m high, oblong to oblong-lanceolate leaves, 3.5-13.5 cm long, large flowers with the floral segments long-acuminate, lateral sepals falcate, [15]18-21 mm long, linear-lanceolate to linear-oblong petals, and the midlobe of the lip sub-rhombic with a long isthmus, and a prominent apicule. *Epidendrum sumacoense* Hágsater & Dodson has somewhat smaller flowers, acute, apiculate, 13-15 mm long sepals, and cuneate petals, the apex rounded, and the midlobe of the lip emarginate, with a small apicule.

CONSERVATION STATUS: DD. Data deficient. Apparently widespread and common.

ETYMOLOGY: In reference to the Mount Pichincha, in central Ecuador, where the species was first collected.

REFERENCES: Dodson, C. H. 1989. *Epidendrum pichincae* Schltr., in *Icon. Pl. Trop.*, ser. 2, 5: 480; Dodson, C. H. 1999. in P. Jørgensen & C. Leon, (eds.) *Catalogue of the Vascular Plants of Ecuador*, *Monogr. Syst. Bot. Missouri Bot. Gard.* 75: 665.

Authors: E. Santiago & E. Hágsater

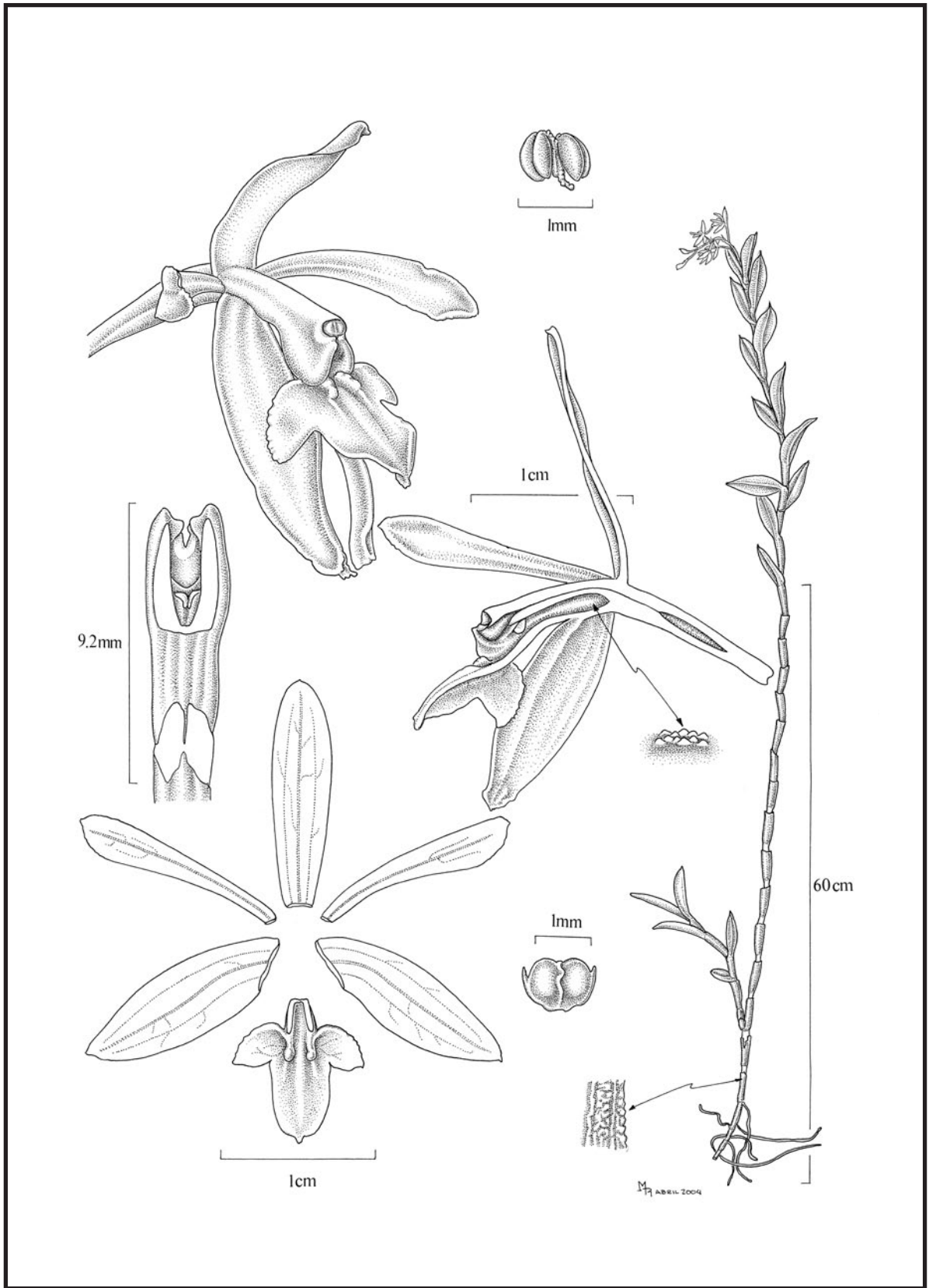
Illustrator: M. López R.

Editors: E. Hágsater & L. Sánchez S.

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ICONES ORCHIDACEARUM 12. 2009. Plate 1274



EPIDENDRUM PITTIERI Ames

EPIDENDRUM PITTIERI Ames, Sched. Orch. 1: 18. 1922.

Type: COLOMBIA: Cauca: headwaters of Río López, Río Palo basin, Tierra Adentro, January 1906, 2500-3000 m, **H. Pittier 1067**. Holotype: US! photo and fragment of holotype (flowers): AMES!

Hierba terrestre, monopodial, ramificada arriba, de 50-100 cm de alto. **Raíces** basales, carnosas, delgadas, blancas, ca. 1 mm de grosor. **Tallos** ramificados, tipo caña, lateralmente aplanados, erectos, rectos, delgados; el principal de 21-95 x 0.3-0.5 cm; las ramificaciones más cortas, 15 x 0.3-0.5 cm. **Hojas** 8-30, distribuidas a lo largo de los tallos, alternas, articuladas, semejantes en tamaño y forma, dísticas, extendidas a subparalelas con respecto al tallo, coriáceas; vaina tubular, finamente estriada, rugosa, 0.5-1.5 x 0.3-0.5 cm; lámina ovada a ovado-oblonga, aguda a cortamente acuminada, margen ligeramente revuelto en ejemplares herborizados, 2-3 x 0.7-1.1 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, florece una sola vez, arqueada nutante, pauciflora, laxa, corta, 5-6 cm de largo; pedúnculo subterete, delgado, 10 mm de largo. **Bráctea floral** prominente, en ocasiones más largas que el ovario, linear lanceoladas, acuminadas, abrazadoras, 6-17 mm de largo. **Flores** 7-14, simultáneas, resupinadas, de color blanco verdosas a amarillentas, algo teñidas de púrpura en la superficie dorsal de los segmentos florales, sin datos de fragancia. **Ovario** terete, delgado, no inflado, no ornamentado, 7-12 mm de largo. **Sépalos** carnosos, 3-nervados, margen entero, extendido, 12-14 x 3-4 mm; el **dorsal** extendido, libre, lanceolado, ápice redondeado; los **laterales** entreabiertos, unidos de manera oblicua a la base de la columna, oblongo-oblancoleolados, agudos, dorsalmente carinados, oblicuos. **Pétalos** entreabiertos, libres, linear-espatulados, obtusos, 1-nervados, la nervadura ramificada en el ápice dando la apariencia de ser 3-nervados, margen entero, extendido, 12-13 x 1.5-2 mm. **Labelo** unido a la columna, trilobado, cordado en la base, 7-8 x 7-8 mm; bicalloso, los callos pequeños, subglobosos, ubicados justo al frente de la columna; disco provisto de tres carinas, que se desvanecen antes de llegar al seno apical; lóbulos laterales semi-orbitales, redondeados, margen denticulado, 3 x 3-4 mm; lóbulo medio oblongo, redondeado en el ápice, incipientemente apiculado, margen entero, en ocasiones algo involuto en el ápice, dando al lóbulo medio una apariencia triangular, 4 x 3 mm. **Columna** recta, delgada en la base y gradualmente más amplia hacia el ápice, 10-11 mm de largo. **Clinandrium** reducido, margen entero. **Antera** reniforme, 4-locular. **Polinios** 4, ovoides, lateralmente aplanados. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** pequeños, de 1/3 del largo de la cavidad estigmática. **Nectario** poco profundo, sin penetrar el ovario, papiloso. **Cápsula** no vista.

Terrestrial, monopodial **herb**, branching above. **Roots** basal, fleshy, thin, white. **Stems** cane-like, laterally compressed, erect straight, thin, branching above, the main stem, long the branches short. **Leaves** 8-30, distributed throughout the stems, alternate, articulate, similar in size and shape, distichous, coriaceous; sheath tubular, minutely striated, rugose; blade ovate to ovate-oblong, acute to short-acuminate, margin slightly revolute in pressed specimens. **Inflorescence** apical, racemose, flowering only once, arching-nutnant, lax, few-flowered, short; peduncle terete, thin, very short. **Floral bracts** prominent, sometimes longer than the ovary, linear-lanceolate, acuminate, amplexicaul. **Flowers** 7-14, simultaneous, resupinate, greenish white to yellowish, the dorsal surface somewhat tinged purple. **Ovary** terete, thin, not inflated, smooth, short. **Sepals** fleshy, 3-veined, margin entire, spreading; the **dorsal** sepal spreading, free, lanceolate, apex rounded; the **lateral** sepals partly spreading, obliquely united to the base of the column, oblong-oblancoleolate, acute, dorsally carinate, oblique. **Petals** partly spreading, free, linear-spatulate, obtuse, 1-veined, the vein branching towards the apex so as to appear 3-veined; margin entire, spreading. **Lip** united to the column, 3-lobed, base cordate; bicallose, the calli small, sub-globose, located just in front of the column; disc 3-keeled which disappear before they reach the apical sinus; lateral lobes semi-orbicular, rounded, margin denticulate; midlobe oblong, apex rounded, somewhat apiculate, margin entire, occasionally the apex somewhat involute, making the midlobe appear triangular. **Column** straight, thin at the base, gradually widened towards the apex. **Clinandrium-hood** reduced, margin entire. **Anther** reniform, 4-celled. **Polinia** 4, ovoid, laterally compressed. **Rostellum** apical, slit. **Nectary** shallow, without penetrating the ovary, papillose.

OTHER SPECIMENS: COLOMBIA: [Antioquia:] Páramo Urrao, 3400 m, *Ospina 47*, JAUM! **Arauca:** Sierra Nevada del Cocuy, Quebrada El Playón, 3685 m, 9 VI 1973, *Cleef 10110*, SEL! Ux2! (Illustration voucher). **Boyacá:** Páramos al NW de Belén, 4055 m, 27 II 1972, *Cleef 1911*, U! Duitama, 3930 m, 12 XII 1972, *Cleef 7129*, SEL! U! N de Vado Hondo, 3600 m, 6 IV 1973, *Cleef 9429*, AAU! **Cauca:** Volcan de Puracé, ca. 10,000 ft, 23 VII 1960, *Garay 19*, AMES! Parque Nacional Puracé, 3050-3200 m, 1 VIII 1980, *Lozano 3577*, COL! entre Coconuco y Paletará, 3150 m, 25 VIII 1961, *Uribe 3815*, COL! **Cundinamarca:** Páramo de Palacio, 3200 m, 13 V 1972, *Cleef 3796*, AAU! Nemocón, 2780 m, 30 XII 1962, *García-Barriga 17712*, AAU! San Bernardo, 2900 m, 22 VI 1981, *Jaramillo 6990*, COL! Páramo-Boquerón de Chipaque, 3300 m, 17 XI 1956, *Ospina 35*, AMES! COL! Páramo de Guasca, 3200 m, 9 III 1955, *Renz 8340*, RENZ! **Huila:** Santa Leticia, 2230 m, 21 VI 1948, *García-Barriga 12883*, AMES! US! **[Nariño:]** Pueblo Laguna bei Pasto, 10,500 ft, 23 X 1878, *Lehmann s.n.*, W-R 62210! **Putumayo:** km 39, Pasto to Sibundoy, 2750 m, 23 I 1987, *Dodson 17027*, MO! Sibundoy, 2800 m, 30 VI 1953, *Schultes 20088*, AMES! **VENEZUELA:** Mérida: Páramo de Quirorá, 2600 m, 24 II 1922, *Jahn 890*, NY! US!

OTHER RECORDS: COLOMBIA: **Cauca:** Páramo de Guanacas, 3000 m, *Escobar 1184*, note and photo published in *Orquideología* 10(1): 65, photo 125. 1975. **VENEZUELA:** Táchira: Río Quinariá, Quebrada Las Copas, 2450 m, *Dunsterville 1039*, note and illustration published in *Venez. Orch. Illustr.*, 6: 140-141.

DISTRIBUTION AND ECOLOGY: Known from the Cordillera Oriental in northern Colombia and into the Cordillera de los Andes of Venezuela, and the Cordillera Central in southern Colombia, terrestrial, at 2600-4000 m altitude. Flowering throughout the year.

RECOGNITION: *Epidendrum pittieri* belongs to the Andean Group, Fritizianum Subgroup characterized by the monopodial stems branched above, the ovate to ovate-elliptic, acute to short-acuminate leaves, lateral sepals obliquely united to the base of the column, and clearly 3-lobed lip. The species is recognized by the 60 cm tall plants with ovate to ovate-oblong, acute to short-acuminate leaves, greenish white to yellowish flowers, sepals 12-14 mm long, the midlobe of the lip oblong, apiculate. *Epidendrum zipaquiranum* Schlfr. which belongs to the Cernuum Subgroup and has often been confused with this species, has the leaves upright, parallel to the stem, lanceolate, acute and apiculate to 8.5 cm long, the sepals 6-11 mm long, and the midlobe of the lip ovate.



Epidendrum scabrum Ruiz & Pav. has taller plants (to 3 m), a paniculate inflorescence, ovate, acute leaves, yellow flowers, sepals 9-10 mm long, and the midlobe of the lip sub-ovate. *Epidendrum nevadense* Hágsater & E.Santiago has lanceolate, acute leaves, pink flowers, sepals 7-8 mm long, and the lateral lobes of the lip very small. *Epidendrum fritizianum* Hoehne has plants to 1.5 m tall, ovate-elliptic leaves 3.5-6 x 2-2.4 cm (on the main stem), green flowers, the sepals purple dotted and dorsally verrucose, 9 mm long, and the lip with a fleshy, semicircular disc, the midlobe trapezoid.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In honor of Henri Pittier (1857-1950), Swiss botanist who lived in Venezuela, and collected extensively also in Costa Rica and Panama.

REFERENCES: *Dunsterville*, G. C. K., & L. A. Garay, 1976, *Venezuelan Orchids Illustr.*, 6: 140-141; *Foldats*, E., 1970, *Flora de Venezuela*, 15(3): 339; *Garay*, L. A., 1975, *Orquídeas colombianas nuevas o críticas*, Decena XIII, *Orquideología* 10(1): 65.

Authors: E. Santiago & E. Hágsater

Illustrator: M. López R.

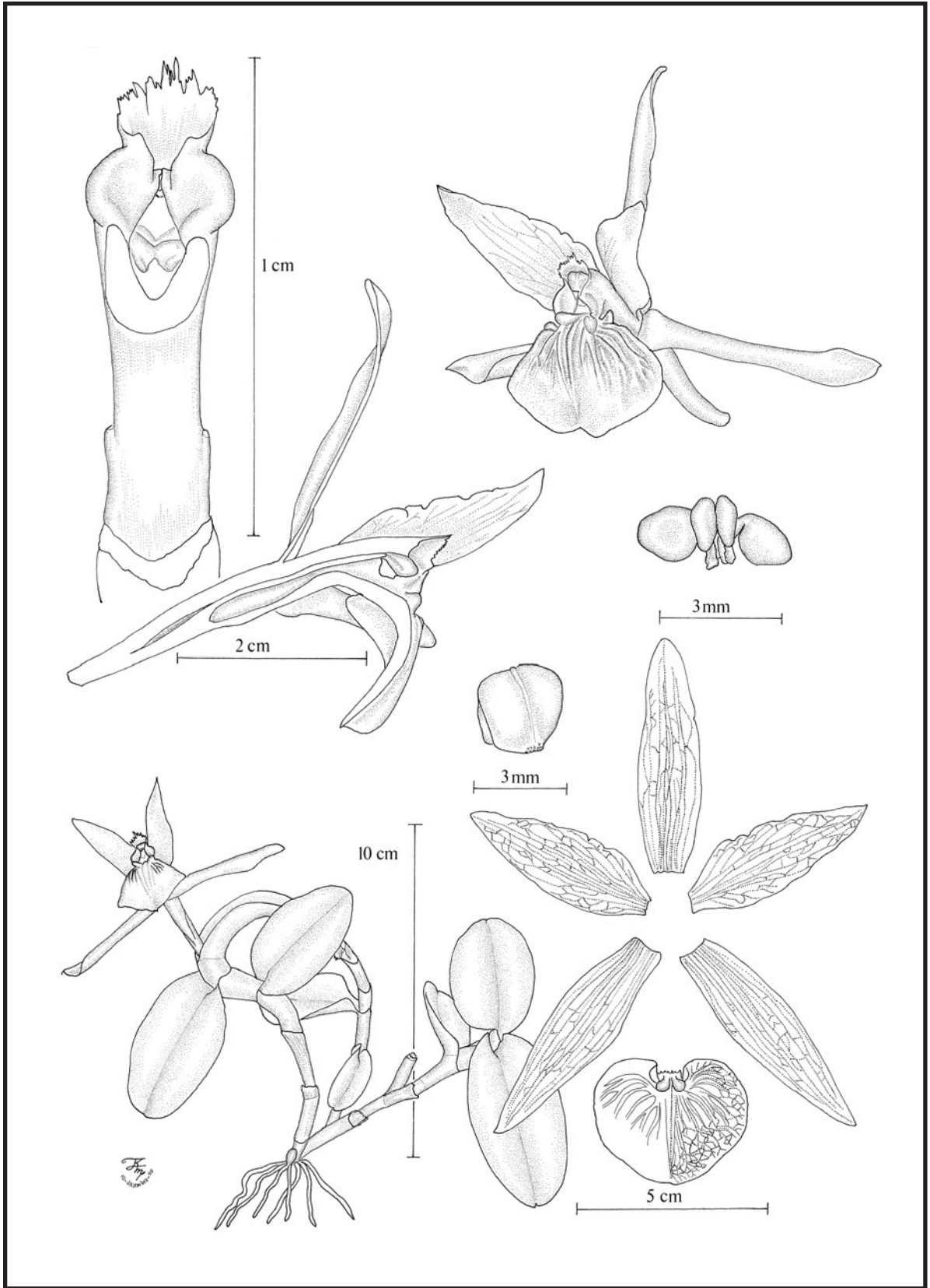
Editors: E. Hágsater & L. Sánchez S.

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ICONES ORCHIDACEARUM 12. 2009.

Plate 1275



EPIDENDRUM PLATYCHILUM Schltr.

Plate 1276

EPIDENDRUM PLATYCHILUM Schltr., Repert. Spec. Nov. Regni Veg., Beih. 8:80. 1921. *non Epidendrum platyichilum* Schltr. 1922. (= *Epidendrum dentiferum* Ames & C. Schweinf.)

Type: ECUADOR: Chimborazo: In silvis tropicis prope Puente de Chimbo, Sept. 1891, **A. Sodiro s.n.** Holotype: B (destroyed). Tracing by Manfield, copy AMES 36144!

Neotype: ECUADOR: Imbabura: km 62.1 camino de Lita, desde la desviación Ibarra-Tulcán, 740 m, 12 julio 1990, cult. 17 mayo 1991, **Eric Hágsater 10667, Calaway H. Dodson, Daniel Rubio, Nixon Revelo**, QCA ex AMO 13705!
Clononeotype: cult. 23 noviembre 1992, AMO 15379!

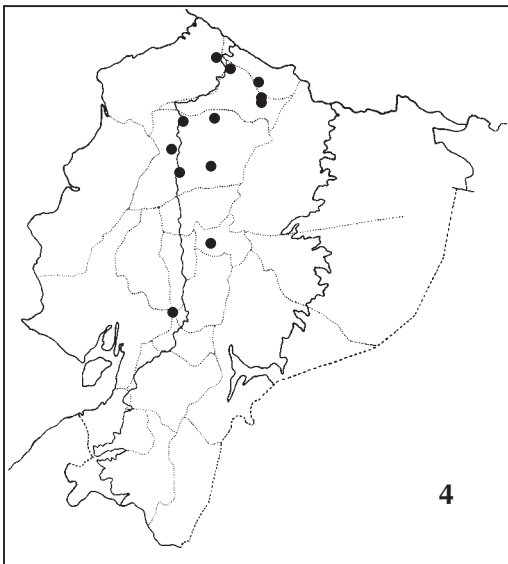
Hierba epífita, simpodial, cespitosa, 11-20 cm de alto. **Raíces** basales, carnosas delgadas, 1-2 mm de grosor. **Tallos** sencillos, tipo caña, algo lateralmente comprimidos, flexuosos, 7-16 x 0.3-0.6 cm. **Hojas** 3-5, distribuidas a lo largo del tallo; vaina foliar lateralmente comprimida, lisa, 1.6-2 cm de largo; lámina foliar elíptica a angostamente ovada, lisa, no ornamentada, verde, coriácea, ápice retuso, margen entero, 6-7.6 x 2.3-3.4 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, en el tallo maduro, florece una sola vez, sésil. **Bráctea floral** mucho más corta que el ovario, triangular, aguda, 3-3.3 x 1-1.5 mm. **Flores** 1 a 2, resupinadas, simultáneas, verdes. **Ovario** inflado longitudinalmente, terete, no ornamentado, 20-45 x 2.3-3.4 mm. **Sépalos** libres, glabros, extendidos, coriáceos, elípticos, ápice agudo a redondeado, 5-7 nervados, margen entero a sinuado, revoluto, carina dorsal ausente, 36-40 x 8.3-10 mm. **Pétalos** membranáceos, entreabiertos, libres, angostamente obovados, ápice agudo, 3-5 nervados, margen sinuado, revoluto, 28-40 x 8.8-10 mm. **Labelo** unido a la columna, reniforme-suborbicular, base cordada, ápice redondeado con un pequeño apículo, disco fuertemente marcado por venas engrosadas, 17-19 x 17-24.5 mm; bicalloso, los callos pequeños. **Columna** ligeramente arqueada, 10-17.5 x 2.8-4 mm. **Clinandrio** prominente, entero, fimbriado. **Antera** subsférica, 4-locular, no ornamentada. **Polinios** 4, subiguales, obovoides, lateralmente comprimidos; caudículas suaves y granuladas, más cortas que los polinios, viscidio viscoso, translúcido. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** de 1/2 de la cavidad estigmática. **Nectario** penetrando 1/2 del ovario, no ornamentado. **Cápsula** no vista.

Epiphytic, sympodial, caespitose **herb.** **Stems** somewhat laterally compressed, flexuose. **Leaves** 3-5; sheaths laterally compressed, unornamented; blade elliptic to narrowly ovate, retuse, unornamented, green, coriaceous, margin entire. **Inflorescence** apical, from the mature stems, flowering only once, sessile. **Floral bracts** shorter than the ovary, triangular, acute. **Flowers** 1-2, resupinate, simultaneous, green. **Ovary** inflated, terete, smooth. **Sepals** free, glabrous, spreading, coriaceous, elliptic, apex acute to rounded, margin entire to sinuate, revolute, 5-7 veined. **Petals** membranaceous, partly spreading, free, narrowly obovate, apex acute, margin sinuate, revolute, 3-5 veined. **Lip** united to the column, reniform-sub-orbicular, cordate at the base, apex rounded, apiculate, disc with prominent veins; bicallose, the calli small. **Column** somewhat arcuate. **Clinandrium-hood** prominent, entire, fimbriate. **Anther** sub-spheric, 4-celled, unornamented. **Pollinia** 4, sub-equal, obovoid, laterally compressed; caudicles soft and granular, smaller than the pollinia; viscidium viscous, translucent. **Rostellum** sub-apical, slit. **Nectary** penetrating 1/2 of the ovary, unornamented.

OTHER SPECIMENS: ECUADOR: Junction of the Provinces of **Guayas, Cañar, Chimborazo & Bolívar:** Bucay, 100-1250 ft, 8 VI 1945, *Camp E-3723*, NY! **Bolívar:** 90 km from Duran between Montalvo and Balzapamba, 300 m, 21 V 1960, *Dodson 80*, MO! SEL! **Cotopaxi:** La Maná, rd. Quevedo-Latacunga, 360 m, 12 IV 1976, *Dodson s.n.* SEL! La Maná, km 60 Rd. Quevedo-Latacunga, 4 VI 1976, *Dodson 9264*, SEL! **Esmeraldas:** Lita and San Lorenzo, 17.3 km N of Río Tulubí, 81 m, 17 VII 2000, *Croat 84101*, QCNE! km 11-23 Lita-San Lorenzo, 700-880 m, *Dodson 18256*, MO! km 38.4 Lita-San Lorenzo, 250 m, 11 VII 1990, *Hágsater 10642*, AMO! km 38.4 Lita-San Lorenzo, 250 m, 11 VII 1990, cult. 8 VIII 1990, *Hágsater 10660*, AMO! **Guayas:** Hacienda Botija c. 8 km E of Naranjal, 250-350 m, 26 V 1980, *Harling 19500*, GB! **Imbabura:** Lita-Ibarra, km 14, 700 m, 12 VII 1990, *Dodson 18536*, MO! km 62.1 camino de Lita, 740 m, 12 VII 1990, cult. 3 VII 1991, *Hágsater 10843*, AMO! *ibid.* cult. 16 III 1992, AMO! Cachaco, above Lita along ridgeline, 1400 m, *Hirtz 2958*, MO! Lita, 900-1100 m, IV 1994, *Palacios 12236*, QCNE! **Pichincha:** Reserva Río Guaycuyacu, 700 m, 11 IV 1998, *Clark 4955*, QCNE! Cerca de Puerto Quito, 330 m, *Dodson 15184*, MO! Chiriboga Quito-Sto. Domingo via Chiriboga, km 85, 1200 m, 16 II 1991, *Dodson 18670*, MO! Tinalandia, km 14 Sto. Domingo-Quito, 1200 m, IV 1984, *Hirtz 1736*, MO!

OTHER RECORDS: ECUADOR: Imbabura: km 62.1 camino de Lita, 740 m, 12 VII 1990, cult. 17 V 1991, *Hágsater 10667*, flowers in spirit AMO! km 60.0, camino de Lita, 12 VII 1990, cult. 24 VII 1990, *Hágsater 10671* (flowers in spirit at AMO!) (Illustration voucher). *Ibid.* cult. 10 XII 1990, AMO! km 62.1 camino de Lita, 740 m, 12 VII 1990, cult. 13 VIII 1993, *10843*, flowers in spirit AMO!

DISTRIBUTION AND ECOLOGY: Endemic to Ecuador, Pacific slopes of the Andes. Epiphyte, in montane rain forest, from 81 to 1400 m altitude. Flowering throughout the year. Pollinated by *Amastus ancona*, fide Dodson & Frymire, 1961.



RECOGNITION: *Epidendrum platyichilum* belongs to the Difforme Group which is recognized by the caespitose, sympodial plants, fleshy, pale green to glaucous leaves, apical inflorescence, sessile, rarely with a short peduncle, one-flowered to corymbose, without spathaceous bracts, fleshy, green to yellowish green rarely white flowers. The species can be recognized by lateral compressed stems, 1-2, green flowers, inflated, terete ovary, reniform-sub-orbicular lip, with several prominent veins, clinandrium-hood prominent, fimbriate. It is similar to *Epidendrum kerryae* Hágsater & L. Sánchez from Colombia and Ecuador which has a single, large flower, the ovary is trigonous, with a ventral vesicle, dorsally flat, the veins of the lip are somewhat thickened and the clinandrium-hood is erose.

CONSERVATION STATUS: Apparently not threatened. Common in western Ecuador.

ETYMOLOGY: From the Greek πλατύς, wide, broad, and χεῖλος, in reference to the relatively wide lip of this species.

REFERENCES: Schlechter, R. 1921. Die Orchideenflora von Ecuador. **Repert. Sp. Nov. regni veg., Beih.** 8: 80-81. Dodson, C. H. & G. P. Frymire. 1961. Natural Pollination of Orchids, **Florida Orchidist** 4(4): 23-30. Dodson, C. H. & P. M. Dodson. 1980. Orchids of Ecuador, **Icon. Pl. Trop.** 1: pl. 91. Hágsater, E. & L. M. Sánchez. 1994. *Epidendrum kerryae*, una nueva especie de Colombia. **Orquideología** 19(2): 37-42.

Authors: L. Sánchez S. & E. Hágsater

Illustrator: R. Jiménez M.

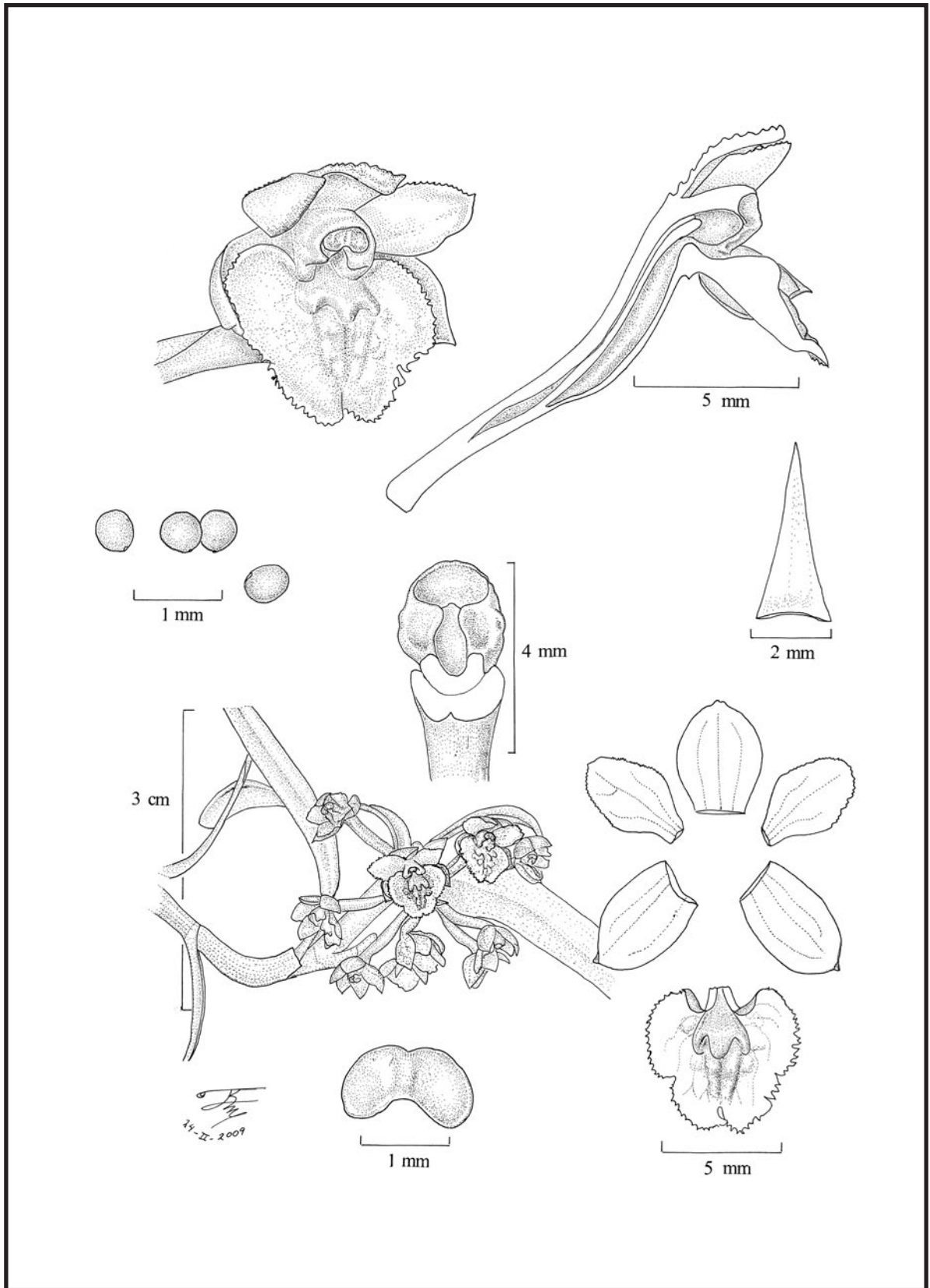
Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009.

Plate 1276



EPIDENDRUM PODOCARPOPHILUM Schltr.

Plate 1277

EPIDENDRUM PODOCARPOPHILUM Schltr., Repert. Spec. Nov. Regni Veg., Beih. 8: 81. 1921.

Type: ECUADOR: Azuay: um Huasi-huaico, an den oberen Westhängen der West-Andes von Cuenca, 3000-3500 m, April, **F. C. Lehmann 6468**. Holotype: B (destroyed). Isotypes: K-L! LE!

Hierba epífita, ramificada, 30-80 cm de alto. **Raíces** basales, tanto en el tallo inicial como en algunas ramificaciones, carnosas, delgadas, blancas, 1 mm de grosor. **Tallos** ramificados cuando maduros, las ramificaciones originándose de los entrenudos subapicales del tallo anterior, tipo caña, teretes, delgados, erectos, rectos; el inicial 20 x 0.3-0.5 cm; los subsecuentes 7.5-45 x 0.15-0.4 cm. **Hojas** 3-5, distribuidas hacia el ápice de los tallos, erecto extendidas, alternas, articuladas, coriáceas; vaina tubular, estriada, rugosa, 0.5-20 x 3-5 mm; lámina oblongo lanceolada, ápice obtuso, bilobado, margen entero, 3-6.5 x 0.4-0.9 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, arqueada nutante, corta, densa, ca. 2 cm de largo. **Brácteas florales** más cortas que el ovario, lanceoladas, acuminadas, 3-5 mm de largo. **Flores** 10-17, simultáneas, resupinadas, pequeñas, carnosas, glabras; de color naranja pálido; sin datos de fragancia. **Ovario** terete, delgado, no inflado, no ornamentado, arqueado hacia el ápice, 8-9 mm de largo. **Sépalos** entreabiertos, libres, ligeramente cóncavos, oblongo elípticos, obtusos, 3-nervados, margen entero, extendido, 5-6 x 2.5-3 mm; los **laterales** ligeramente oblicuos, apiculados. **Pétalos** entreabiertos, libres, obovado espatulados, obtusos, 3-nervados, las nervaduras laterales cortamente ramificadas a todo lo largo, margen entero, extendido, 5 x 2 mm. **Labelo** unido de manera oblicua a la columna, trilobado, base ligeramente cordada, margen denticulado, 4 x 6 mm; escaloso; disco con 3 quillas redondeadas, muy cortas; lóbulos laterales hemiorbiculares, 7.3 x 4.5 mm; lóbulo medio corto, transversalmente rectangular, con el ápice cortamente emarginado formando un par de lóbulos subcuadrados, 2 x 3.7 mm. **Columna** corta, gruesa, con un par de alas apicales redondeadas, no involutas, 2 mm de largo. **Clinandrio** corto, margen entero. **Antera** reniforme, 4-locular. **Polinios** obovoides. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** no vistos. **Nectario** penetrando la mitad del ovario, ligeramente inflado, no ornamentado. **Cápsula** no vista.

Epiphytic, monopodial, branching **herb**. **Roots** basal, both from the basal stem as well as from some branches, fleshy, thin, white. **Stems** branching when mature, the branches originating from the sub-apical internodes of the previous stem, cane-like, terete, thin, erect, straight. **Leaves** 3-5, distributed towards the apex of the stems, erect-spreading, alternate, articulate, coriaceous; sheaths tubular, striated, rugose; blade oblong-lanceolate, apex obtuse, bilobed, margin entire. **Inflorescence** apical, racemose, arching-nutant, short, dense-flowered. **Floral bracts** much shorter than the ovary, lanceolate, acuminate. **Flowers** 10-17, simultaneous, resupinate, small, fleshy, glabrous, pale orange. **Ovary** terete, thin, not inflated, smooth, arched towards the apex. **Sepals** partly spreading, free, slightly concave, oblong-elliptic, obtuse, 3-veined, margin entire, spreading, lateral sepals slightly oblique, apiculate. **Petals** partly spreading, free, obovate-spatulate, obtuse, 3-veined, lateral veins short-branched throughout, margin entire, spreading. **Lip** obliquely united to the column, 3-lobed, base slightly cordate, margin denticulate; ecallose, disc with 3 rounded, very short keels; lateral lobes hemi-orbicular; midlobe short, transversely rectangular, the apex shallow emarginate, forming a pair of sub-quadrangle lobes. **Column** short, thick, with a pair of apical, rounded, non-involute wings. **Clinandrium-hood** short, margin entire. **Anther** reniform, 4-locular. **Pollinia** obovoid. **Rostellum** apical, slit. **Nectary** penetrating half the ovary, somewhat inflated, smooth.

OTHER SPECIMENS: ECUADOR: El Oro: north of Salvias (east of Zaruma), 2100 m, 4 II 1993, *Dalström 1836*, SEL!

OTHER RECORDS: ECUADOR: Hort. Ecuagenera, 2 II 2004, *Hágsater 14189*, digital photo and spirit, AMO! (Illustration voucher).

DISTRIBUTION AND ECOLOGY: Known only from southern Ecuador, on the western slope of the Andes, epiphytic at 2000-3000 m altitude. Flowering in February and April.

RECOGNITION: *Epidendrum podocarpophilum* belongs to the Diothonea Group and Subgroup, characterized by the branching habit, linear-lanceolate to lanceolate, bilobed leaves, arching-nutant, racemose inflorescence, membranaceous or rarely fleshy flowers, the lip entire to 3-lobed, with an erose margin, ecallose, without or with 1-10 thin, smooth to erose keels, the column united to the lip from totally to obliquely to free. The species is recognized by the

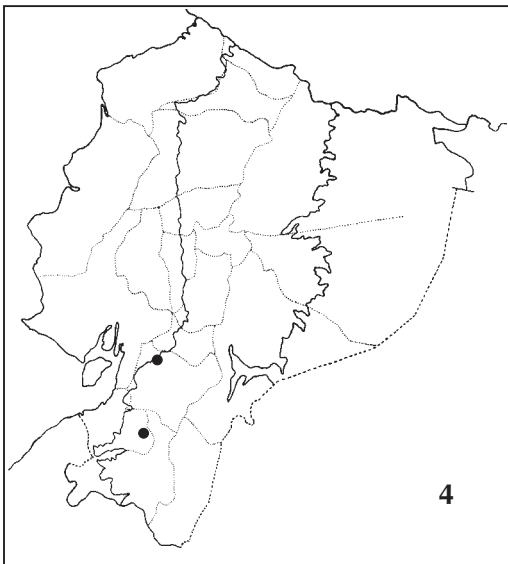
oblong-lanceolate leaves 3-6.5 cm long, 2 cm long inflorescence with some 17 pale, orange colored flowers, sepals 5-6 mm long, the 3-lobed lip with 3, short, smooth keels. *Epidendrum globiflorum* Rchb.f. has oblong-ovate leaves 1.5-3 cm long, a 1 cm long inflorescence with 7-8 greenish-white flowers, sepals 6.0-7.5 mm long sepals, and a 3-lobed lip without keels. *Epidendrum pseudoglobiflorum* Hágsater & Dodson has orange to reddish, trumpet-shaped flowers, sepals connate at the base, 6.4-7 mm long, and an entire lip with 7 keels. *Epidendrum restrepoanum* A.D.Hawkes from Colombia has carmine-red flowers, the sepals dorsally pustulate, 6-9 mm long and the lip with 7 keels.

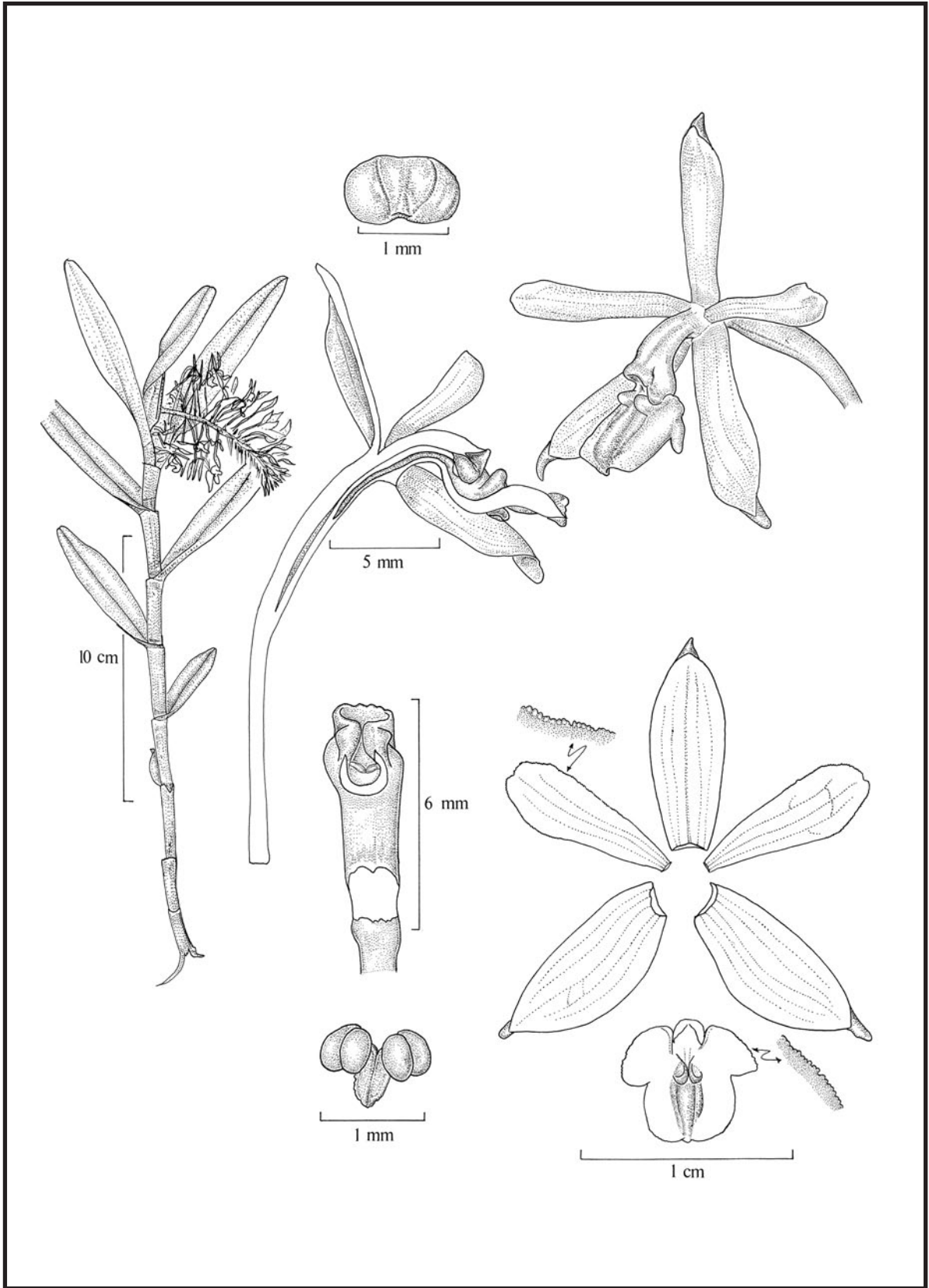
NOTES: Kränzlin (1899) cited the type, *Lehmann 6468* under *Epidendrum globiflorum*. The flower illustration published by Mansfeld (1929) appears to have a conduplicate lip, but we believe that is an artifact of the way the flower was pressed, our live material shows a flat lip.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek *φυλον* in reference to the affinity of this species which grows on *Podocarpus* trees typical of the high altitude forests in southern Ecuador.

REFERENCES: Kränzlin, F. 1899. Orchidaceae Lehmannianae, *Engl. Jahrb.* 26: 469. Mansfeld, R. 1929. *Repert. Spec. Nov. Regni Veg., Beih.* 57: fig. 357.





EPIDENDRUM PSEUDOCERNUUM Carnevali & I.Ramírez

EPIDENDRUM PSEUDOCERNUUM Carnevali & I. Ramírez, Harvard Papers 3(2): 241. 1998.

Type: VENEZUELA: Trujillo: near Boconó, Páramo de Guaramacal, 2600-3000 m, 22 November 1984, *H. van der Werff & F. Ortega 6076*. Holotype PORT, Isotypes: MO, VEN.

Hierba terrestre o raramente epífita, monopodial, ramificada arriba, erecta, 75-100 cm de alto. **Raíces** basales en el tallo principal y ocasionalmente escasas en la base de algunas ramificaciones, carnosas, delgadas. **Tallos** tipo caña, teretes, erectos, rectos, ramificados subapicalmente; el principal ca. 40 cm de largo (o más); las de las ramas 4.5-9 x 0.5-0.8 cm; cubiertos en las porciones basales por vaina tubulares, no foliáceas, escariosas y fibrosas con el tiempo, ca. 3.5 cm de largo. **Hojas** 15 en el tallo principal, 5-9 en las ramificaciones, distribuidas en la mitad apical de los tallos, las basales más cortas que las apicales, alternas, articuladas, subcoriáceas; vaina tubular, algo inflada en el ápice, estriada, rugosa, 8-30 mm de largo; lámina oblonga, obtusa, margen extendido, ligeramente eroso en el ápice, 3-10 x 1-1.6 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, florece una sola vez, arqueada, cónica, generalmente pauciflora, laxa (raramente pluriflora y densa), 4-7.5 cm de largo; pedúnculo corto, terete, delgado, 10-20 mm de largo. **Brácteas florales** mucho más cortas que el ovario, angostamente triangulares a triangular lanceoladas, acuminadas, abrazadoras, 2-3 mm de largo. **Flores** 7-13 [30-60], resupinadas, simultáneas (aunque en ocasiones cuando la inflorescencia es pluriflora, las flores abren de manera sucesiva), de color crema verdoso con el labelo pardo cremoso. **Ovario** terete, muy delgado, no inflado, no ornamentado, verde oscuro, 12-20 mm de largo. **Sépalos** extendidos, libres, carnosos, elíptico obovados, redondeados, con una arista prominente, 5-nervados, no ornamentados, margen entero, revoluto, 8-13 x 3-5 mm; los **laterales** ligeramente oblicuos. **Pétalos** extendidos, libres, oblanceolados, redondeados, 3-nervados, no ornamentados, margen crenulado, revoluto, 8-11 x 1.5-3 mm. **Labelo** unido a la columna, 3-lobado, base cordada, 5-6.5 x 6-8.5 mm; bicalloso, los callos prominentes, alargados hasta la base del lóbulo medio; disco provisto de tres carinas, lisas, romas, bajas, el par lateral ligeramente más corto que la central, la cual se alarga hasta el ápice de la lámina; lóbulos laterales dolabriformes a transversalmente subovados, margen crenulado, 1.8-2.1 x 2.2-3.5 mm; lóbulo medio de forma variable, subcuadrado a subrectangular, truncado en el ápice, diminutamente apiculado, margen entero, 2.8 x 4 mm. **Columna** fuertemente arqueada, delgada en la base y ancha en el ápice, 5 mm de largo. **Clinandrio** prominente, margen crenulado. **Antera** reniforme, 4-locular. **Polinios** 4, obovoides; caudículas suaves y granuladas, más cortas que los polinios. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** pequeños, ocupando 1/3 del largo de la cavidad estigmática. **Nectario** poco profundo, penetrando 1/6 del ovario, delgado, no inflado, no ornamentado. **Cápsula** globosa; pedicelo terete, delgado, 14 mm de largo; cuerpo 2.5 x 2 cm; cuello apical, 9 mm de largo.

Terrestrial or rare epiphytic, monopodial, branching above, erect **herb**. **Roots** basal from the main stem, and occasionally scarce at the base of some branches, thin. **Stems** cane-like, terete, erect, straight, branching sub-apically, the main stem much longer than the branches; basal portions covered by tubular, non-foliar, scarious sheaths, becoming fibrous with time. **Leaves** 15 on the main stem, 5-9 on the branches, distributed along the apical half of the stems, the basal ones shorter, alternate, articulate, sub-coriaceous; sheath tubular at the base, somewhat inflated at the apex, striated, rugose; blade oblong, obtuse, margin spreading, slightly erose towards the apex. **Inflorescence** apical, racemose, flowering only once, arching, conical, generally lax few-flowered (rarely many-flowered and dense); peduncle short, terete, thin. **Floral bracts** much shorter than the ovary, narrowly triangular to triangular-lanceolate, acuminate, amplexicaul. **Flowers** 7-13 [30-60], resupinate, simultaneous (though when many-flowered they open in succession), greenish cream-colored, the lip creamy brown. **Ovary** terete, very thin, not inflated, smooth, dark green. **Sepals** spreading, free, fleshy, elliptic-obovate, rounded, prominently awned, 5-veined, smooth, margin entire, revolutive; lateral sepals slightly oblique. **Petals** spreading, free, oblanceolate, rounded, 3-veined, smooth, margin crenulate, revolutive. **Lip** united to the column, 3-lobed, base cordate; bicallose, the calli prominent, elongate to the base of the midlobe; disc 3-keeled, keels smooth, low, rounded, the lateral pair slightly shorter than the mid-keel which reaches the apex of the lip; lateral lobes dolabriform to transversely sub-ovate, margin crenate; midlobe variable, from sub-quadrate to sub-rectangular, apex truncate, minutely apiculate, margin entire. **Column** strongly arched, thin at the base, dilated at the apex. **Clinandrium-hood** prominent, margin crenulate. **Anther** reniform, 4-celled. **Pollinia** 4, obovoid; caudicles soft and granulate, shorter than the pollinia. **Rostellum** apical, slit. **Nectary** shallow, penetrating 1/6th of the ovary, thin, not inflated, smooth. **Capsule** globose; pedicel terete, thin.

OTHER SPECIMENS: VENEZUELA: Andes, unspecified, (J. Steyermark), *Dunsterville 1016*, AMES! **Barinas:** trail from Carrizal, Parque Nacional Sierra Nevada, 28 VII 1988, *Dorr 5754*, NY! **Mérida:** Qda. de La Mitisus, Parque Nacional Sierra Nevada, 3000 m, 19 VI 1988, *Dorr 5616*, NY! MO! Páramo El Tambor, 2700 m, 27 IV 1949, *Renz 5291*, RENZ! **Táchira:** Zwischen Zumbador und Queniquea, 2500 m, 25 VIII 1949, *Renz 5936*, RENZ! Páramo El Zumbador, 2800 m, 23 XI 1949, *Renz 6217*, RENZ! **Trujillo:** entre Carache y Agua de Obispo, 20 km de Carache, 2300-2500 m, 10 V 1998, *Rivero 1725*, MO! PORT. Strasse Trujillo-Boconó, Regenwald, 2000-2500 m, 15 VIII 1947, *Renz 4262*, RENZ! Strasse Trujillo-Boconó, Regenwald, 2000-2500 m, 15 VIII 1947, *Renz 4269*, RENZ! Strasse Trujillo-Boconó, 2200 m, 13 IX 1947, *Renz 4475*, RENZ! Carache-Humucaro Bajo, Passhohe, 2300 m, 8 II 1948, *Renz 4592*, RENZ! Zwischen Carache und Humucaro Bajo, Passhohe, 2200 m, 8 II 1948, *Renz 4630*, RENZ! Zwischen Trujillo und Boconó, km 48 moosige, kalkfne Felsen, 2600 m, 5 III 1948, *Renz 4656*, RENZ! Zwischen Trujillo und Boconó, 2700 m, 12 XI 1943, *Renz 5027*, RENZ! Zwischen Trujillo und Boconó, Umgebung der Passhohe km 50, 2300 m, 24 II 1950, *Renz 6264*, RENZ! Páramo Los Nepas, Carache-Humocaro Bajo, 2300 m, 16 X 1958, *Renz 9178*, RENZ! Carretera vieja entre Trujillo y Boconó, 2300-2500 m, *Steyermark 97282*, AMES! K-L! US! entre La Peña y Agua de Obispo, 22-28 km de Carache, 2400-2500 m, 1 III 1971, *Steyermark 105008*, NY! Staz. II, Tra Boconó ed il Páramo di Guaramacal, 2000-2650 m, *Taglia 9592*, FI! Misí, La Cristalina, 2400 m, 28 VIII 1941, *Tamayo 1933*, US! (Illustration voucher).

OTHER RECORDS: VENEZUELA: Mérida: Páramo La Negra, 3300 m, *Dunsterville 700*, note, (Foldats 1970); illustration (Dunsterville & Garay, 1965); illustration (Romero & Carnevali, 2000). **Táchira:** Carretera hacia Pregonero, *Dunsterville s.n.*, note (Foldats, 1970). Pregonero, *Gerlach s.n.*, slide, AMO! **Trujillo:** at side of Boconó-Trujillo old road, 8000 ft, *Dunsterville 798*, xerox of illustration, AMES! Ibid. *Dunsterville 798 A*, AMES! Boconó-Guaramacal road, 1800 m, *Dunsterville 1302*, note and xerox of illustration, AMES!

DISTRIBUTION AND ECOLOGY: Known only from the SW portion of the Cordillera de los Andes in Venezuela, terrestrial at 1800-3300 m altitude. Flowering from February to October.

RECOGNITION: *Epidendrum pseudocernuum* belongs to the Andean Group, Cernuum Subgroup, characterized by the monopodial, cane-like stems with sub-apical branching, the branches shorter than the main stem, coriaceous to sub-coriaceous leaves, fleshy flowers, and 3-lobed lip. The species is recognized by the oblong leaves, conical, general lax, few-flowered inflorescence, ca. 4-7.5 cm long, the green to greenish cream-colored flowers, elliptic-obovate sepals with revolutive margins, and the strongly arched column. *Epidendrum cernuum* Kunth has a cylindrical inflorescence, ca. 7.5-15 cm long, greenish-yellow to yellowish brown flowers, sepals oblong-elliptic and the column arched. *Epidendrum brevicernuum* Hágsater & Dodson has elliptic to lanceolate leaves, greenish white to green flowers, the lateral lobes of the lip as large as the midlobe, and the apex of the midlobe emarginate, not apiculate. *Epidendrum cardioglossum* Rchb.f. has a short inflorescence, 2-4 cm long, with 4-6, greenish yellow flowers, elliptic sepals 4.5-6 mm wide, and a straight column with the margin of the clinandrium-hood entire.



CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek πσευδο, false, like, and the Latin *cernuus*, drooping, in reference to the pendent scape of the inflorescence. The species when described was compared with *E. cernuum*.

REFERENCES: Dunsterville, G. C. K. & L. A. Garay. 1965, as *Epidendrum cernuum* Kunth, *Venez. Orch. Ill.*, 3: 90; Foldats, E. 1970, as *Epidendrum cernuum*, *Flora de Venezuela*, 15(3):190-192. Romero-González, G. A. & G. Carnevali F. 2000. *Orch. Venez., Ill. Field Guide*, 2 ed. A-G: 280.

Authors: E. Santiago & E. Hágsater

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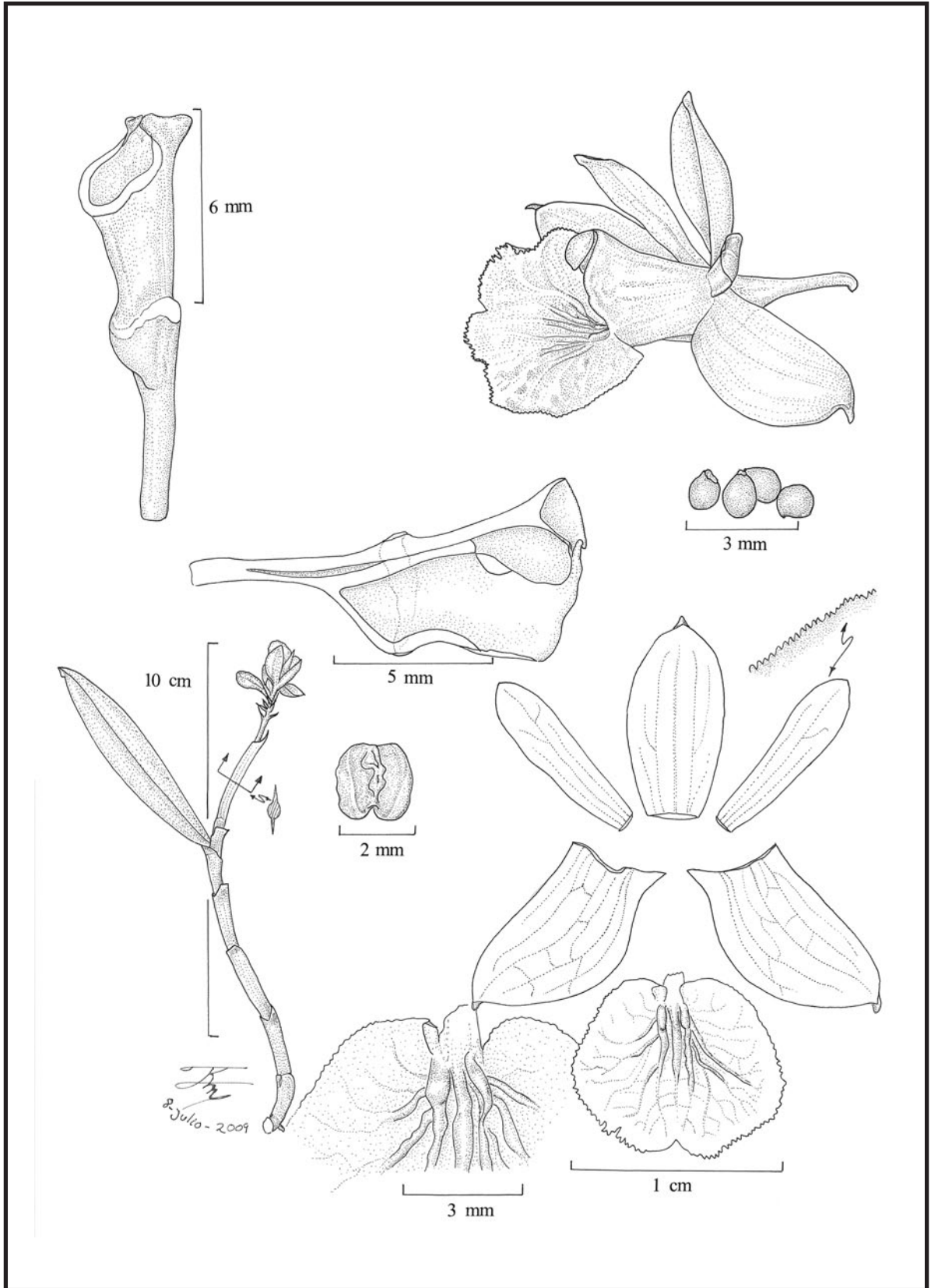
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México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009.

Plate 1278



EPIDENDRUM PTEROCAULUM Hágsater & E.Santiago

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

Type: COSTA RICA: San Cristóbal, April, **Endres s.n.** Holotype: W-R 13652! (Illustration voucher).

Epidendrum suaveis (Rchb.f. & Warsc.) Løjtnant simile sed floribus minoribus purpureis, pedunculo ancipitose et labello transverse elliptico cum venis ramosis tribus, incrassatis laevibus, labelli totam superficiem tegentibus, discrepans.

Hierba simpodial, erecta, ca. 12 cm de alto (incluyendo la inflorescencia). **Raíces** probablemente basales. **Tallos** sencillos, tipo caña, teretes en la base y algo lateralmente aplanados arriba, delgados, erectos, 7.5 cm de largo; cubiertos en la base por vainas tubulares, no foliáceas, escariosas, 11-16 mm de largo. **Hojas** ca. 5, alternas, articuladas, subcoriáceas; vaina tubular, finamente estriada, 3-20 mm de largo; lámina angostamente elíptica, obtusa, margen entero, 6 x 1.1 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, florece una sola vez, racemosa, pauciflora, erecta, 5 cm de largo; pedúnculo lateralmente aplanado, ancipitose, recto, 2.7 cm de largo; provisto de 2 brácteas, angostamente triangulares, acuminadas, abrazadoras, 5-6 mm de largo; raquis lateralmente aplanado, oculto casi totalmente por las brácteas florales, muy corto, 7 mm de largo. **Brácteas florales** más cortas que el ovario, angostamente triangulares, acuminadas, abrazadoras, 3-4 mm de largo. **Ovario** terete, muy delgado en sus 2/3 basales y fuertemente inflado detrás del perianto, no ornamentado, 8 mm de largo. **Flores** 6, no resupinadas, membranáceas, llamativas, de color púrpura; sin datos de fragancia. **Sépalos** entreabiertos, libres, elípticos-obovados, diminutamente apiculados, margen entero, extendido, 9.5-10.5 x 4.5-5.2 mm; el **dorsal** con el ápice redondeado, 3-nervado, las nervaduras laterales cortamente ramificadas; los **laterales** con el ápice obtuso, 5-nervados, oblicuos. **Pétalos** entreabiertos, libres, oblanceolados, redondeados, 3-nervados, margen crenulado, extendido, 9 x 2.2 mm. **Labelo** unido oblicuamente a la columna, transversalmente elíptico, truncado en la base, ligeramente emarginado en el ápice, margen denticulado, 8.5 x 10 mm; ecalloso; disco con tres venas engrosadas, lisas, ramificadas, que radian en la mayoría de la superficie del labelo. **Columna** ligeramente arqueada hacia arriba en el ápice, amplía en toda su longitud, pero especialmente hacia el ápice, 6 mm de largo. **Clinandrio** corto, margen entero. **Antera** subcuadrada-reniforme, 4-locular, con una quilla central, erosa, en la superficie dorsal, el ápice ligeramente emarginado. **Polinios** 4, obovoides, algo lateralmente comprimidos; caudículas no vistas. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** prominentes. **Nectario** penetrando el ovario justo detrás del perianto, amplio, no ornamentado. **Cápsula** no vista.

Erect, sympodial **herb.** **Roots** probably basal. **Stems** simple, cane-like, terete at the base, somewhat laterally compressed above, thin, erect; base covered by non-foliar, scarios, tubular sheaths. **Leaves** ca. 5, alternate, articulate, subcoriaceous; sheath tubular, minutely striated; blade narrowly elliptic, obtuse, margin entire. **Inflorescence** apical, flowering only once, racemose, few-flowered, erect; peduncle laterally compressed, ancipitose, straight; provided with 2 narrowly triangular, acuminate, amplexicaul bracts; rachis laterally compressed, nearly totally hidden by the floral bracts, very short. **Floral bracts** much shorter than the ovary, narrowly triangular, acuminate, amplexicaul. **Ovary** terete, very thin along the basal 2/3, and strongly inflated thereafter, smooth. **Flowers** 6, non-resupinate, membranaceous, showy, purple colored. **Sepals** partly spreading, free, elliptic-obovate, minutely apiculate, margin entire, spreading; dorsal sepal apically rounded, 3-veined, the lateral veins short-branched; lateral sepals apically obtuse, 5-veined, oblique. **Petals** partly spreading, free, oblanceolate, rounded, 3-veined, margin crenulate, spreading. **Lip** obliquely united to the column, entire, transversely elliptic, base truncate, apex slightly emarginate, margin denticulate; ecallose; disc with 3 thickened, branching, radiating, low, smooth, veins. **Column** slightly arching upwards at the apex, thick throughout, but especially towards the apex. **Clinandrium-hood** short, margin entire. **Anther** sub-quadrangle-reniform, apex slightly emarginate, with a low, erose, central, dorsal keel; 4-celled. **Pollinia** 4, obovoid, somewhat laterally compressed. **Rostellum** apical, slit. **Nectary** penetrating the ovary just behind the perianth, wide, smooth.

OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: Known only from central Costa Rica, precise placement of the locality not known. Flowering in April.

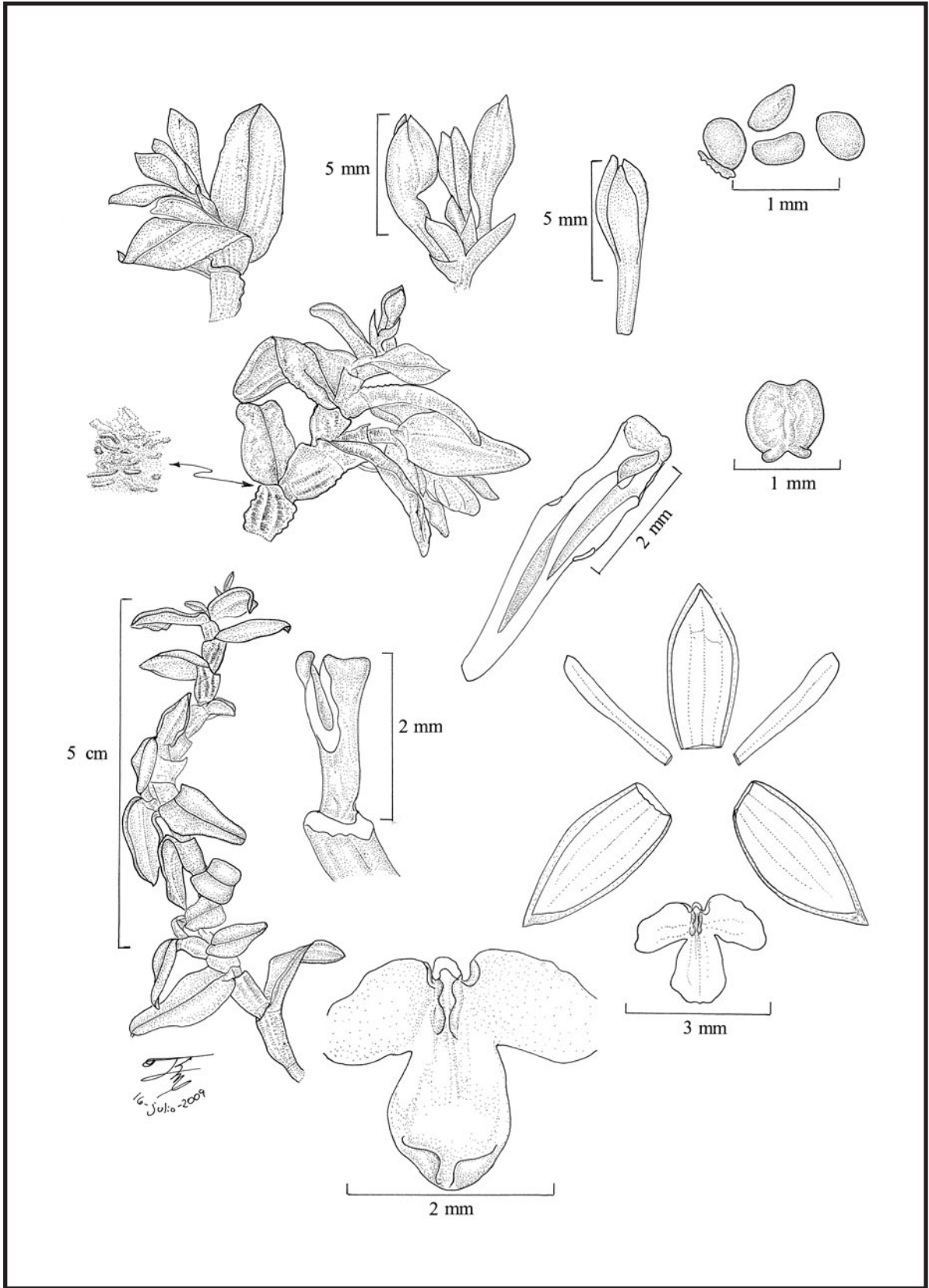
RECOGNITION: *Epidendrum pterocaulum* is recognized by the racemose inflorescence with an ancipitose peduncle, and short rachis with few showy, purple flowers, sepals about 10 mm long, the lip with thickened, smooth, branching, radiating veins, and the inflated nectary just behind the perianth. We have not been able to place it to a group, though the flattened peduncle of the inflorescence is reminiscent of the Neowilliamsia Group, but the pollinarium lacks the hard, tape-like caudicles. The Allenii subgroup of the Albertii Group also



has a flattened, two-winged peduncle, but the floral bracts are ovate-elliptic, conduplicate and imbricating. The flowers of *Epidendrum suaveis* have similar, obliquely united column-lip, and ecallose lip, but has monopodial plants where the new stem originates from the apical internodes of the previous stem, leaves are linear-lanceolate and inflorescences lax-flowered, the flowers yellow to yellowish brown.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek πτερον, wing, and the Latin *pedunculus*, stem, in reference to the peduncle of the inflorescence; i.e. with a winged stem.



EPIDENDRUM PURDII Hágsater & E.Santiago

Plate 1280

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

Type: COLOMBIA: Sta. Martha, **Purdie s.n.** Holotype: W-R 55163! (Illustration voucher).

Epidendrum physopi Kraenzl. simile sed foliis ovato-lanceolatis dorsaliter rugosis, floribus minoribus, labello cum margine subintegro et lobulis lateralibus brevioribus quam lobulo medio, abhorret.

Hierba monopodial, de más de 7 cm de largo (sólo la porción vista). **Raíces** no vistas. **Tallos** tipo caña, teretes, originándose de los entrenudos apicales de tallos anteriores dando la impresión de ser ramificaciones laterales cortas, 1.5-3 x 0.15-0.2 cm. **Hojas** 5-6 distribuidas a lo largo de cada tallo, alternas, articuladas, coriáceas, desiguales en tamaño, (el par apical muy pequeño) con la superficie dorsal rugosa con difuminaciones rojo-purpúreas; vaina infundibuliforme, rugosa, teñida de rojo-purpúreo, 4-7 x 3-4 mm de largo; lámina ovado lanceolada, subobtusada, diminutamente apiculada, margen crenulado, algo revuelto, 6-17 x 5-7 mm. **Bráctea espátacea** ausente. **Inflorescencia** apical, subsésil, racemosa, erecta, pauciflora, densa, 10 mm de largo (con flores); pedúnculo muy corto, 1 mm de largo; desprovisto de brácteas; raquis 2 mm de largo. **Brácteas florales** tan largas como el ovario, triangulares, agudas, abrazadoras, 2-3 mm de largo. **Flores** 4-5, simultáneas, resupinadas, sin datos de color ni fragancia. **Ovario** terete, delgado, no ornamentado, 4-5 mm de largo. **Sépalos** libres, carnosos, obovados, agudos, 3-nervados, margen entero, 3.5-3.8 x 1.5 mm. **Pétalos** libres, linear oblongos, truncados en el ápice, 1-nervados, margen entero, extendido, 3 x 0.5 mm. **Labelo** unido a la columna, trilobado, base cordada, margen subentero, 2.3 x 2.7 mm; bicalloso, los callos delgados, subglobosos, paralelos, pequeños; lóbulos laterales oblongo ovados, oblicuos, 11.5 x 10 mm; lóbulo medio angostamente obovado, ápice subredondeado, margen apical ligeramente involuto. **Columna** corta, gruesa, recta, 2 mm de largo. **Clinandrio** prominente (aunque sin sobrepasar el cuerpo de la columna), margen entero. **Antera** 4-locular, subreniforme, con una quilla erosa en la superficie dorsal, el ápice con un par de apéndices linear oblongos, divergentes. **Polinios** 4, obovoides, algo lateralmente aplanados; caudículas suaves y granuladas, más cortas que los polinios. **Lóbulos laterales del estigma** ocupando 1/2 del largo de la cavidad estigmática. **Nectario** corto, poco profundo, apenas penetrando justo detrás del perianto, no inflado, no ornamentado. **Cápsula** no vista.

Monopodial, short **herb.** **Stems** cane-like, terete, originating from the apical internodes of the previous stems, thus appearing like short lateral branches. **Leaves** 5-6, distributed throughout the stem, alternate, articulate, coriaceous, unequal in size, (the apical pair smaller), the dorsal surface rugose tinged with red-purple; sheath infundibuliform, rugose, tinted red-purple; blade ovate-lanceolate, sub-obtuse, minutely apiculate, margin crenulate, somewhat revolute. **Inflorescence** apical, sub-sessile, racemose, erect, densely few-flowered; peduncle very short, without bracts; rachis short. **Floral bracts** as long as the ovary, triangular, acute, amplexicaul. **Flowers** 4-5, simultaneous, resupinate, without information on color or fragrance. **Ovary** terete, thin, not inflated, smooth. **Sepals** free, fleshy, obovate, acute, 3-veined, margin entire. **Petals** free, linear-oblong, apex truncate, 1-veined, margin entire, spreading. **Lip** united to the column, 3-lobed, base cordate, margin sub-entire; bicallose, the calli thin, sub-globose, parallel, small; lateral lobes oblong-ovate, oblique; midlobe narrowly obovate, apex sub-rounded, apical margin slightly involute. **Column** short, thick, straight. **Clinandrium-hood** prominent (without surpassing the body of the column), margin entire. **Anther** 4-celled, subreniforme, with a dorsally superficial, erose, keel, apex with a pair of linear-oblong, divergent appendices. **Pollinia** 4, obovoid, somewhat laterally compressed; caudicles soft and granulose, shorter than the pollinia. **Nectary** short, shallow, barely penetrating the ovary behind the perianth, not inflated, smooth.

OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: From the Sierra Nevada de Santa Martha in northern Colombia, without further information.

RECOGNITION: *Epidendrum purdii* belongs to Andean Group, Soratae Subgroup which is characterized by the branching habit starting on a primary stem, infundibuliform, rugose leaf-sheaths, lanceolate, aristate, acute leaves, racemose sub-capitate inflorescence on a short, thin peduncle, and the bicallose lip. The species is recognized by the ovate-lanceolate leaves, dorsally rugose with red-purple blotches, sepals obovate, 3.5-3.8 mm long, a 3-lobed lip, margin sub-entire, lateral lobes shorter than the midlobe. It is very similar to *Epidendrum physopus* Kraenzl. (syn. *E. trimeroglossum* Schltr. & *E. schienderi* Hágsater) which has linear-lanceolate leaves, sepals oblong-oblancheolate, 6-8 mm long; the lip 3-lobed, the margin erose-dentate, and the lateral lobes as long as the midlobe. *Epidendrum bolivianum* Schltr. has oblong-lanceolate leaves 3-4 cm long; sepals obovate-spatulate, 13 mm long, 3-lobed lip, 13 mm long, 3-lobed lip with an entire bridge, the midlobe trapezoid, minutely apiculate.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In honor of William M. Purdie who collected plants along the Palomino River up to the Páramo Alto in the Sierra Nevada de Santa Marta, Colombia, in 1844. He was sent to Jamaica and Colombia by the Royal Gardens, Kew.



Authors: E. Hágsater & E. Santiago

Illustrator: R. Jiménez M.

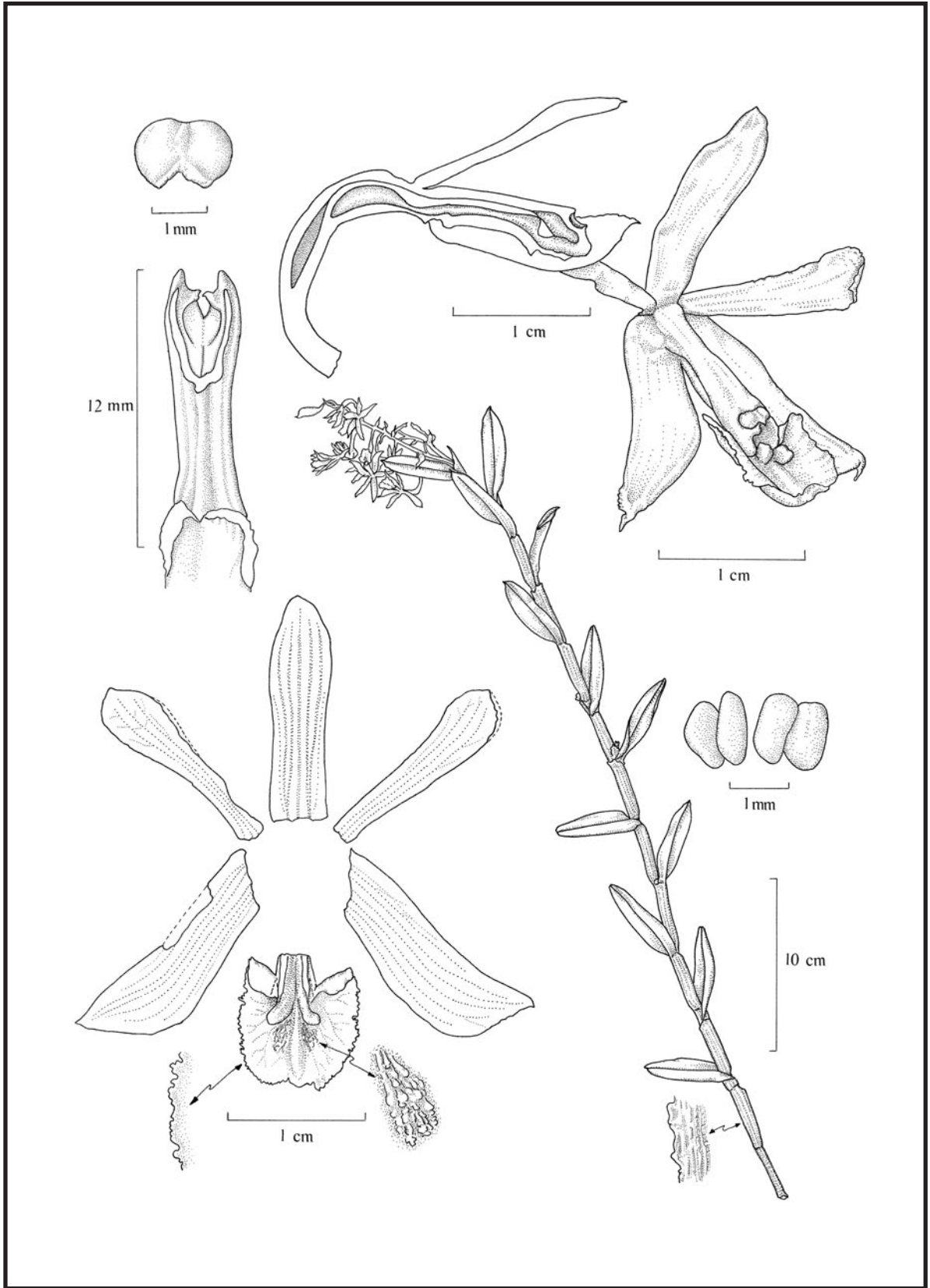
Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009.

Plate 1280



EPIDENDRUM QUADRANGULATUM A.D.Hawkes

EPIDENDRUM QUADRANGULATUM A.D.Hawkes, Orquídea (Río de Janeiro) 18(5): 172. 1956.

Basionym: *Epidendrum quadratum* Lindl., Fol. Orchid. Epidendrum: 83. 1853. Type: Tropical America, **Linden s.n.**
Holotype: K-L! tracing W-R 5859! Isotype W-R 49719! Not *Epidendrum quadratum* Klotzsch (1850) = *Prosthechea varicosa* (Bateman ex Lindl.) W.E.Higgins.

Hierba monopodial, ramificada arriba cuando madura, de más de 30 cm de alto. **Raíces** no vistas. **Tallos** tipo caña, erectos, rectos, el tallo principal ramificado subapicalmente cuando maduro; de más de 30 x 1.0 cm. **Hojas** 7 o más, distribuidas a lo largo de los tallos, articuladas, dísticas, coriáceas, subextendidas; vaina tubular, 14-40 mm de largo; lámina ovado oblonga, obtusa, 6.5-10 x 1.8-2.0 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, florece una sola vez, racemosa, arqueada, pluriflora, densa, 8-9 cm de largo; pedúnculo corto, recto, 20 mm de largo; provisto de una pequeña bráctea deltoide, amplexicaula. **Flores** 15, simultáneas, no resupinadas, carnosas, sin datos de color ni fragancia. **Brácteas florales** más cortas que el ovario, triangular lanceoladas, acuminadas, abrazadoras, 9 mm de largo. **Ovario** terete, delgado, no inflado, no ornamentado, algo arqueado, 27-35 mm de largo. **Sépalos** libres, oblongos, obtusos, 13-15 x 5-6 mm; el **dorsal** extendido; los **laterales** entreabiertos, oblicuos. **Pétalos** entreabiertos, libres, espatulado oblanceolados, redondeados, 3-nervados, las nervaduras laterales cortamente ramificadas, margen denticulado, extendido, 12 x 4 mm. **Labelo** unido a la columna, entero, cuadrado subredondeado, base ligeramente cordada, margen diminutamente serrulado, 8 x 8 mm; bicalloso; disco con una quilla carnosa, delgada e intercallosa, que se alarga hasta el ápice del labelo y dos pares de venas engrosadas cortas y evidentes. **Columna** recta, delgada, ca. 7 mm de largo. **Clinandrio** prominente (aunque sin sobrepasar el cuerpo de la columna), margen dentado. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** prominentes, de 1/2 del largo de la cavidad estigmática. **Nectario** penetrando un tercio del ovario, algo inflado, no ornamentado. **Antera** reniforme, 4-locular. **Polinios** 4, subovoides, lateralmente aplanados. **Cápsula** no vista.

Monopodial **herb**, branching above when mature. **Stems** cane-like, erect, straight, the main stem branching sub-apically when mature. **Leaves** 7 or more, distributed throughout the stems, articulate, distichous, coriaceous, somewhat spreading; sheath tubular; blade ovate-oblong, obtuse. **Inflorescence** apical, flowering only once, racemose, arching, densely many-flowered; peduncle short, straight, provided with a small deltoid, amplexicaul bract. **Flowers** 15, simultaneous, non-resupinate, fleshy. **Floral bracts** shorter than the ovary, triangular-lanceolate, acuminate, amplexicaul. **Ovary** terete, thin, not inflated, smooth, somewhat arched. **Sepals** free, oblong, obtuse, the dorsal sepal spreading, the lateral sepals partly spreading, oblique. **Petals** partly spreading, free, spatulate-oblanceolate, rounded, 3-veined, the lateral veins short branched, margin denticulate, spreading. **Lip** united to the column, entire, quadrate-sub-rounded, base slightly cordate, margin minutely serrulate; bicallose, disc with a single fleshy keel, reaching the apex of the lip, and two pairs of short, evident, thickened veins. **Column** straight, thin. **Clinandrium-hood** prominent, (but not surpassing the body of the column), margin dentate. **Rostellum** apical, slit. **Anther** reniform, 4-celled. **Pollinia** 4, subovate, laterally compressed.

OTHER SPECIMENS: [COLOMBIA: Nariño:] Montaña de Meneses, XII 1864, *Jameson s.n.*, US! **ECUADOR:** Azuay: between Oña and the Río Yacuambí, 8000-9500 ft, 10 IX 1945, *Prieto P-227*, NY x2! (Illustration voucher).

OTHER RECORDS: None seen.

DISTRIBUTION AND ECOLOGY: Confirmed only from southern Colombia and Ecuador, at around 2400-3100 m altitude. Flowering from September to December.

RECOGNITION: *Epidendrum quadrangulatum* belongs to the Andean Group, Orgyale Subgroup which is characterized by the monopodial, sub-apical branching habit, erect to sub-erect inflorescences, lax, non-resupinate flowers, the lip entire. The species is recognized by the ovate-oblong leaves to 2 cm wide, slightly arching, densely many-flowered inflorescence, sepals 13-15 mm long, lip quadrate-sub-rounded, about 8 x 8 mm, with thickened keels on the lip, the clinandrium-hood denticulate. *Epidendrum panduratum* Hágsater & Dodson has apparently shorter, ovate to elliptic leaves, a panduriforme lip (sub-quadrate in general outline), with a pair of small, incipient lateral lobes. *Epidendrum chaoticum* Hágsater & E. Santiago has somewhat larger flowers, sepals 20 mm long, the lateral sepals dorsally verrucose, and the lip sub-entire, with a pair of incipient lateral lobes.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Latin *quadratum*, square, in reference to the general outline of the lip.



Authors: E. Santiago & E. Hágsater

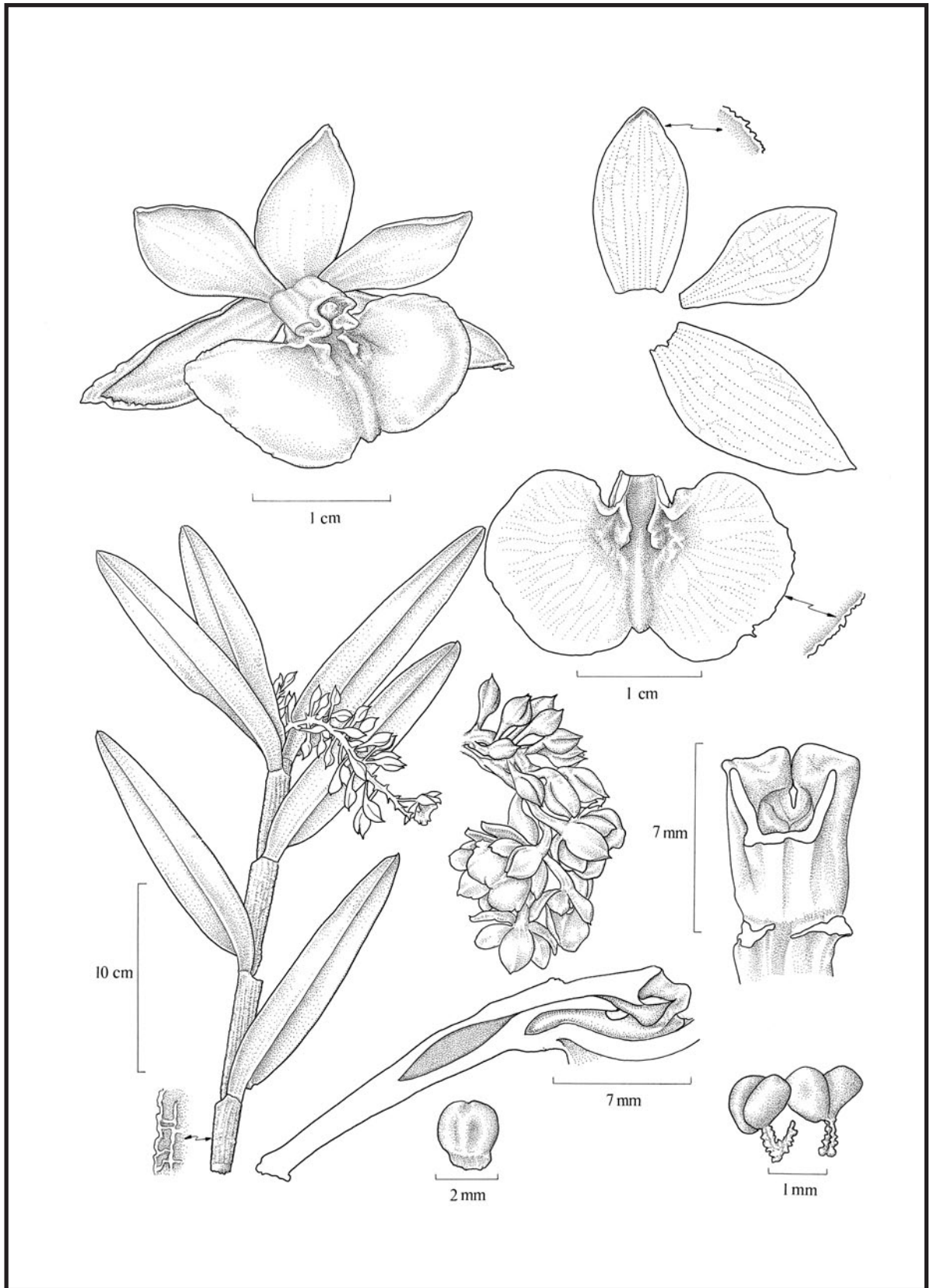
Illustrator: M. López R.

Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009. Plate 1281



EPIDENDRUM RENICONFUSUM Hágsater, E.Santiago & Dodson

Plate 1282

EPIDENDRUM RENICONFUSUM Hágsater, E.Santiago et Dodson, *sp. nov.*

Type: ECUADOR: Pichincha: Chillotallo-Santo Domingo de los Colorados, W de Paso San Juan, *E. Hágsater 9015*. Holotype: QCA! Isotypes: AMO! (Illustration voucher). MO!

Epidendro sagasteguii Hágsater & E.Santiago simile sed floribus ab inflorescentiae apicem versus basem aperientibus, majoribus, petalis margine integro, labello cum callis binis laminaribus valde brevibus et carina elongata usque ad laminae apicem, discrepat.

Hierba terrestre, monopodial, muy ramificada cuando madura, de 80 a 200 cm de alto. **Raíces** de la base del tallo principal, carnosas, gruesas, blancas, 3-5 mm de grosor. **Tallos** tipo caña, teretes en la base y lateralmente aplanados hacia el ápice, erectos, rectos, ramificados cuando maduros; el principal 40-70 x 0.6-2 cm; las ramificaciones 19-24 x 0.6-1.1 cm. **Hojas** numerosas en el tallo principal; 7 en las ramificaciones, distribuidas a lo largo de las mismas, erecto extendidas, alternas, articuladas, coriáceas, desiguales en tamaño (las basales más cortas); vaina tubular, estriada y rugosa, 1.7-6.5 x 0.6-2 cm; lamina oblonga a oblongo lanceolada, subobtusada, desigualmente bilobada, margen entero, extendido, 3-22 x 1.5-4.2 cm. **Inflorescencia** apical, racemosa, frecuentemente produciendo un racimo secundario, con botones florales en desarrollo cuando el principal esta en floración, arqueado nutante, densa, pluriflora, [6]9-15 cm de largo; pedúnculo corto, lateralmente aplanado, 1-2 cm de largo; provisto de una bráctea triangular, subaguda, 7 mm de largo.

Bráctea espatácea ausente. **Flores** [10] 25-70, resupinadas, muy carnosas, abriendo de manera sucesiva del ápice a la base de la inflorescencia y llegando a estar todas abiertas de manera simultánea, cuando los botones florales del racimo adicional se encuentran en desarrollo; de color verde, concoloras; sin fragancia. **Bráctees florales** mucho más cortas que el ovario, angostamente triangulares, acuminadas, amplexicaulas, 3-6 mm de largo. **Ovario** terete, delgado, no inflado, no ornamentado, 16-27 mm de largo. **Sépalos** extendidos, libres, elípticos, 7-nervados, margen entero, extendido; el **dorsal** obtuso, 13-15 x 7-7.5 mm; los **laterales** agudos, ligeramente oblicuos, [14]17-19 x 8-9 mm. **Pétalos** extendidos, libres, obovado espatulados, ápice subagudo, 3-nervados, las nervaduras laterales ramificadas, dando la impresión de ser 5-nervados, margen entero, extendido, 13-16 x 7-9 mm. **Labelo** unido a la columna, reniforme, base cordada, ápice emarginado, diminutamente apiculado, margen denticulado, extendido, 13-15 x 20-25 mm; bicalloso, los callos laminares, cortos; disco con una quilla intercallosa, carnosa, prominente, que se alarga hasta el ápice de la lámina.

Columna corta, gruesa, recta, 7 mm de largo. **Clinandrio** corto, carnoso, margen entero. **Antera** ovoide, con el ápice truncado, 4-locular. **Polinios** 4, obovoides, lateralmente comprimidos; caudículas tan largas como los polinios. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** pequeños, de 1/3 del largo de la cavidad estigmática. **Nectario** poco profundo, apenas penetrando el ovario, no inflado, no ornamentado. **Cápsula** elipsoide; pedicelo 16 mm de largo; cuerpo 6.5 x 4 mm; cuello apical 8 mm de largo.

Terrestrial, monopodial **herb**, much sub-apically branched when mature, tall. **Roots** from the base of the main stem, fleshy, thick, white. **Stems** cane-like, terete at the base, laterally compressed towards the apex, erect, straight, sub-apically branched when mature, the branches shorter than the main stem. **Leaves** numerous on the main stem, 7 on the branches, distributed throughout, erect-spreading, alternate, articulate, coriaceous, unequal in size (the lower ones shorter); sheath tubular, striated and rugose; blade oblong to oblong-lanceolate, sub-obtuse, unequally bilobed, margin entire, spreading. **Inflorescence** apical, racemose, frequently producing a secondary raceme, the floral buds developing when the main raceme is in full bloom, arching-nutant, densely many-flowered; peduncle short, laterally compressed, provided with a triangular, sub-acute bract. **Flowers** [10] 25-70, resupinate, very fleshy, opening successively from the apex towards the base of the inflorescence, eventually all open simultaneously; concolor green, without fragrance. **Floral bracts** much shorter than the ovary, narrowly triangular, acuminate, amplexicaul. **Ovary** terete, thin, not inflated, smooth. **Sepals** spreading, free, elliptic, 7-veined, margin entire, spreading; the dorsal sepal obtuse, the lateral sepals acute, oblique. **Petals** spreading, free, obovate-spatulate, apex sub-acute, 3-veined, the lateral veins branching, so as to appear 5-veined, margin entire, spreading. **Lip** united to the column, reniform, base cordate, apex emarginate, minutely apiculate, margin denticulate, spreading; bicallose, the calli laminar, short; disc with a fleshy, prominent mid keel that terminates at the apex of the lip. **Column** short, thick, straight. **Clinandrium-hood** short, fleshy, margin entire. **Anther** ovoid, 4-celled, the apex truncate. **Pollinia** 4, obovoid, laterally compressed; caudicles as long as the pollinia. **Rostellum** apical, slit. **Nectary** shallow, slightly penetrating the ovary, not inflated, smooth. **Capsule** ellipsoid, with a long pedicel, and an apical neck.

OTHER SPECIMENS: See appendix.

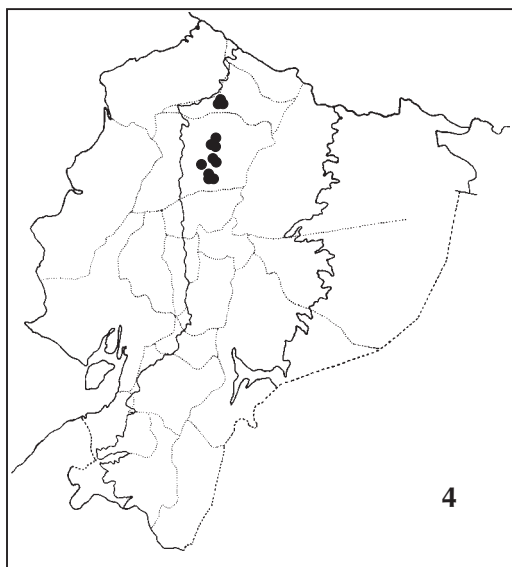
DISTRIBUTION AND ECOLOGY: Endemic to central Ecuador, on the western slope of the Andes, terrestrial at 1700-3100 m altitude. Flowering from December to June, August. **RECOGNITION:** *Epidendrum reniconfusum* belongs to the Andean Group, Renilabium Subgroup which is characterized by the tall plants, monopodial habit, generally large, bilobed leaves, racemose inflorescence, entire or 3-lobed lip with a channel at the base of the disc between the calli. The species is recognized by the 2 m tall plants with oblong to oblong-lanceolate leaves 3-22 x 1.5-4.2 cm, concolor green flowers, lateral sepals 14-19 x 8-9 mm, petals obovate-spatulate, the apex sub-acute, lip reniform with two laminar, short, convergent calli and a fleshy, prominent mid keel; the anther truncate, not dentate-fimbriate. It has been consistently confused with *Epidendrum renilabium* Schltr. which is sympatric in the same range, but has smaller flowers, yellowish green, sepals 13-14 mm long, widely obovate-spatulate petals with the apex rounded, and the lip with a pair of very long, low, rounded calli which have a canal in between; the anther is apically dentate-fimbriate. *Epidendrum renilabioides* Hágsater & Dodson has purple tinged brown flowers on the dorsal surface, ventrally greenish white, sepals 12-15 mm long and the lip is not emarginate, and has a prominent "Y" shaped callus, comparatively the sides of the "Y" comparatively short. *Epidendrum sagasteguii* Hágsater & E.Santiago has oblong to narrowly elliptic leaves to 13 cm long, the flowers open from the base of the inflorescence towards the apex, sepals are 11-14.5 mm long, petals widely obovate, the margin erose, the lip bicallose with laminar calli which reach the middle of the lip, and a short fleshy keel.

NOTE: This is the species with concolor green flowers and short calli which has been consistently confused with *Epidendrum renilabium*. Dodson (1999) cited *Sodiro 44b* at QPLS as the lectotype of *E. renilabium* but that specimen corresponds to the new species here described. That citation is erroneous, because the illustration of the type clearly shows rounded petals and the very long calli which nearly reach the apical sinus of the lip. It was selected before the renilabium subgroup has clearly understood, and, compared to other subgroups, is clearly distinct. *Epidendrum odontantherum* Hágsater & Dodson is now understood to be a synonym of *E. renilabium*.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Latin *renuli*, kidney, and *confusum*, mixed, in reference to the kidney-shaped lip, and the fact that this species has been confused with the true *Epidendrum renilabium*.

REFERENCE: Dodson, C. H. 1999. *Orchidaceae* in Jørgensen, P. M. & S. León-Yáñez. *Catalogue of the Vascular Plants of Ecuador*. **Monogr. Syst. Bot. Missouri Bot. Gard.** 75: 666.



Authors: E. Hágsater, E. Santiago & C. H. Dodson

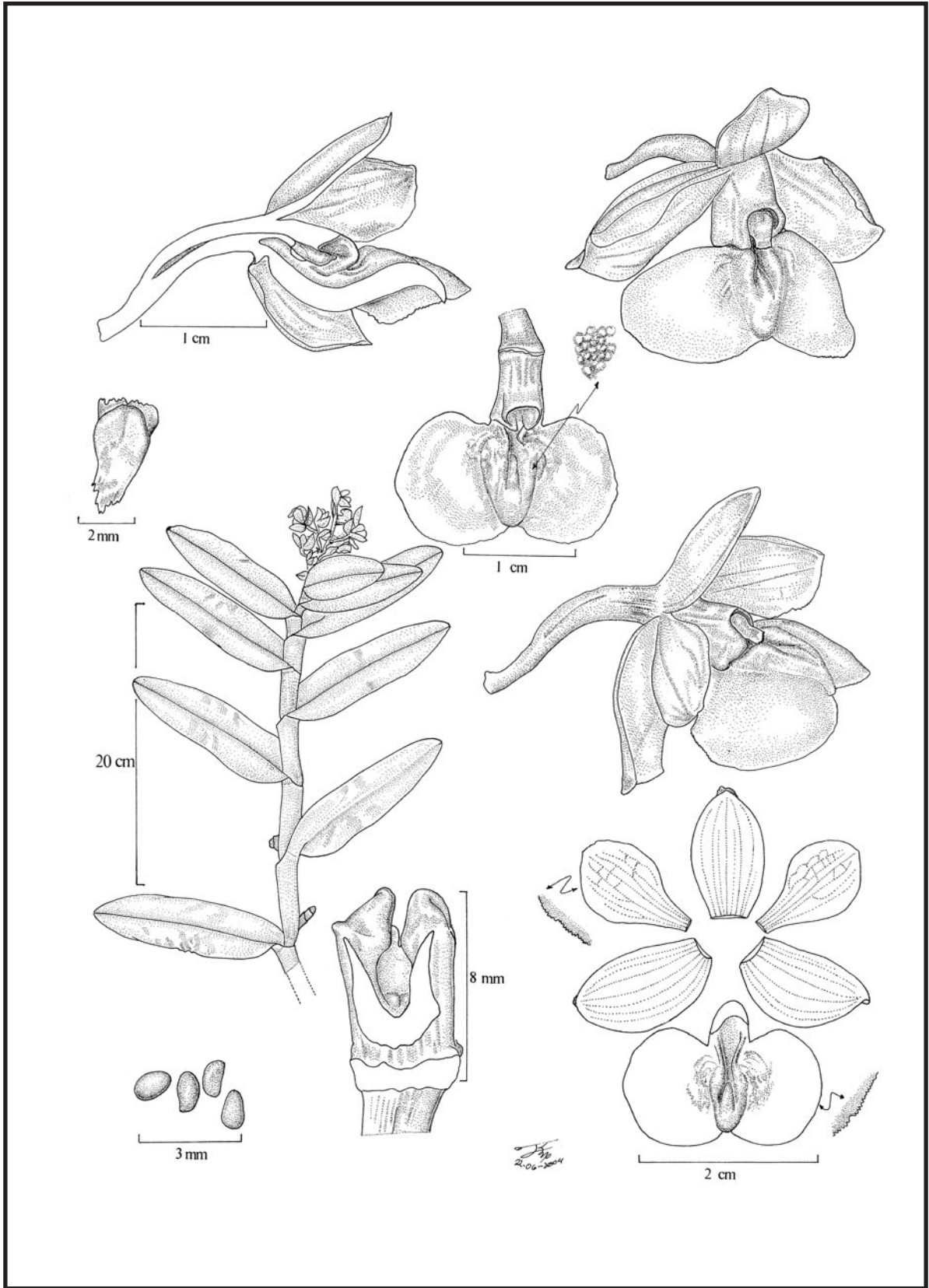
Illustrator: M. López R.

Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009. Plate 1282



EPIDENDRUM RENILABIUM Schltr.

EPIDENDRUM RENILABIUM Schltr., Repert. Spec. Nov. Regni Beih. 8: 84. 1921.

Type: ECUADOR: Chimborazo: In valle Pallatanga, ditonion Riobamba, September 1891, *Sodiro s.n.* Holotype: B, destroyed (illustration of floral details AMES 36140, Published in Figuren Atlas zu der Südamerikanischen Kordillerenstaaten von R. Schlechter, Repert. Spec. Nov. Regni Veg., Beih. 57: no. 361, 1929). Lectotype (cited by Dodson, 1999) here rejected*: *Sodiro 44b*, QPLS! Neotype (here designated): ECUADOR: Pichincha; Chiriboga, 2100-2200 m, 23 August 1984, *Dodson 14357*, MO! (Illustration voucher). Isoneotypes: QCA! QCNE x2! Synonym: *Epidendrum odontantherum* Hágsater & Dodson, Icon. Orchid. (Mexico) 7: pl. 767, 2004. Type: ECUADOR: Pichincha: W of Calacalí, W slopes of Cordillera Occidental, km 21 on road from Calacalí, 2500 m, 24 May 1979, *Bernt Løjtnant & Ulf Molau 13673*. Holotype: AAU! (Illustration AMO!). Isotype: GB!

Hierba terrestre o epífita, monopodial, ramificada subapicalmente, de 100 a 200 cm de alto. **Raíces** no vistas. **Tallos** tipo caña, teretes, algo lateralmente comprimidos hacia el ápice, erectos, rectos, ramificados subapicalmente cuando maduros; el principal no visto; las ramas 29-40 x 0.6-1.5 cm. **Hojas** probablemente numerosas en el tallo principal; 7-12 en las ramificaciones, distribuidas a lo largo de las mismas, erecto extendidas, alternas, articuladas, coriáceas, desiguales en tamaño (las basales más cortas); vaina tubular, estriada y rugosa, 1.5-5.5 x 0.6-1.5 cm; lamina oblonga a oblongo lanceolada, obtusa, ligeramente bilobada, coriácea, margen entero, extendido, [3]7-16 x 2-3.3 cm. **Inflorescencia** apical, racemosa, frecuentemente produciendo un racimo secundario, con botones florales en desarrollo cuando el principal está en floración, arqueada nutante, densa, multiflora, 6-10 cm de largo; pedúnculo lateralmente aplanado, 15 mm de largo; provisto de una bráctea triangular, aguda, semejante a las florales, de 6 mm de largo; raquis recto. **Bráctea espatácea** ausente. **Flores** 15-30, resupinadas, muy carnosas, abriendo de manera sucesiva del ápice a la base de la inflorescencia y llegando a estar todas abiertas de manera simultánea; amarillo verdosas; sin fragancia. **Bráctea floral** mucho más cortas que el ovario, deltoides, acuminadas, amplexicaulas, 2-5 mm de largo. **Ovario** terete, delgado, no inflado, no ornamentado, 13-22 mm de largo. **Sépalos** extendidos, libres, elípticos, subagudos, diminutamente apiculados, 7-nervados, margen entero, extendido, 13-14 x 7-9 mm; los **laterales** ligeramente oblicuos. **Pétalos** extendidos, libres, anchamente obovado espatulados, ápice redondeado, 5-nervados, las nervaduras laterales cortamente ramificadas a todo lo largo, margen diminutamente dentado, extendido, 11-13 x 7-10 mm. **Labelo** unido a la columna, convexo en posición natural, reniforme, base cordada, ápice emarginado, diminutamente apiculado, margen denticulado, extendido, [6]11-13 x 18-22 mm; bicalloso, los callos alargados más allá de la mitad apical de la lamina, paralelos, muy carnosos, formando un canal intercaloso que termina justo donde se forma una sola quilla muy corta, que se alarga hasta el seno apical del labelo. **Columna** corta, gruesa, recta, 6-7 mm de largo. **Clinandrio** corto, carnosos, margen entero. **Antera** ovoide, 4-locular, con el ápice dentado-fimbriado. **Polinios** 4, obovoides, lateralmente comprimidos; caudículas cortas, granuladas. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** capsuloso, de 1/3 del largo de la cavidad estigmática. **Nectario** poco profundo, apenas penetrando el ovario, no inflado, no ornamentado. **Cápsula** no vista.

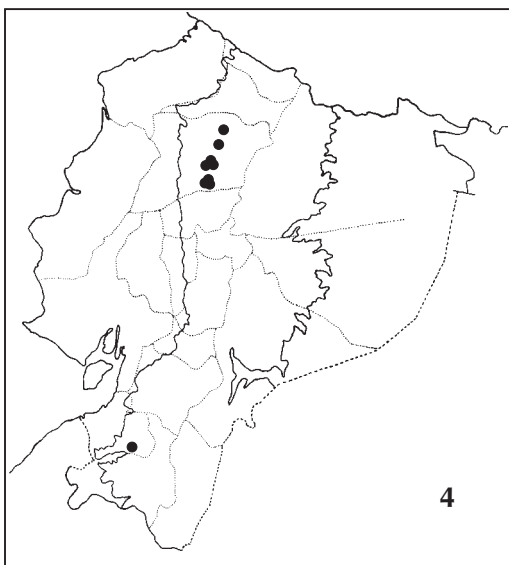
Terrestrial or epiphytic, monopodial **herb**, sub-apically branched, tall. **Stems** cane-like, terete, somewhat laterally compressed towards the apex, erect, straight, branching sub-apically when mature. **Leaves** probably numerous on the main stem, 7-12 on the branches, distributed throughout the stem, erect-spreading, alternate, articulate, coriaceous, unequal in size (the basal leaves shorter); sheath tubular, striated, rugose; blade oblong to oblong-lanceolate, obtuse, slightly bilobed, coriaceous, margin entire, spreading. **Inflorescence** apical, racemose, frequently producing a secondary raceme, with floral buds developing when the main raceme is in full bloom, arching-nutant, dense, many-flowered; peduncle laterally compressed, provided with a triangular, acute bract, similar to the floral bracts; rachis straight. **Flowers** 15-30, resupinate, very fleshy, opening in succession from the apex towards the base of the inflorescence, all eventually open simultaneously; greenish yellow; without fragrance. **Floral bracts** much shorter than the ovary, deltoid, acuminate, amplexicaul. **Ovary** terete, thin, not inflated, smooth. **Sepals** spreading, free, elliptic, subacute, minutely apiculate, 7-veined, margin entire, spreading; lateral sepals oblique. **Petals** spreading, free, widely obovate-spatulate, apex rounded, 5-veined, the lateral veins short-branched throughout, margin minutely dentate, spreading. **Lip** united to the column, convex in natural position, reniform, base cordate, apex emarginate, minutely apiculate, margin minutely denticulate, spreading; bicallose, the calli elongate, reaching more than half the length of the lip, parallel, very fleshy, forming a canal in the middle which ends where the two calli meet and form a low, rounded keel which reaches the apical sinus. **Column** short, thick, straight. **Clinandrium-hood** short, fleshy, margin entire. **Anther** ovoid, 4-celled, the apex fimbriate-dentate. **Polinia** 4, obovoid, laterally compressed; caudicles short, granulose. **Rostellum** apical, slit. **Nectary** shallow, slightly penetrating the ovary, not inflated, smooth.

OTHER SPECIMENS: ECUADOR: Pichincha: carretera antigua Quito-Chiriboga, 3090 m, 17 I 2001, *Alvarez 2874*, NY! El Volante on road between Chiriboga and Santo Domingo, ca. 1900 m, 1 VII 1955, *Asplund 16724*, S! Reserva Geobotánica del Pululahua, 1600 m, 7 IX 1988, *Cerón 4792*, QCNE! km 39 carretera vieja vía Chiriboga Quito-Santo Domingo, 23 VIII 1984, 2100-2200 m, *Dodson 14375*, AMES! Chiriboga road, old Santo Domingo-Quito road, 33 km northeast of Alluriquín, 6100 ft, 5 VIII 1980, *Saulea 4007*, AMES! km 20 Santo Domingo-Quito, 8 IV 1984, *Thurston 3416*, AMO! km 27 Santo Domingo-Quito, 1500-2100 m, 12 IV 1984, *Thurston T-4116*, AMO! Reserva Río Guajalito, near Chiriboga, 1850 m, 5 VII 1991, *van der Werff T2210*, MO! (Illustration AMO!) QCNE! **El Oro:** Guayquichuma, 2100 m, 9 II 1998, *Boniñaz 3655*, MO!

OTHER RECORDS: ECUADOR: Pichincha: Mountain above Tandapi, rd. Quito-Sto. Domingo, 2300 m, VI 1984, *Hirtz 1824*, MO, slide color AMO!

DISTRIBUTION AND ECOLOGY: Endemic to western Ecuador, on the upper western slope of the Andes, terrestrial or epiphytic at 1600-3100 m altitude, sympatric with *Epidendrum reniconfusum* Hágsater, E.Santiago & Dodson. Flowering from throughout the year.

RECOGNITION: *Epidendrum renilabium* belongs to the Andean Group, Renilabium Subgroup which is characterized by the tall plants, monopodial habit, generally large, bilobed leaves, racemose inflorescence, entire to 3-lobed lip with a channel at the base of the lip between the calli. The species is recognized by the tall plants, to 2 m, with oblong to oblong-lanceolate leaves 7-16 cm long, the arched inflorescence



with very fleshy, yellowish green flowers that open in succession from the apex towards the base of the inflorescence, sepals 13-14 mm long, petals obovate-spatulate, apically rounded, and the bicallose lip with a pair of very fleshy, long calli that nearly reach the apical sinus of the lip. *Epidendrum renilabioides* Hágsater & Dodson, which grows up to the northern border of Ecuador, has externally purplish brown flowers, petals and lip greenish, the calli and the column white, petals are elliptic-spatulate, the apex obtuse, and the lip is "Y" shaped, with the lip apiculate, not emarginate. *Epidendrum reniconfusum* Hágsater, E.Santiago & Dodson, has somewhat larger, concolor green flowers, sepals 14-19 mm long, sub-acute petals, and two laminar very short calli, with a intermediate elongate keel; the apex of the anther is truncate, not dentate. *Epidendrum sagasteguii* Hágsater & E. Santiago has flowers that open from the base towards the apex of the inflorescence, sepals 11-12 mm long, widely obovate, obtuse petals with the margin dentate, and the lip is bicallose, the calli laminar and short.

*NOTE: *Epidendrum renilabium* is now understood to be characterized by the rounded petals and huge, elongate calli which nearly reach the apical sinus of the lip, as is clearly illustrated by the sketch prepared by Schlechter from *Sodiro s.n.* (destroyed at B). The specimen of *Sodiro 44b* was cited by Dodson (1999) as the lectotype, before the renilabium subgroup was clearly understood. That QPLS specimen, *Sodiro 44b*, belongs to *Epidendrum reniconfusum* Hágsater, E.Santiago & Dodson, described in this same volume as new, and corresponds to what has generally been known as *E. renilabium*.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Latin *renuli*, kidney, and *labium*, lip, in reference to the kidney-shaped lip.

REFERENCE: Dodson, C. H., 1999. *Orchidaceae* in Jørgensen, P. M. & S. León-Yáñez. Catalogue of the Vascular Plants of Ecuador. **Monog. Syst. Bot. Missouri Bot. Gard.** 75: 666.

Authors: E. Santiago & E. Hágsater

Illustrator: R. Jiménez M.

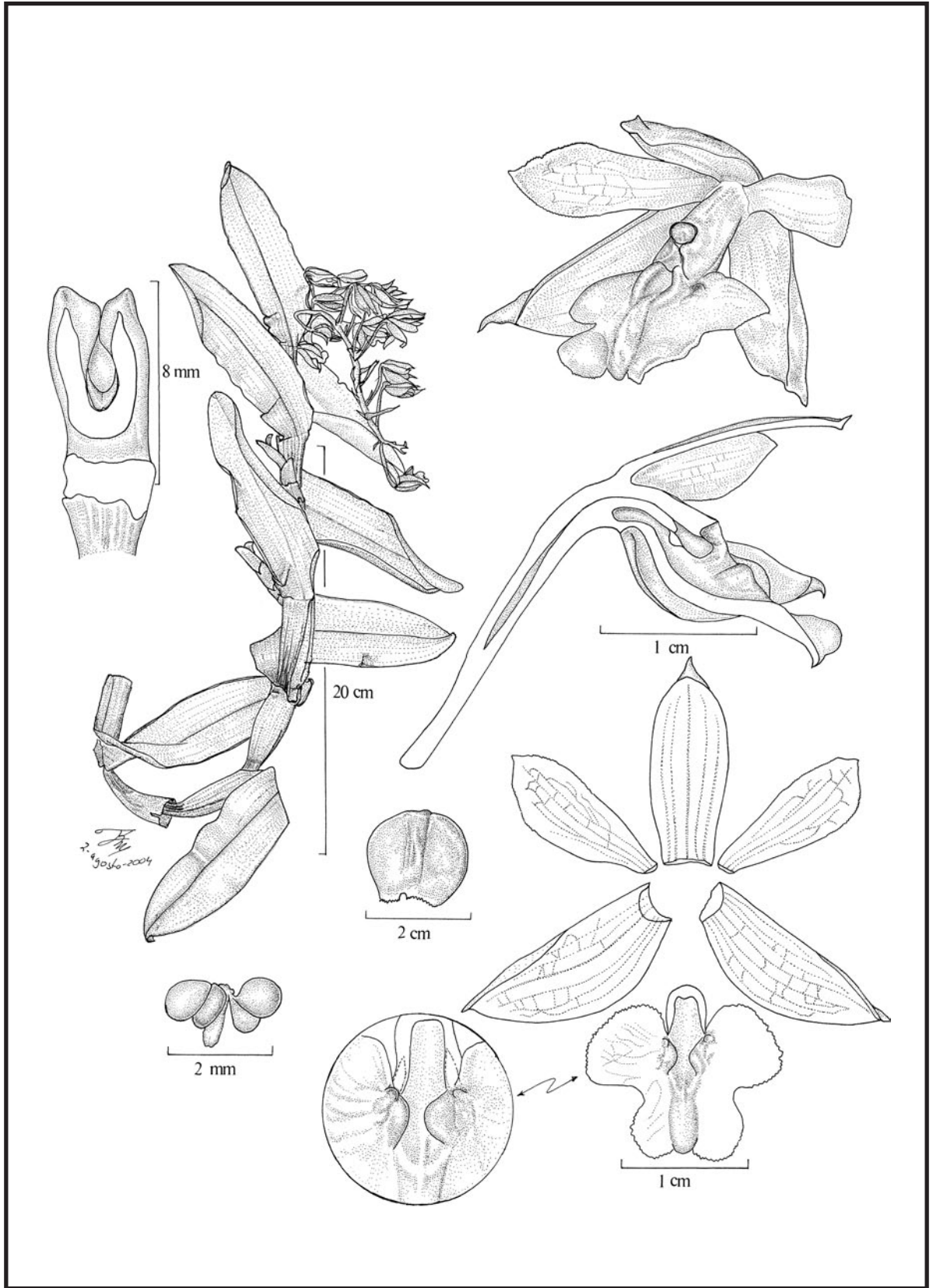
Editors: E. Hágsater & L. Sánchez S.

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México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009.

Plate 1283



EPIDENDRUM x RENIPICHINCHAE Hågsater & E.Santiago

Plate 1284

EPIDENDRUM X RENIPICHINCHAE Hágsater et E.Santiago, *hybr. nat. nov.*

Type: ECUADOR: Pichincha: km 44, Quito a Santo Domingo via Tandapi, 3000 m, 18 mayo 1985, **C. H. Dodson & T. A. Dodson 15845**. Holotype: MO! (Illustration voucher).

Intermedium inter *Epidendro pichincha* Schltr., per folia oblonga ad oblongo-lanceolata, sepala acuminata 16-18 mm longa et labellum trilobum, lobis lateralibus brevioribus quam lobulo medio, definitum, et *Epidendro renilabioides* Hágsater & E.Santiago, per labellum reniformem cum callo brevi instar "Y", determinatum.

Hierba terrestre, monopodial, ramificada subapicalmente. **Raíces** no vistas. **Tallos** tipo caña, ramificados subapicalmente, erectos, rectos, teretes en la base y lateralmente aplanados hacia el ápice; fragmento 30 x 0.7-1.4 cm; las ramificaciones aparentemente más cortas; cubiertos en la base por vainas tubulares no foliares. **Hojas** 10 o más en el tallo principal; probablemente distribuidas a lo largo del tallo, erectas, extendidas, semejantes en tamaño; vainas subinfundibuliformes cuando secas, finamente estriadas, rugosas, 30-38 mm de largo; lámina oblongo elíptica, ápice subobtusado, margen entero, extendido, 8-10 x 2.1-3.2 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, arqueada nutante, pluriflora, densa, 12 cm de largo; pedúnculo corto, delgado, 20 mm de largo. **Brácteas florales** más cortas que el ovario, triangular lanceoladas, acuminadas, abrazadoras, 6 mm de largo. **Ovario** terete, delgado, no inflado, no ornamentado, 15-24 mm de largo. **Flores** 20, simultáneas, resupinadas, carnosas, amarillo cremosas, sin datos de fragancia. **Sépalos** entreabiertos, libres, agudos, con una arista prominente, margen entero, extendido, 16-18 x 6-7 mm; el **dorsal** elíptico oblongo, 5-nervado; los **laterales** elípticos, 7-nervados, oblicuos. **Pétalos** entreabiertos, libres, espatulados, obtusos, 3-nervados, las nervaduras cortamente ramificadas a todo lo largo, margen diminutamente papiloso, extendido, 16 x 5.5 mm. **Labelo** unido a la columna, trilobado, cordado en la base, margen diminutamente eroso en el ápice de los lóbulos, extendido, 12 x 15.5 mm; bicalloso, callos prominentes, laminares, la parte externa rodeada de pequeños engrosamientos carnosos; disco con una cavidad intercallosa, corta, que termina justo donde nace una carina prominente y engrosada que se alarga hasta el ápice de la lamina; lóbulos laterales dolabriformes, 6.3 x 6.5 mm; lóbulo medio transversalmente rectangular, anchamente apiculado, 6 x 9 mm. **Columna** recta, engrosada, 8 mm de largo. **Clinandrio** reducido, margen entero. **Antera** reniforme, truncada en el ápice y el margen denticulado. **Polinios** 4, obovoides, subiguales; caudículas cortas, suaves y granuladas. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** pequeños, de 1/3 del largo de la cavidad estigmática. **Nectario** corto, sin penetrar el ovario, no inflado, no ornamentado. **Cápsula** no vista.

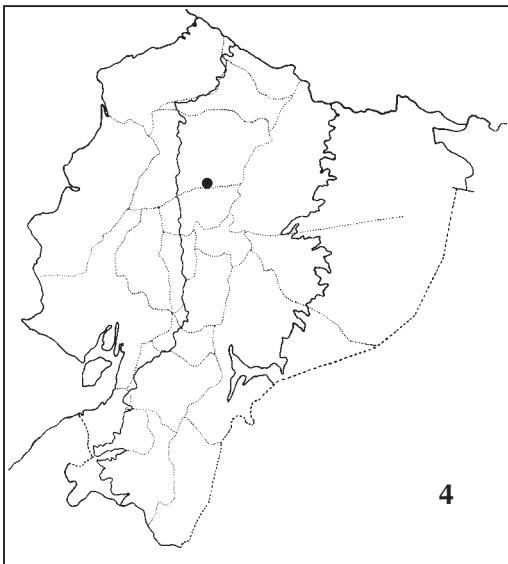
Terrestrial, monopodial **herb**, sub-apically branched. **Stems** cane-like, erect, straight, terete at base, laterally compressed above, sub-apically branched. **Leaves** 10 or more on the main stem, apparently distributed throughout, erect-spreading, similar in size; sheaths sub-infundibuliform when dry, minutely striated, rugose; blade oblong-elliptic, apex sub-obtuse, margin entire, spreading. **Inflorescence** apical, racemose, arching-nutant, densely many-flowered; peduncle short, thin. **Floral bracts** shorter than the ovary, triangular-lanceolate, acuminate, amplexicaul. **Ovary** short, thin, not inflated, smooth. **Flowers** 20, simultaneous, resupinate, fleshy, creamy yellow. **Sepals** partly spreading, free, acute, prominently aristate, margin entire, spreading; dorsal sepal elliptic-oblong, 5-veined; laterally elliptic, 7-veined, oblique. **Petals** partly spreading, free, spatulate, obtuse, 3-veined, the veins short branched throughout, margin minutely papillose, spreading. **Lip** united to the column, 3-lobed, base cordate, apical margin minutely erose, spreading; bicallose, the calli prominent, laminar, the outer side rounded by small fleshy thickenings; disc with a cavity in between the calli, short, ending in a wide, rounded, thickened keel that ends in the at the apex of the lip; lateral lobes dolabriform; midlobe transversely rectangular, widely apiculate. **Column** straight, thickened, short. **Clinandrium-hood** reduced, margin entire. **Anther** reniform, apex truncate, margin denticulate. **Pollinia** 4, obovoid, sub-equal; caudicles short, soft and granulate. **Rostellum** subapical, slit. **Nectary** short, without penetrating the ovary, not inflated, smooth.

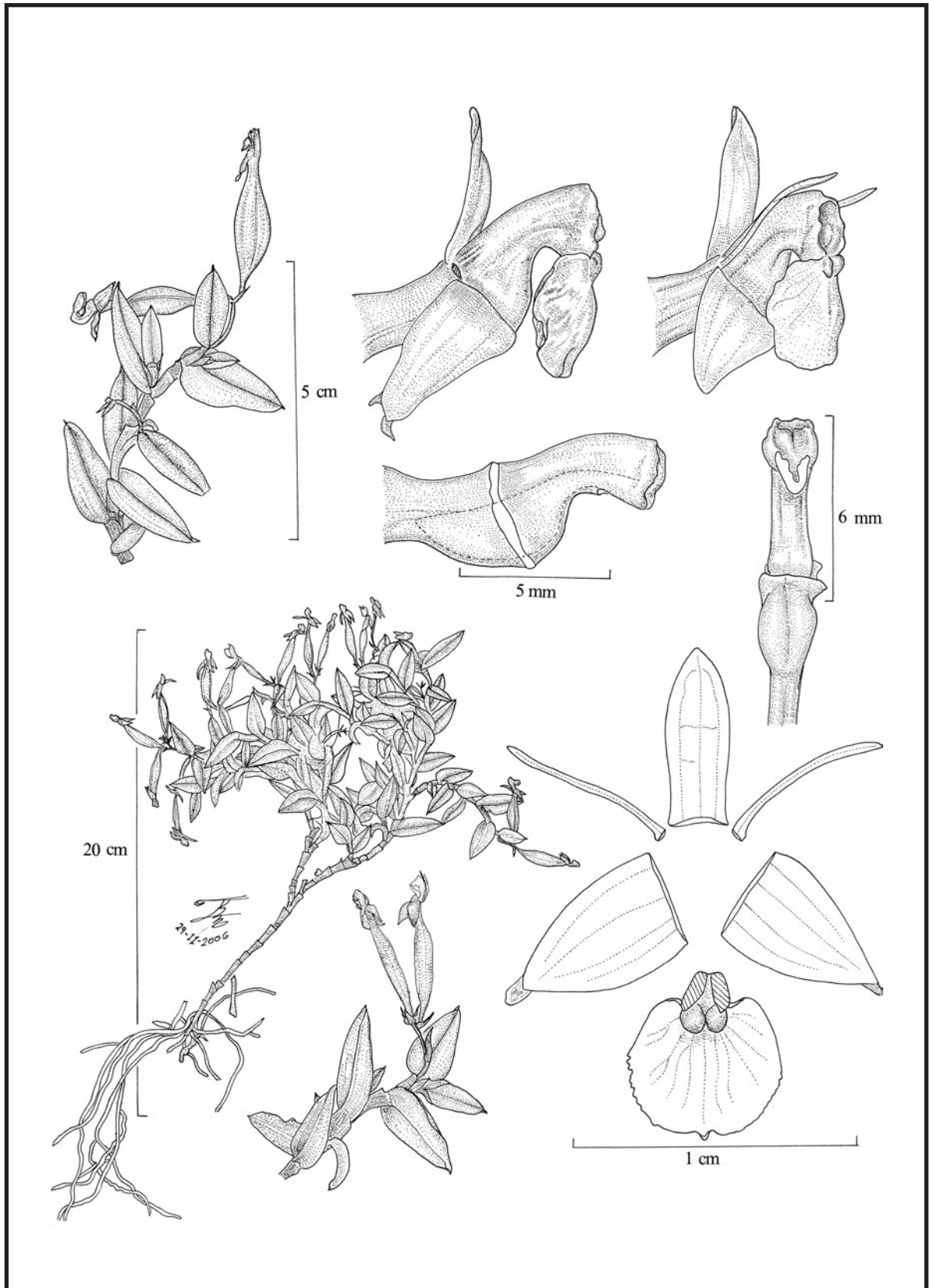
OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: Known only from the type, in central Ecuador, terrestrial at 3000 m altitude. Flowering in May.

RECOGNITION: *Epidendrum x renipichincha* belongs to the Andean Group characterized by the monopodial habit, cane-like stems with sub-apical branches which are considerably shorter than the main stem, coriaceous leaves, apex bilobed, and fleshy flowers, the lip 3-lobed. This is the putative natural hybrid of *Epidendrum pichincha* Schltr. which has a deeply 3-lobed lip and *Epidendrum renilabioides* Hágsater & Dodson which has a bilobed lip, and a short callus, both species being present in the area. *Epidendrum amblyantherum* Hágsater & E.Santiago, is vegetatively very similar, but the flowers of that species are yellow to yellow-ochre, the lip has prominent, divergent calli, surrounded by 3 pairs of short, laminar keels.

ETYMOLOGY: The putative natural hybrid of *Epidendrum renilabioides* and *E. pichincha*.





EPIDENDRUM RETROSEPALUM Hágsater, R.Fernández & E.Santiago

Plate 1285

EPIDENDRUM RETROSEPALUM Hágsater, R.Fernández et E.Santiago, *sp. nov.*

Type: PERU: Cusco: alrededores de Marcapata, 2630-2700 m, 13 September 1984, **R. Fernández 487**. Holotype: USM! Isotype: AMO! (Illustration voucher).

Epidendro sorotae Rchb.f. simile sed foliis ovato-lanceolatis, sepalis lateralibus reflexis, labello orbiculari cum margine apicali arcuato, differens.

Hierba monopodial, ramificada, ca. 17 cm de alto. **Raíces** basales, carnosas, delgadas, ca. 2 mm de grosor. **Tallos** tipo caña, teretes, delgados, muy ramificados a partir de la mitad apical del tallo principal; el principal ca. 14 x 0.3 cm; las ramificaciones más cortas (algunas tan cortas que parecieran ser inflorescencias laterales), 3-4 x 0.1-0.2 cm. **Hojas** en el tallo principal caducas, no vistas; ca. de 6 en las ramificaciones, distribuidas a lo largo de las mismas, alternas, articuladas; vaina tubular, estriada, rugosa, infundibuliforme, 4-5 x 2-3 mm; lámina ovado lanceolada, aguda, diminutamente apiculada, margen entero, subcoriácea, 1.3-2 x 0.6-0.8 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, florece una sola vez, pauciflora, laxa, 1.3 cm de largo; pedúnculo terete, delgado, desprovisto de brácteas, 5-6 mm de largo. **Brácteas florales** más cortas que el ovario, triangular lanceoladas, cortamente acuminadas, abrazadoras, 2-4 mm de largo. **Flores** 3-4, simultáneas, resupinadas, sin datos de color ni fragancia. **Ovario** terete, delgado, inflado ventralmente justo detrás del perianto, 4-6 mm de largo. **Sépalos** libres, margen entero, extendido; el **dorsal** extendido, angostamente obovado, subobtusos, 3-nervado, 6 x 2.3 mm; los **laterales** fuertemente reflexos, ovado triangulares, con una arista prominente, 4-nervados, 7 x 3.8 mm. **Pétalos** entreabiertos, libres, linear filiformes, subobtusos, 1-nervados, margen entero, extendido, 6 x 0.3 mm. **Labelo** unido a la columna, entero, orbicular, ligeramente cordado en la base, margen crenulado en la mitad apical de la lamina, 5 x 5.5 mm; bicalloso, los callos prominentes, globosos; desprovisto de quillas. **Columna** ligeramente arqueada, angosta en la parte media y fuertemente dilatada en la mitad basal, 5 mm de largo. **Clinandrio** corto, margen subentero. **Antera** y **Polinios** no vistos. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** no vistos. **Nectario** penetrando hasta la mitad del ovario y formando una vesícula prominente a la altura del perianto. **Cápsula** elipsoide, con el perianto persistente; pedicelo 5 mm de largo; cuerpo 14-16 x 4-6 mm; cuello apical 3 mm de largo.

Monopodial **herb**, branching sub-apically. **Roots** basal, fleshy, thin. **Stems** cane-like, terete, thin, much branched above the middle of the main stem; the branches much shorter than the main stem, some so short so as to seem lateral inflorescences. **Leaves** from the main stem fallen, not seen; about 6 per branch, distributed throughout, alternate, articulate; sheath tubular, striated, rugose, infundibuliform; blade ovate-lanceolate, acute, minutely apiculate, margin entire, sub-coriaceous. **Inflorescence** apical, racemose, flowering only once, lax, few-flowered; peduncle terete, thin, without bracts. **Floral bracts** shorter than the ovary, triangular-lanceolate, short-acuminate, amplexicaul. **Flowers** 3-4, simultaneous, resupinate. **Ovary** terete, thin, inflated ventrally just behind the perianth. **Sepals** free, margin entire, spreading, the dorsal sepal spreading, narrowly obovate, sub-obtuse, 3-veined; the lateral sepals strongly reflexed, ovate-triangular, with a prominent awn, 4-veined, slightly larger than the dorsal sepal. **Petals** partly spreading, free, linear-filiform, sub-obtuse, 1-veined, margin entire, spreading. **Lip** united to the column, entire, orbicular, base slightly cordate, apical half of the margin crenulate; bicallose, the calli prominent, sub-globose; without keels. **Column** slightly arching, narrowed at the middle, strongly dilated apically. **Clinandrium-hood** short, margin sub-entire. **Rostellum** apical, slit. **Nectary** penetrating half the ovary and forming a prominent vesicle at the height of the perianth. **Capsule** ellipsoid, perianth persistent, short and apical neck.

OTHER SPECIMENS: None seen.

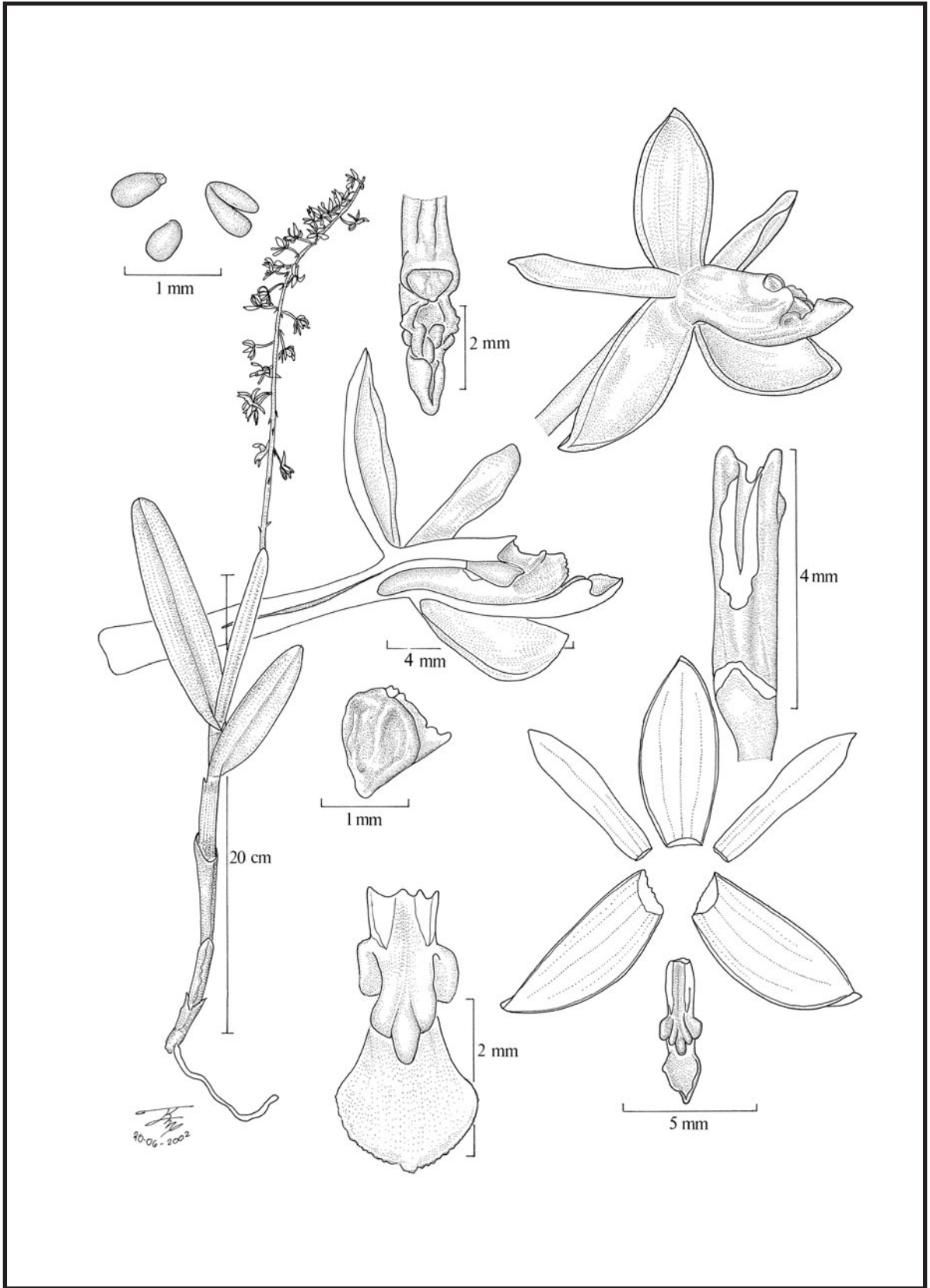
DISTRIBUTION AND ECOLOGY: Along the upper reaches of the Amazon slope of the Andes in southern Peru, probably epiphytic, at 2630-3250 m altitude. In early fruit in September.



RECOGNITION: *Epidendrum retrosepalum* belongs to the Sorotae 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 sub-capitate inflorescence on a short, thin peduncle, and the bicallose lip. The species is recognized by the ovate-lanceolate, acute leaves 1.3-2 x 0.6-0.8 cm, inflated ovary, strongly reflexed, 7 mm long, lateral sepals, linear-filiform petals and the orbicular lip with the apical half of the margin crenulate. *Epidendrum sorotae* has lanceolate leaves 1.7-4.7 x 0.4-0.6 cm; partly spreading lateral sepals, linear petals and a reniform lip with the apex slightly 3-lobed. *Epidendrum obliquum* Schltr. has lanceolate leaves and the ovary is not inflated, the lip reniform, apically emarginate. *Epidendrum moscozoi* Hágsater & E.Santiago, has smaller plants, linear-lanceolate, obtuse leaves 0.8-1.7 x 0.2-0.4 cm; partly spreading sepals 3.7-4 mm long, and the lip reniform with the margin crenate.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Latin *retrosus* backwards, and *sepalum* sepals, in reference to the strongly retrose lateral sepals which make the pressed flowers look somewhat like a squid.



EPIDENDRUM RUSBYI Hágsater & L.Sánchez

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

Type: BOLIVIA: [La Paz]: Mapiiri, 5000 ft, May 1886, **H. H. Rusby 2744**. Holotype: US 825914! (Illustration voucher). Isotypes: AMES 69654! AMES 74001! NY (x2)! (23 April 1886, NY!) US 207024! WIS! K-L!

Epidendro adenoglossi Lindl. simile sed labello trilobato, distinctum.

Herba rastrera, simpodial, epífita, 30-42 cm de alto incluyendo la inflorescencia. **Raíces** basales, delgadas, carnosas, 0.8-1.5 mm de grosor. **Tallo** tipo caña, producido de los nudos inferiores del tallo anterior, a 3 cm arriba de la base; erecto, recto, lateralmente comprimido hacia el ápice, 13-15 x 0.2-0.5 cm; cubierto en la base por 2 vainas no foliosas, escariosas, iguales a las foliares. **Hojas** 1-2 por tallo, distribuidas en el tercio apical del tallo; vainas tubulares, estriadas y finamente rugosas en seco 25-50 mm de largo; lámina articulada, lanceolado oblonga, ápice obtuso, aristado, coriácea, margen entero, 6-15 x 1.5-2.2 cm. **Brácteas espatáceas** 1, raramente 2, ancipitosas, oblongas, agudas, 75-85 x 6.0-7.3 mm. **Inflorescencia** apical, racemosa, erecta, alargada, laxa, 19-27 cm de largo; raquis recto; el pedúnculo erecto, 8.0-9.5 cm de largo, cubierto casi totalmente por las brácteas espatáceas. **Flores** 19-35, simultáneas, no resupinadas, sin datos de color ni fragancia. **Brácteas florales** más cortas que el ovario, triangulares, agudas, 1-2 mm de largo. **Ovario** no ornamentado, 8-10 mm de largo. **Sépalos** extendidos, elípticos, agudos, margen entero, extendido; 5-7 x 2.0-2.5 mm; el dorsal 3-nervado, los laterales 3-5 nervados, con una quilla dorsal apical. **Pétalos** extendidos, lineares, agudos, 3-nervados, margen entero, extendido; 5.0-6.5 x 1.0-1.5 mm. **Labelo** unido a la columna, base truncada, trilobado, 2.7-3.2 x 1.5-1.8 mm; bicalloso, los callos prominentes, alargados, redondeados, disco con una quilla gruesa, más larga que los callos; lóbulos laterales muy pequeños, basales, ovado elípticos, 0.3 x 0.2 mm; lóbulo medio prominente, ampliamente ovado espatulado, con el margen apical redondeado, eroso dentado, 2.0-2.2 x 1.5-1.8 mm. **Columna** corta, gruesa, recta; 3-4 mm de largo. **Clinandrio** reducido, entero. **Antera** 4-locular, ovoide, el ápice cónico. **Polinios** 4, obovoides, lateralmente comprimidos. **Nectario** corto, ligeramente traspasando al perianto, amplio, no ornamentado. **Lóbulos laterales del estigma** ocupando 1/2 de la cavidad estigmática. **Cápsula** no vista.

Creeping, sympodial, epiphytic **herb**. **Roots** basal, thin, fleshy. **Stems** cane-like, produced from the lower nodes of the previous stem, erect, straight, laterally compressed towards the apex, the base covered by two non foliar, scarious sheaths, similar to the foliar sheaths. **Leaves** 1-2 per stem, distributed along the apical 1/3 of the stem; sheaths tubular, striated, minutely rugose when dry; blade articulate, lanceolate-oblong, apex obtuse, aristate, coriaceous, margin entire. **Spathaceous bracts** 1, rarely 2, ancipitose, oblong, acute. **Inflorescence** apical, racemose, elongate, lax-flowered, rachis straight; peduncle erect, nearly totally covered by the spathaceous bracts. **Flowers** 19-35, simultaneous, non-resupinate. **Ovary** smooth, short. **Sepals** spreading, elliptic, acute, margin entire, spreading; dorsal sepal 3-veined, the lateral sepals 3-5-veined, with an apical, dorsal keel. **Petals** spreading, linear, acute, 3-veined, margin entire, spreading. **Lip** united to the column, base truncate, 3-lobed; bicallose, the calli prominent, elongate, rounded, disc with a thick keel, longer than the calli; lateral lobes very small, basal, ovate-elliptic; midlobe prominent, widely ovate-spatulate, the apical margin rounded, erose-dentate. **Column** short, thick, straight. **Clinandrium-hood** reduced, entire. **Anther** 4-celled, ovoid, apex conical. **Pollinia** 4, obovoid, laterally compressed. **Nectary** short, slightly penetrating the ovary, wide, smooth.

DISTRIBUTION AND ECOLOGY: Known only from western Bolivia, at 1500 m altitude. Flowering in May.

OTHER SPECIMENS: None seen.

RECOGNITION: *Epidendrum rusbyi* belongs to the Mancun group which is characterized by the sympodial habit, few-leaved stems, racemose inflorescence with 1-2 ancipitose, long, spathaceous bracts with parallel sides, and Mancun Subgroup which has non-resupinate, flowers, and a generally reduced, fleshy lip. The species can be recognized by the laterally compressed stems, 3-lobed lip, with very small ovate-elliptic lateral lobes and a large, ovate-spatulate midlobe with a rounded, erose-dentate apical margin. It is very similar to *Epidendrum adenoglossum* Lindl. from Peru, which has an entire, linear-oblong lip. *Epidendrum brachyglossum* Lindl. also has laterally compressed stems, linear-lanceolate

leaves (3.0-8.4 x 0.6-0.9 cm), somewhat lax-flowered inflorescence, linear, 1-3-veined petals, 3-lobed lip, the lateral lobes obliquely sub-quadrate to sub-orbicular, acute, and a short, quadrate midlobe. *Epidendrum mancum* Lindl., from southern Ecuador has shorter plants, 15-25 cm tall, smaller leaves, 2-6 x 1.3-2.7 cm, wider sepals and petals, 3-5 mm, and an entire lip. *Epidendrum rhombimancum* Hágsater & L.Sánchez has obovate petals the margin undulate towards the apex, an entire, transversely elliptic lip, with the central keel formed by numerous protuberances. *Epidendrum pseudosarcoglottis* Hágsater & Dodson has spatulate petals, an entire, rectangular, claw-shaped lip, with a cushion-shaped callus, wide and fleshy. *Epidendrum sarcoglottis* Schltr. has large flowers, sepals and petals 8-9 mm long, an entire, triangular, claw-shaped lip.

CONSERVATION STATUS: DD: Data deficient.

ETYMOLOGY: In honor of Henry Hurd Rusby, (1855-1940), graduated from medical school in 1884 and in 1885 he embarked on a two year expedition for Parke, Davis & Co., traversing the South American continent and exploring remote regions of Colombia, Ecuador, Peru, Chile, Bolivia and Brazil. In 1921, when Rusby was 65 years old, he embarked on his last field trip to South America as the Director of the Mulford Biological Exploration of the Amazon Basin.



Authors: E. Hágsater & L. Sánchez S.

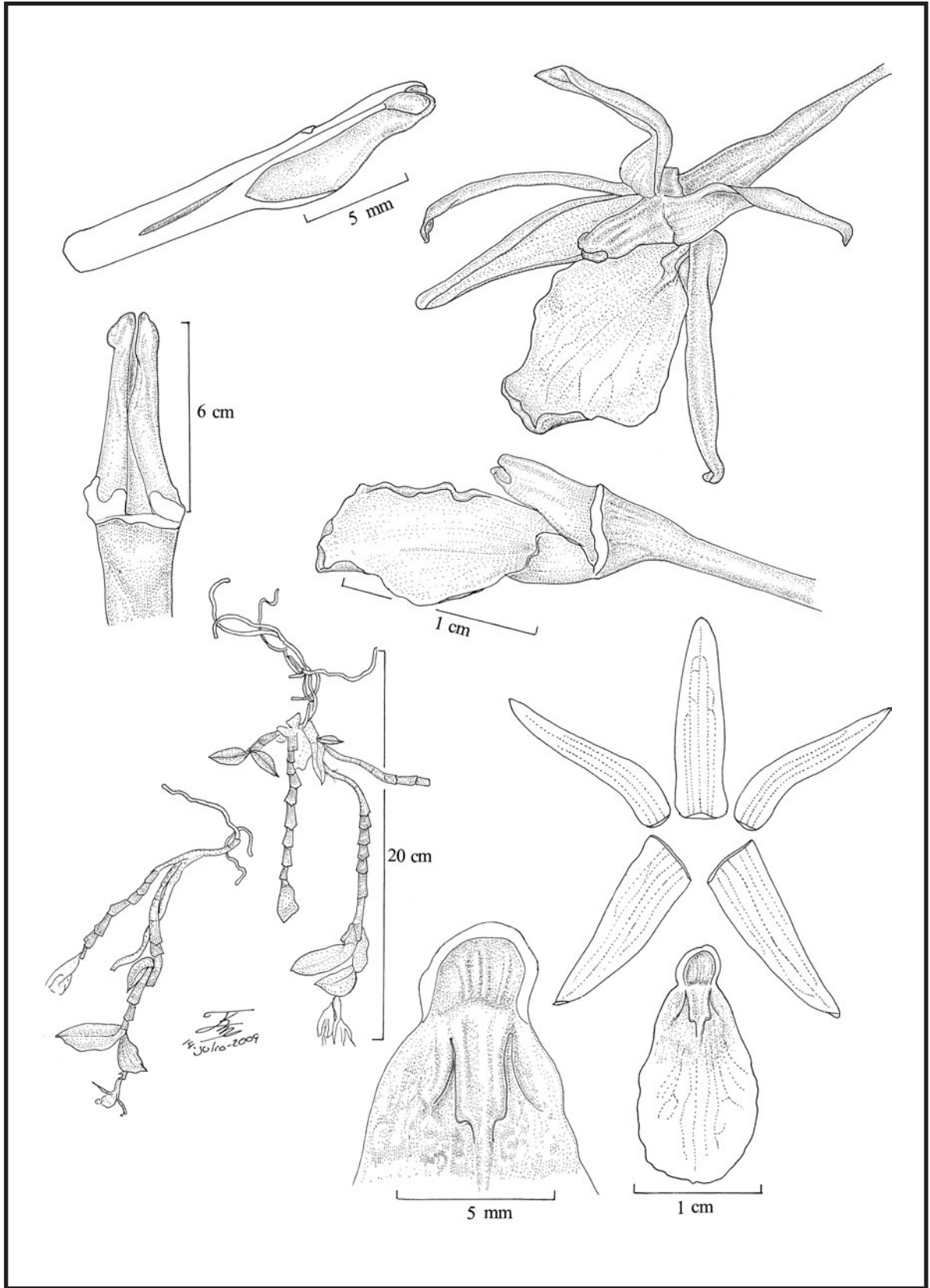
Illustrator: R. Jiménez M.

Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009. Plate 1286



EPIDENDRUM SACCIRHODOCHILUM Hágsater & E.Santiago

Plate 1287

EPIDENDRUM SACCIRHODOCHILUM Hągsater et E.Santiago, *sp. nov.*

Type: ECUADOR: [Pichincha:] ąber San Josę der Montaña Mojanda, Prov. Quito, 2400 m, 4 Januar 1880, **F. C. Lehmann**

424. Holotype: W-R 69283!(Illustration voucher). Isotype: G!

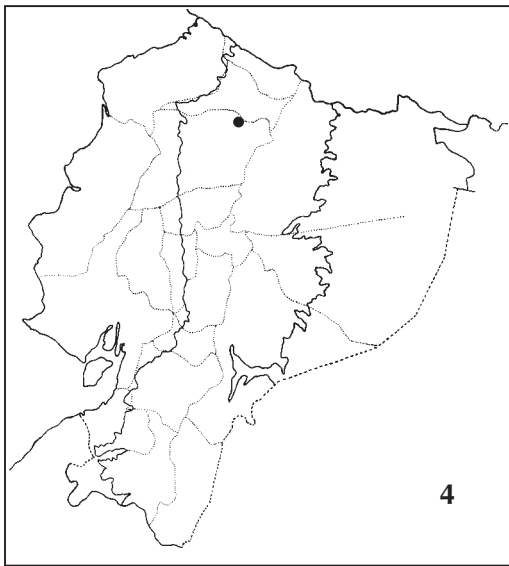
Epidendro rhodochilum (Schltr.) Hągsater & Dodson simile sed floribus 4, aliquantum minoribus, labello cum margine integro et base sacciformi, ovario ventraliter inflato, differens.

Hierba epífita, simpodial, colgante, ca. 15 cm de alto. **Raíces** basales, delgadas, blancas, 0.5 mm de grosor. **Tallos** sencillos, tipo caña, originándose en la base de tallos anteriores, teretes en la base a lateralmente aplanados hacia el ápice, delgados, rectos a levemente sinuosos, 10-12 x 0.12-0.4 cm. **Hojas** 8-11, distribuidas a todo lo largo del tallo, articuladas, alternas, subcoriáceas, descendente-extendidas; vainas tubulares, algo infladas sin llegar a ser infundibuliformes, finamente estriadas, ligeramente ancipitosas, 0.8-1.3 x 0.3-0.6 cm; lámina elíptica a ovado elíptica, oblicua, obtusa, margen entero, 2.1-3.7 x 0.8-1.2 cm. **Bráctea espatácea** 1, anchamente elíptica, subobtusa, conduplicada, 2.2 cm de largo. **Inflorescencia** apical, subsésil, racemosa, recta, pauciflora, laxa, 2.2-2.5 cm de largo; pedúnculo delgado, lateralmente aplanado, recto, 12-14 mm de largo; desprovisto de brácteas y oculto en su totalidad por la bráctea espatácea; raquis corto, sobresaliendo por encima del ápice de la bráctea espatácea, 10-13 mm de largo. **Brácteas florales** mucho más cortas que el ovario, angostamente triangulares, agudas, abrazadoras, 2-4 mm de largo. **Flores** 4, simultáneas, resupinadas, tépalos amarillo verdosos, labelo rojo pardo; sin datos de fragancia. **Ovario** terete, delgado, inflado ventralmente justo detrás del perianto, 11 mm de largo. **Sépalos** entreabiertos, libres, angostamente triangulares, 3-nervados, margen entero, extendido, 15.5 x 4.0-4.5 mm; el **dorsal** obtuso; los **laterales** agudos, oblicuos, con una quilla dorsal pequeña. **Pétalos** entreabiertos, libres, angostamente triangulares, agudos, 3-nervados, ligeramente falcados, margen entero, extendido, 15 x 2.8 mm. **Labelo** totalmente libre de la columna, entero, angostamente obovado, cuneado-sacciforme en la base, margen subentero, 15.5 x 9.5 mm; bicalloso, los callos cortos, pequeños, delgados y paralelos; disco con una quilla intercallosa, ligeramente más larga que los callos, rugoso alrededor del disco, bicuniculado y con un par de pliegues semicirculares, carnosos, ubicados en el lado externo de cada callo. **Columna** recta, amplia en la base y gradualmente más angosta hacia el ápice, 6 mm de largo. **Clinandrio** prominente (aunque sin sobrepasar el ápice de la columna), cubriendo la superficie dorsal de la antera, margen entero. **Antera y Polinios** no vistos. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** no vistos. **Nectario** penetrando ¼ del ovario, amplio en toda su longitud, no ornamentado. **Cápsula** no vista.

Epiphytic, sympodial, pendent **herb.** **Roots** basal, thin, white. **Stems** simple, cane-like, originating from the base of the previous stem, terete at the base to laterally compressed towards the apex, thin, straight, somewhat sinuous. **Leaves** 8-11, distributed throughout the stem, articulate, sub-coriaceous, descending-spreading; sheaths tubular somewhat inflated without being infundibuliform, minutely striated, slightly ancipitose; blade, elliptic to ovate-elliptic, oblique, obtuse, margin entire. **Spathaceous bract** 1, widely elliptic, sub-obtuse, conduplicate. **Inflorescence** apical, sub-sessile, racemose, straight, lax, few-flowered; peduncle thin, laterally compressed, straight; without bracts and totally hidden by the spathaceous bract; rachis short, appearing above the spathaceous bract. **Floral bracts** much shorter than the ovary, narrowly triangular, acute, amplexicaul. **Flowers** 4, simultaneous, resupinate, tepals greenish yellow, lip red-brown. **Ovary** terete, thin, ventrally inflated just behind the perianth. **Sepals** partly spreading, free, narrowly triangular, 3-veined, margin entire, spreading; dorsal sepal obtuse; lateral sepals acute, oblique, with a small dorsal sepals acute, oblique, with a small dorsal keel. **Petals** partly spreading, free, narrowly triangular, acute, 3-veined, slightly falcate, margin entire, spreading. **Lip** totally free from the column, entire, narrowly obovate, base cuneate-sack-like, margin sub-entire; bicallous, calli short, small and parallel; disc with a keel in between the calli, slightly longer than the calli, rugose around the disc, bicuniculate with a pair of semi-circular fleshy pleats, each on the outer side of the calli. **Column** straight, wide at the base, gradually narrowed towards the apex. **Clinandrium-hood** prominent, (though not surpassing the body of the column), covering the anther dorsally, margin entire. **Rostellum** apical, slit. **Nectary** penetrating ¼ of the ovary, wide throughout, smooth.

OTHER SPECIMENS: None see.

DISTRIBUTION AND ECOLOGY: Known only from the type, in the Inter-andean valley near Mojanda, at 2400 m altitude. Flowering in January.



RECOGNITION: *Epidendrum saccirhodochilum* belongs to the Megalospathum Group, characterized by the caespitose but branching habit, many-leaved stem, fleshy, oblique leaves, a short, few flowered, raceme subtended by large semi-ovate spathaceous bracts, resupinate flowers, the column obliquely united to the lip, occasionally free. The species is recognized by the pendent habit, elliptic to ovate-elliptic, oblique leaves, peduncle of the inflorescence part hidden by the subtending spathaceous bract, with 4, simultaneous, sepals and petals narrowly triangular, 15-15.5 mm long; the lip free from the column, narrowly obovate, the margin sub-entire, 15.5 x 9.5 mm. *Epidendrum rhodochilum* (Schltr.) Hągsater has a single-flowered inflorescence, sepals and petals are oblong-lanceolate, 17 mm long; the margin of the obovate lip is ciliate-denticulate. *Epidendrum falsum* Rchb.f. has a longer inflorescence, 4 cm long, with 7 large flowers, sepals oblong-elliptic, 16-17 mm long, the free lip is sub-orbicular-obovate, with the margin denticulate and the base cuneate, and not sack-like.

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

ETYMOLOGY: From the Greek σακκος, bag or sack, in reference to the sac-like base of the lip, ροδο- the prefix for rosy, and χεῖλος- lip, which distinguishes this species from *Epidendrum rhodochilum*, that species has a reddish lip, but does not form a sack at the base of the lip.

Authors: E. Hągsater & E. Santiago

Illustrator: R. Jiménez M.

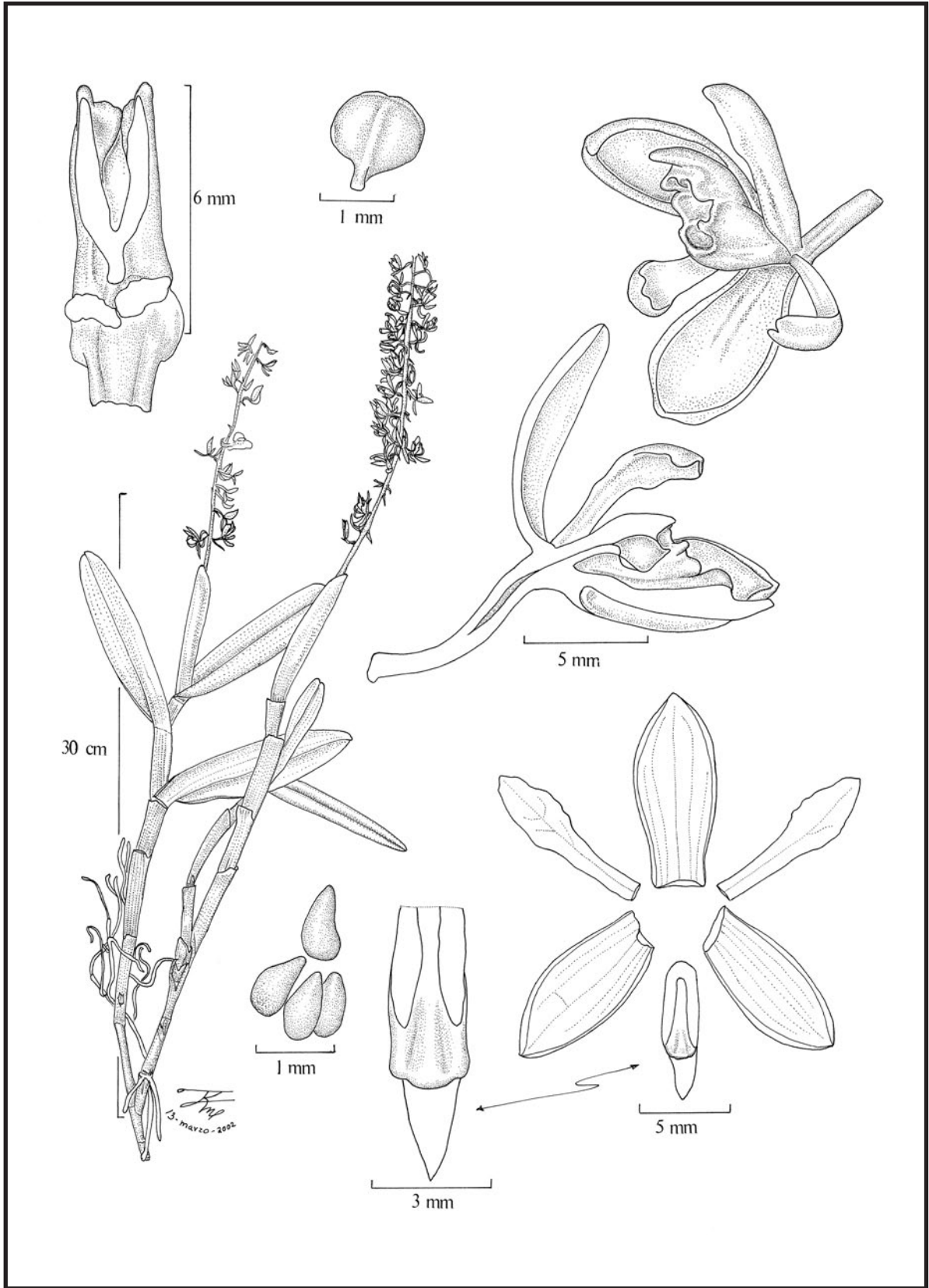
Editors: E. Hągsater & L. Sánchez S.

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México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009.

Plate 1287



EPIDENDRUM SARCOGLOTTIS Schltr.

EPIDENDRUM SARCOGLOTTIS Schltr., Repert. Spec. Nov. Regni Veg., Beih. 8: 86. 1921.

Type: ECUADOR: Chimborazo: In silvis subandinis ad arbores, **A. Mille s.n.** Holotype: B (destroyed). Illustration of the holotype: AMES 36136!, published by Mansfeld (1929).

Hierba epífita, simpodial, subcespitosa, erecta, 25-40 cm de alto. **Raíces** basales, carnosas, generalmente delgadas, 0.7-2 mm de grosor. **Tallos** sencillos, tipo caña, rectos, teretes en la base, lateralmente comprimidos hacia el ápice, 16-21 x 0.3-0.5 cm, el tallo nuevo producido del 2^o-3er entrenudo del tallo anterior, a unos 4-5 cm de la base, en zona basal con 1-2 vainas, tubulares, obtusas, papiráceas, 2-4 cm de largo. **Hojas** 3-4, distribuidas en el tercio apical del tallo, suberectas; vaina tubular, lateralmente comprimida, ancipitosa, estriada, rugosa; lámina oblongo elíptica, desigualmente bilobada, margen entero, coriácea, 5-13 x 1.3-2.2 cm. **Bráctea espatácea** 1, oblonga, ancipitosa, aguda, 3-7.5 cm de largo. **Inflorescencia** apical, racemosa, erecta, 15-17 cm de largo, raquis recto; pedúnculo terete, recto, no ornamentado, 5-7 cm de largo. **Brácteas florales** las basales de la mitad hasta más largas que de ovario, se van reduciendo en longitud siendo las apicales mucho más cortas que el ovario, triangulares, acuminadas, 2-5 mm de largo. **Ovario** terete, no ornamentado, no inflado, 7-8 mm de largo. **Flores** 10-28, simultáneas, no resupinadas, color y fragancia no registrados. **Sépalos** entreabiertos, cóncavos, libres, obovados, obtusos, 5-nervados, margen entero, 8-9 x 3-4 mm; los **laterales** ligeramente oblicuos. **Pétalos** extendidos, lineares hacia la base, dilatados hacia el ápice, obtusos, 1-nervados, margen ondulado, 8-9 x 1.8-2.0 mm. **Labelo** unido a la columna, entero, triangular, en forma de garra, 4-5 x 1.0-1.2 mm; callo prominente, formando un cojín amplio, carnoso, cubriendo toda la superficie basal del labelo, flabelado, al extenderse da la apariencia al labelo de ser trilobado. **Columna** recta, gruesa, 4.0-5.0 mm de largo. **Clinandrio** reducido, margen entero. **Antera**. subesférica, con un pico angosto al frente, 4-locular. **Polinios** 4, obovados, lateralmente comprimidos. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** cortos, de un tercio del largo de la cavidad estigmática. **Nectario** sin traspasar el perianto, no ornamentado. **Cápsula** no vista.

Epiphytic, sympodial, sub-caespitose **herb.** **Roots** basal, fleshy, thin, few. **Stems** simple, cane-like, terete at base, ancipitous above. **Leaves** 3-4, distributed throughout the apical third of the stem; sheath ancipitous, striated and rugose; blade oblong-elliptic, unequally bilobed, coriaceous, margin entire. **Spathaceous bract** oblong, ancipitous, acute. **Inflorescence** apical, racemose, erect. **Floral bracts** from half as long or longer to much shorter than the ovary, triangular, acuminate. **Ovary** terete. **Flowers** 10-28, simultaneous, non-resupinate. **Sepals** partly spreading, concave, obovate, obtuse, 5-veined, margin entire. **Petals** spreading, linear at the base, dilated above, 1-veined, margin undulate. **Lip** united to the column, entire, claw-like; callus prominent, forming a wide cushion, fleshy, covering all the base of the lip, flabellate, when callus is spread the lip appears as 3-lobed. **Column** straight, thick. **Clinandrium-hood** reduced, margin entire. **Anther** sub-spherical, with a narrow beak in front. **Pollinia** 4, obovate, laterally compressed. **Rostellum** apical, slit. **Nectary** not penetrating the ovary, smooth.

OTHER SPECIMENS: COLOMBIA: Cauca: Montaña del Oro and Caramanta above Lupia, 2600-3000 m, VIII 1891, *Lehmann* 7606, AMES (x2)! G! K-L! NY (x2)! (Illustration voucher) W-R! **ECUADOR:** Purchased in Quito from a native collector, 15 IX 1959, *Dodson* 6, SEL!

DISTRIBUTION AND ECOLOGY: Known from Ecuador and Colombia. Epiphyte, from 2660 to 3000 m altitude. Flowering from August to September.

RECOGNITION: *Epidendrum sarcoglottis* belongs to the Mancun group which is characterized by the sympodial habit, few-leaves stems, racemose inflorescence with 1-2 ancipitose, long, spathaceous bracts with parallel sides, and Mancun Subgroup which is non-resupinate, generally reduced and fleshy flowers. The species is recognized by its apically laterally compressed stems, 3-4, oblong-elliptic leaves, 8-9 mm long sepals, the petals with the margin undulate along the apical half, claw-shaped, entire lip, and the single, simple, flabellate callus. It is similar to *Epidendrum adenoglossum* Lindl. which grows in Peru, has linear-lanceolate leaves, short, 5 mm long sepals, petals with an entire margin, and a 3-callose lip, the lateral calli prominent, the mid callus shorter. *Epidendrum mancum* Lindl. is endemic to Ecuador, has shorter plants, 15-25 cm tall, short, wide leaves (2-6 x 1.3-2.7 cm), small flowers, sepals 5-7 mm long, the lip reduced, 3-callose, the lateral calli prominent and elongate, the mid callus small and sub-globose. *Epidendrum brachyglossum* Lindl., also from Ecuador, has terete stems, narrow leaves (0.6-0.8 cm wide), a 3-lobed, bicallose lip, the calli forming a fleshy, canaliculate cavity on the disc, the lateral lobes sub-orbicular, the midlobe transversely rectangular, entire.

NOTE: Dodson (1999), cited *Holm-Nielsen* 6214 as this species, but that collection refers to *E. brachyglossum* Lindl.

CONSERVATION STATUS: DD. Data deficient.



ETYMOLOGY: From the Greek σαρκῆ, fleshy, and γλωττις mouth of the windpipe, in reference to the fleshy lip.

REFERENCES: Dodson, C. H. 1999. *Orchidaceae* in Jørgensen, P. M. & S. León-Yáñez. Catalogue of the Vascular Plants of Ecuador. **Monog. Syst. Bot. Missouri Bot. Gard.** 75: 666. Mansfeld, R. 1929. Figuren Atlas zu der Südamerikanischen Kordillerenstaaten von R. Schlechter, **Repert. Spec. Nov. Regni Veg., Beih.** 57: no. 363.

Authors: L. Sánchez S. & E. Hágater

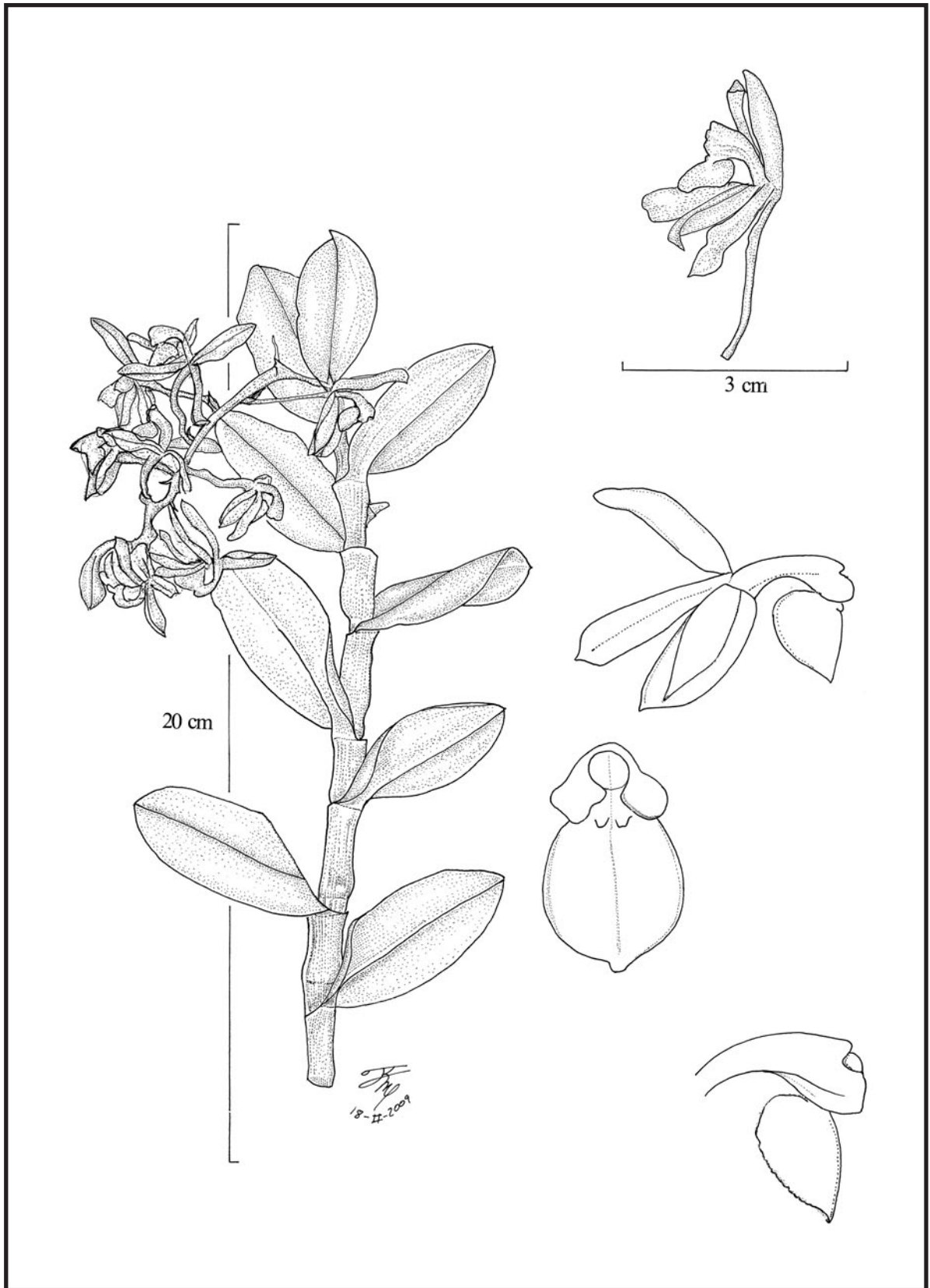
Illustrator: R. Jiménez M.

Editors: E. Hágater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009. Plate 1288



EPIDENDRUM SARCOSTALIX Rchb.f. & Warsc.

Plate 1289

EPIDENDRUM SARCOSTALIX Rchb.f. & Warsc., Bonplandia 2: 111. 1854.

Type: PERU: Without locality data, *Warszewicz s.n.* Holotype: W-R 49936! (Illustration voucher, flower copied from Reichenbach's sketch). Tracing of plant AMES 38296!

Hierba monopodial, erecta, ramificada subapicalmente, de más de 16 cm de alto (sólo vista la porción apical del tallo). **Raíces** no vistas. **Tallos** tipo caña, ramificados subapicalmente, erectos, rectos; de más de 16 x 0.8 cm. **Hojas** 9 o más, dísticas, erecto-extendidas, subcoriáceas; vainas tubulares, estriadas, 15-23 x ca. 8 mm; lámina "oblonga" ovado elíptica, obtusa, diminutamente apiculada, margen entero, extendido a ligeramente revoluto, 3.5-5 x 2-2.5 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, arqueado nutante, laxa, 6 cm de largo; pedúnculo corto, delgado, recto, 1 cm de largo; desprovisto de brácteas. **Flores** 12, simultáneas, resupinadas, carnosas; sin datos de color ni fragancia. **Brácteas florales** mucho más cortas que el ovario, triangular lanceoladas, acuminadas, abrazadoras, 6-8 mm de largo. **Ovario** terete, delgado, ligeramente dilatado detrás del perianto, 20 mm de largo. **Sépalos** entreabiertos, libres, carnosos, oblongo obovados, agudos, margen entero, 15-17 x 6 mm; los **laterales** ligeramente oblicuos. **Pétalos** entreabiertos, libres, oblanceolado espatulados, obtusos, diminutamente apiculados, 14 x 3.5 mm. **Labelo** unido a la columna, entero, convexo, anchamente ovado cordiforme, agudo, ligeramente cordado en la base, margen ligeramente eroso, ca. 8 x 10 mm; bicalloso, los callos pequeños. **Columna** delgada hacia la base, arqueada, con un par de alas redondeadas en el ápice carnosos, 11 mm de largo. **Clinandrio** corto, margen entero. **Antera y Polinios** no vistos. **Rostelo** apical, hendido.

Monopodial, erect **herb**, branching sub-apically. **Stems** cane-like, branching sub-apically, erect, straight. **Leaves** 9 or more, distichous, erect-spreading, sub-coriaceous; sheaths tubular, striated; blade "oblong", ovate-elliptic, obtuse, minutely apiculate, margin entire, spreading to slightly revolute, about half as wide as they are long. **Inflorescence** apical, racemose, arching-nutant, lax-flowered, peduncle short, thin, straight, without bracts. **Flowers** 12, simultaneous, resupinate, fleshy. **Floral bracts** much shorter than the ovary, triangular-lanceolate, acuminate, amplexicaul. **Ovary** terete, thin, slightly dilated behind the perianth, long. **Sepals** partly spreading, free, fleshy, oblong-obovate, acute, margin entire, the lateral sepals slightly oblique. **Petals** partly spreading, free, oblanceolate-spatulate, obtuse, minutely apiculate. **Lip** united to the column, entire, convex, widely ovate-cordiform, acute, base slightly cordate, margin slightly erose; bicallose, the calli small. **Column** thin towards the base, arching, with a pair of rounded wings at the fleshy apex. **Clinandrium-hood** short, margin entire. **Rostellum** apical, slit.

OTHER SPECIMENS: None seen.

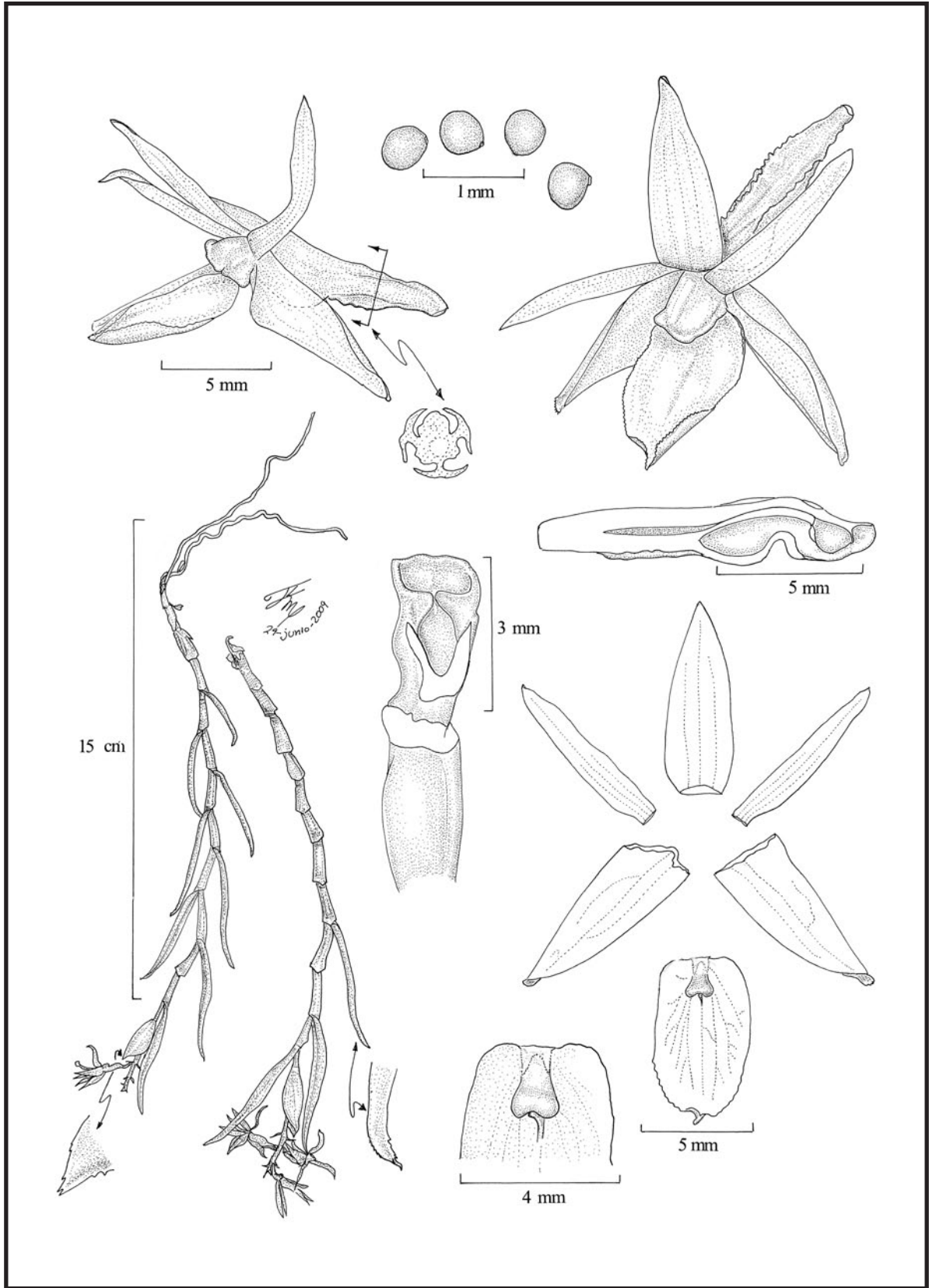
DISTRIBUTION AND ECOLOGY: Known only from the type, "Peru", without locality.

RECOGNITION: *Epidendrum sarcostalix* belongs to the Andean Group, Cernuum Subgroup, characterized by the monopodial habit, cane-like stems with subapical branches which are considerably shorter than the main stem, coriaceous to sub-coriaceous leaves, and fleshy flowers, the lip entire or 3-lobed. The species is recognized by the ovate-elliptic leaves 3.5-5 x 2-2.5 cm, large flowers, sepals 15-17 mm long, convex, widely ovate-cordiform lip with minute calli. *Epidendrum sumapacense* Hágsater & E. Santiago is vegetatively very similar, but the lip is sub-reniform, with small lobes, very prominent calli and 3, low keels on the disc. *Epidendrum orgyale* Lindl. has oblong leaves 2.8-5 x 1-1.2 cm, non-resupinate flowers with a elongate ovary, sepals 12-14 mm long, and the lip widely cordiform and the margin serrulate.

CONSERVATION STATUS: DD. Data deficient. Known only from the type without locality data.

ETYMOLOGY: From the Greek σαρχο- flesh, and σταλιξ, stake, in reference to the thickened, fleshy column.





EPIDENDRUM SCHMIDTCHENII Hágsater & E.Santiago

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

Type: COLOMBIA: "Antioquia": [Mount?] Tolima, April 1882, *G. Schmidtchen s.n.* Holotype: W-R 11172! (Illustration voucher).

Epidendro calypratoidei Hágsater & Dodson simile sed foliis brevioribus, bractea spathacea oblique ovata, labello parcialiter libero, oblongo-elliptico cum base truncata, unicalloso, discrepans.

Hierba epífita, simpodial, colgante, ca. 15.5-17.5 cm de alto. **Raíces** basales, delgadas, blancas, 0.5-1 mm de grosor. **Tallos** sencillos, tipo caña, teretes en la base y algo lateralmente aplanados hacia el ápice, delgados, ligeramente sinuosos, 12 x 0.1-0.3 cm. **Hojas** 9-10, distribuidas a todo lo largo del tallo, articuladas, alternas, subcoriáceas, suberectas; vainas tubulares, levemente infladas sin llegar a ser infundibuliformes, lateralmente aplanadas, algo ancipitosas, finamente estriadas, 1-1.4 x 0.2-0.4 cm; lámina oblicua, linear a linear lanceolada, cortamente acuminada, apiculada, margen diminutamente papiloso, extendido, 2-4.5 x 0.2-0.4 cm. **Bráctea espatácea** 1, anchamente ovada, aguda, conduplicada, oblicua, con el margen apical dentado, 1.7-2 cm de largo. **Inflorescencia** apical, racemosa, corta, erecta, 3.5 mm de largo; pedúnculo delgado, lateralmente aplanado, recto, 23-25 mm de largo; la mitad basal oculta en la por la bráctea espatácea. **Bráctea floral** mucho más cortas que el ovario, triangular lanceoladas, acuminadas, abrazadoras, 2-4 mm de largo. **Flores** 7, simultáneas, resupinadas; sin datos de color ni fragancia. **Ovario** subterete, inflado ventralmente detrás del perianto, 8 mm de largo; provisto de 3 quillas, longitudinales, paralelas, prominentes, bialadas, erosas. **Sépalos** entreabiertos, libres, ovado triangulares, agudos, 3-nervados, margen entero, extendido, 8.6 x 3 mm; los **laterales** ligeramente oblicuos, con una quilla dorsal erosa. **Pétalos** entreabiertos, libres, linear oblongos, agudos, 3-nervados, margen entero, extendido, 8 x 1.3 mm. **Labelo** unido a la mitad basal de la columna, entero, base truncada, oblongo elíptico, margen apical denticulado, 7 x 4 mm; unicalloso, el callo bilobado en el ápice, muy corto; disco provisto de una quilla pequeña, baja e incipiente. **Columna** engrosada hacia el ápice, dorsalmente levemente arqueada hacia arriba, 3 mm de largo. **Clinandrio** prominente, margen entero. **Antera** no vista. **Polinios** 4, lenticulares; caudículas no vistas. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** prominentes, de la mitad del largo de la cavidad estigmática. **Nectario** penetrando 1/3 del ovario, inflado, constricto a la altura del perianto, no ornamentado. **Cápsula** no vista.

Epiphytic, sympodial, pendent **herb.** **Roots** basal, thin, white. **Stems** simple, cane-like, base terete, somewhat flattened towards the apex; thin, slightly sinuous. **Leaves** 9-10, distributed throughout the stem, articulate, alternate, subcoriaceous, sub-erect; sheaths tubular, slightly inflated, without being infundibuliform, laterally compressed, somewhat ancipitose, minutely striated; blade, oblique, linear to linear-lanceolate, short acuminate, apiculate, margin minutely papillose, spreading. **Spathaceous bract** 1, widely ovate, acute, conduplicate, oblique, the apical margin dentate. **Inflorescence** apical, racemose, short, erect, peduncle thin, laterally compressed, straight; the basal half hidden by the spathaceous bract. **Floral bracts** much shorter than the ovary, triangular-lanceolate, acuminate, amplexicaul. **Flowers** 7, simultaneous, resupinate. **Ovary** sub-terete, inflated ventrally behind the perianth, provided with 3, longitudinal, prominent, erose keels, each bi-winged. **Sepals** partly spreading, free, ovate-triangular, acute, 3-veined, margin entire, spreading, the **lateral** sepals slightly oblique, with a n erose dorsal keel. **Petals** partly spreading, free, linear-oblong, acute, 3-veined, margin entire, spreading. **Lip** united to the basal half of the column, entire, base truncate, oblong-elliptic, apical margin denticulate; single callused, the callus bilobed at the apex, very short; disc provided with a small, low, keel. **Column** thickened towards the apex, dorsally slightly arching upwards, very short. **Clinandrium-hood** prominent, margin entire. **Pollinia** 4, lentil-shaped. **Rostellum** sub-apical, slit. **Nectary** penetrating 1/3 of the ovary, inflated, constricted at the height of the perianth, smooth.

OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: Known only from the type, "Tolima". Flowering in April.

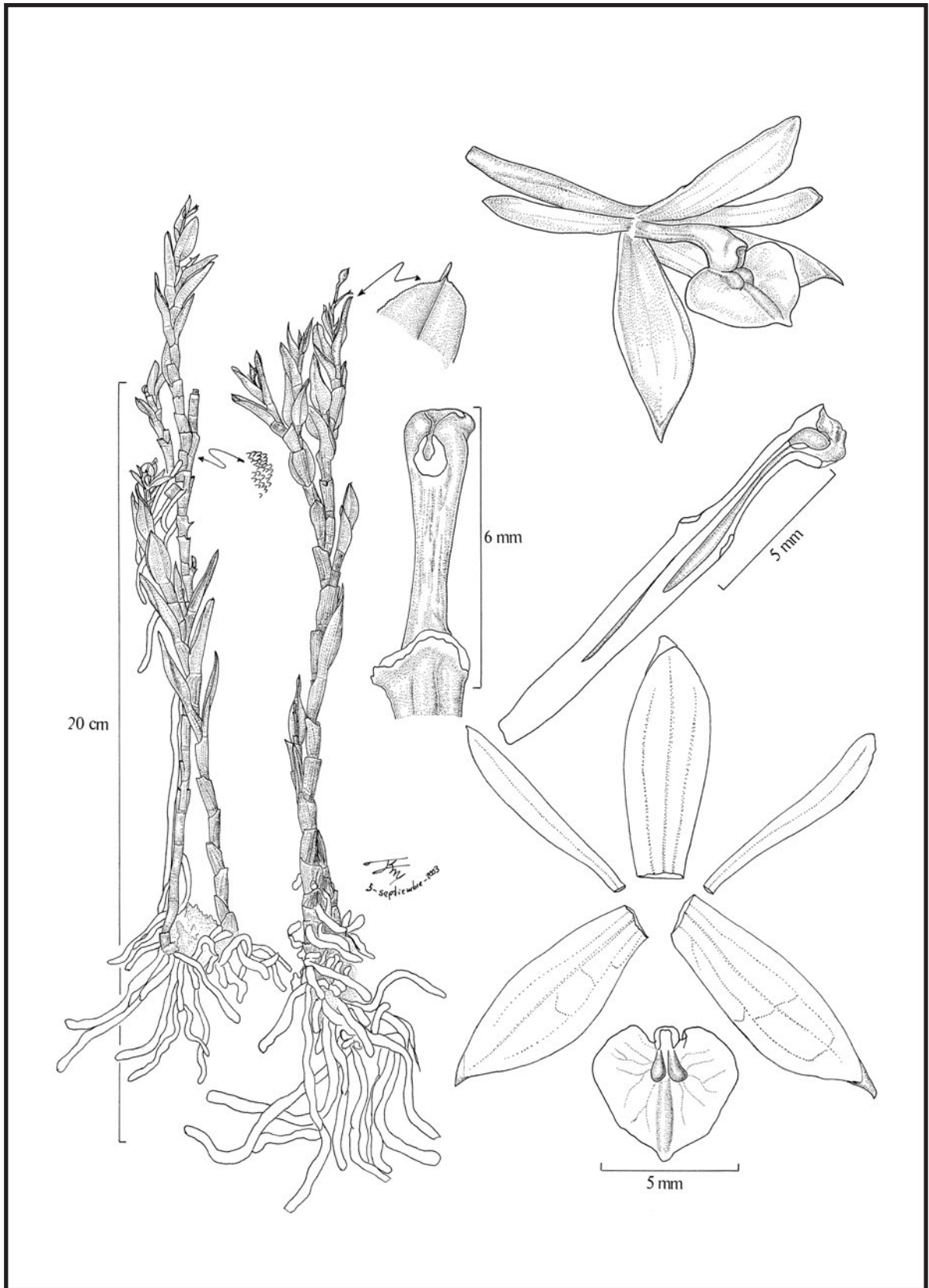
RECOGNITION: *Epidendrum schmidtchenii* belongs to Megalopsthemium Group characterized by the caespitose but branching habit, many-leaved stem, fleshy, oblique leaves, a short, few flowered, raceme subtended by large semi-ovate spathaceous bracts, resupinate flowers, the column more or less united to the lip, and the Inornatum Subgroup, which has long, 3-8, narrow leaves, 8:1-20:1, and a simple, lip. The species is recognized by the small plants with linear to linear-lanceolate leaves, inflorescence racemose about 3.5 mm long, with a widely ovate bract covering half the peduncle; the ovary inflated with longitudinal, erose [two-winged], keels; the lip oblong-elliptic, with a single, bilobed-callus. *Epidendrum calypratoidei* Hágsater & Dodson has a semi-lanceolate spathaceous bract covering the whole of the peduncle, and elliptic, acute, bicallose lip, the margin of the clinandrium-hood erose. *Epidendrum vareschii* Foldats, from



western Venezuela, has a longer inflorescence, 8.5 cm long with 2 prominent spathaceous bracts on the peduncle, the ovary inflated without longitudinal keels, and the lip narrowly ovate, with 2 short, laminar calli.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In honor of G. Schmidtchen, a German botanist who collected around Medellín during 1882-1884; a few of his specimens are at W-R, another set, with little information, was sent to B, where it was destroyed. There are other orchids dedicated to him in *Masdevallia*, *Platystele*, *Stelis* and *Telipogon*, as well as plants in the Adiantaceae, Lycopodiaceae and Sellaginellaceae families.



EPIDENDRUM SCOPULORUM Rchb.f.

Plate 1291

EPIDENDRUM SCOPULORUM Rchb.f., Xenia Orch. 3: 23. 1878.

Type: BOLIVIA: [La Paz:] Lacarejá, Viciniis Sorata; Laucha de Cochipata in scopulosis montis Illampi, 3200 m, Januario-Mart. 1860, **G. Mandon 1137**. Lectotype (here designated): W-R 49942! Isolectotypes: AMES! G x2! NY! P x3! S! (Illustration voucher). W-R 49923! W-R s.n.! W-R 33755! (Illustration of flower). [not *Mandon 1137 bis* = *E. cartilaginiflorum**, except for the three short fragments mounted on the left on the specimen at P!]

Hierba litófito, erecta, monopodial, ramificada arriba, ca. 20 cm de alto. **Raíces** basales, en el tallo principal, escasas en algunas ramificaciones, carnosas, gruesas, blancas, 1-2 mm de grosor. **Tallos** ramificados, tipo caña, teretes, erectos, ligeramente flexuosos; el principal 12-19 x 0.2-0.3 cm; las ramificaciones producidas a partir de la mitad apical del tallo inicial, algunas a su vez escasamente ramificadas, 2.5-4.5 x 0.2 cm. **Hojas** 9-12 en el tallo inicial, 3-4 en las ramas, distribuidas en la mitad apical de los tallos, articuladas, alternas, adpresas en tallos jóvenes, coriáceas, púrpura violáceo; vaina tubular, infundibuliforme, estriada, verrugosa, teñida de púrpura violáceo, 6-11 x 2-3 mm; lámina lanceolada, ápice subagudo, apiculado, margen crenulado, extendido, 1.2-3 x 0.5-0.8 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, erecta, corta, pauciflora, laxa, 1.0-1.5 cm de largo; pedúnculo muy corto, terete, desprovisto de brácteas. **Flores** 4, sucesivas, resupinadas, de color púrpura violáceo, sin datos de fragancia. **Brácteas florales** de la mitad del largo del ovario, angostamente triangulares, agudas, conduplicadas, abrazadoras, 3-4.5 mm de largo. **Ovario** terete, delgado, no inflado, no ornamentado, 9-10 mm de largo. **Sépalos** entreabiertos, libres, obovados, obtusos, apiculados, 3-nervados, margen entero, extendido, 9 x 3 mm. **Pétalos** entreabiertos, libres, linear oblanceolados, obtusos, oblicuos, 1-nervados, margen entero, 8.3 x 1 mm. **Labelo** unido a la columna, entero, cordiforme, obtuso, margen entero, 5 x 5.3 mm; bicalloso, los callos cortos, subglobosos; disco provisto de una quilla prominente, que se desvanece hacia el ápice de la lamina. **Columna** delgada, recta, 6 mm de largo. **Clinandrio** corto, margen entero. **Antera y Polinios** no vistos. **Rostelo** apical, hendido. **Cápsula** no vista.

Lithophytic, erect, monopodial, **herb**, with sub-apical branching. **Roots** basal, from the main stem, scarce on some branches, fleshy, thick, white. **Stems** cane-like, terete, erect, slightly flexuous, with sub-apical branching; the branches much shorter than the main stem. **Leaves** 9-12 on the main stem, 3-4 on the branches, distributed along the apical half of the stems, articulate, alternate, adpressed on young stems, coriaceous, violet-purple; sheath tubular, infundibuliform, striated, verrucose, tinged violet-purple, blade lanceolate, apex sub-acute, apiculate, margin crenulate, spreading. **Inflorescence** apical, racemose, erect, short, lax, few-flowered; peduncle very short, terete, without bracts. **Flowers** 4, successive, resupinate, violet-purple. **Floral bracts** half as long as the ovary, narrowly triangular, acute, conduplicate, amplexicaul. **Ovary** terete, thin, not inflated, smooth. **Sepals** partly spreading, free, obovate, obtuse, apiculate, 3-veined, margin entire, spreading. **Petals** partly spreading, free, linear-oblanceolate, obtuse, oblique, 1-veined, margin entire, spreading. **Lip** united to the column, entire, cordiform, obtuse, margin entire; bicallose, the calli short, sub-globose; disc provided with a prominent keel which disappears towards the apex of the lip. **Column** thin, straight, long. **Clinandrium** short, margin entire. **Rostellum** apical, slit.

OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: Known to us only from the type, from the region of La Paz, Bolivia, at 3200 m altitude. Flowers from January to March.

RECOGNITION: *Epidendrum scopulorum* belongs Scabrum Group, Soratae Subgroup characterized by the branching habit, the new stems generally arising from the apex of the previous stem, thus appearing as long stems with lateral inflorescences, acute to acuminate leaves and infundibuliform sheaths. The species is recognized by the small plants, to 20 cm tall, sub-erect branching and adpressed leaves, violet-purple flowers, sepals 9 mm, the lip cordiform with an obtuse apex. *Epidendrum cartilaginiflorum* Rchb.f. is vegetatively very similar, but the flowers are ochre colored, sepals 16 mm long, and the cordiform lip is apically rounded. *Epidendrum soratae* Rchb.f. has greenish yellow flowers, sepals 6-7 mm

long, and lip slightly 3-lobed, the midlobe small and emarginate. *Epidendrum cardenasii* Hágsater has longer leaves, 3.6-5 cm long, sepals 12-13 mm long, the lip reniform with a emarginate lip widely mucronate. *Epidendrum bolivianum* Schltr. has taller plants, to 40 cm tall, purple-brown flowers, sepals 13 mm long, and a 3-lobed lip.

*NOTE: It evident to us that Mandon used his numbers for what he thought was a single species from different localities. Thus 1137 corresponds to *E. scopulorum*. However, his 1137 bis, *E. cartilaginiflorum* corresponds to two different localities, the holotype comes from Ananea, while other specimens were collected near Sorata. The sheet at P contains is a mixed collection.]

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Latin *scopulosus* rocky, found in a rocky place.



Authors: E. Santiago & E. Hágsater

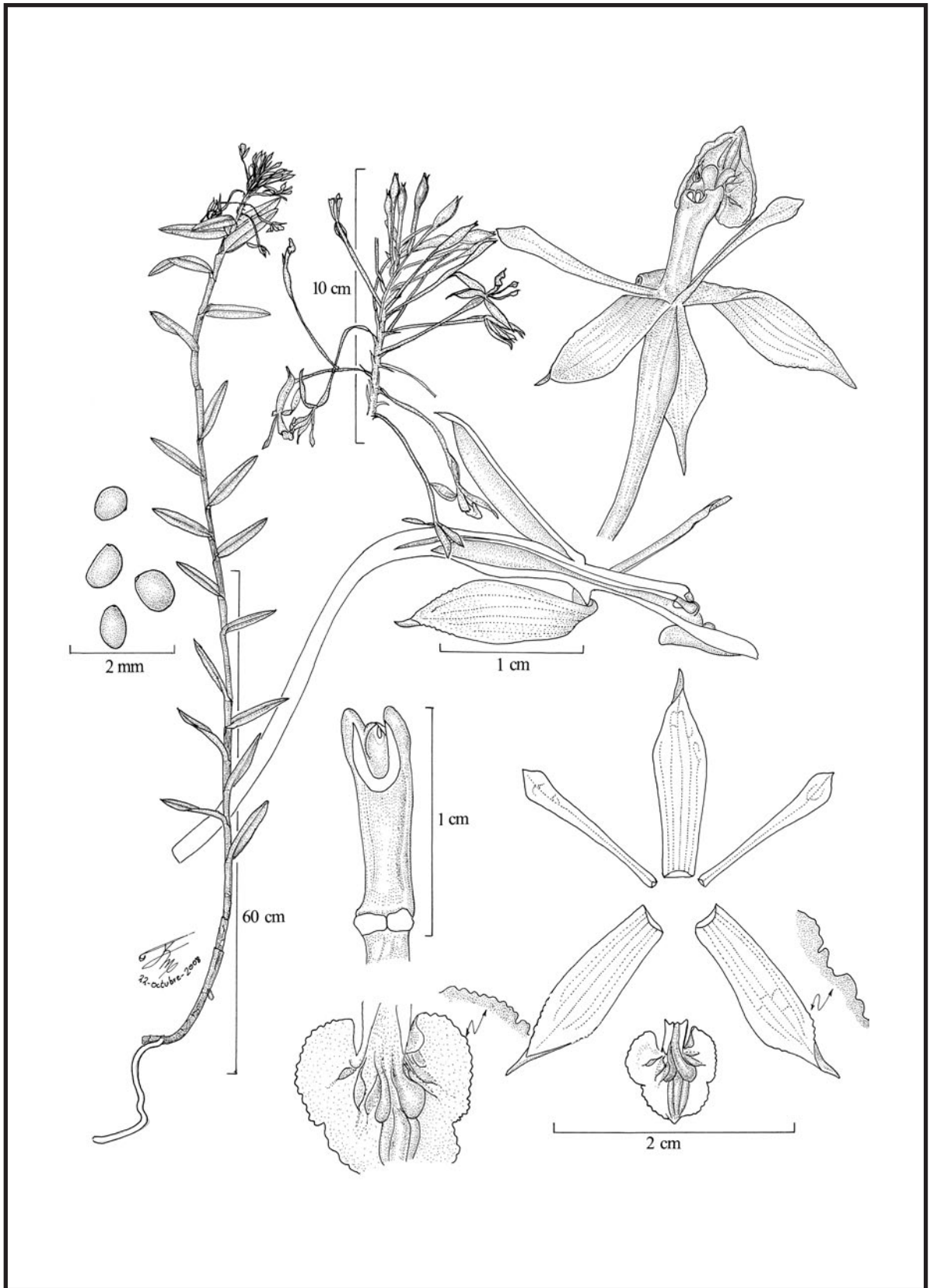
Illustrator: R. Jiménez M.

Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009. Plate 1291



EPIDENDRUM SCYTOCLADIUM Schltr.

EPIDENDRUM SCYTOCLADIUM Schltr., Repert. Spec. Nov. Regni Veg., Beih. 7: 149. 1920.

Type: COLOMBIA: Antioquia: ca. 2700 m, **M. Madero s.n.** Holotype: B, destroyed. Neotype [here designated]: COLOMBIA: Medellín-San Jerónimo, Cerro del Padre Amaya, 2840 m, pressed cult. 22 IV 1983, **E. Hágater 7278**. COL! Isoneotypes: AMO! MO!
Synonym: *Epidendrum subtorquatum* Kraenzlin, Notizbl. Bot. Gart. Berol. 7: 438. 1920. Type: COLOMBIA: Antioquia: Alto de San José, 1560 m, **Kalbreyer 1590 o 1736**. "Specimens cited: B, destroyed, no type designated." Neotype [here designated]: COLOMBIA: Antioquia: Vereda San José, 2980 m, 30 April 1990, **J. G. Ramírez 3891**, JAUM!

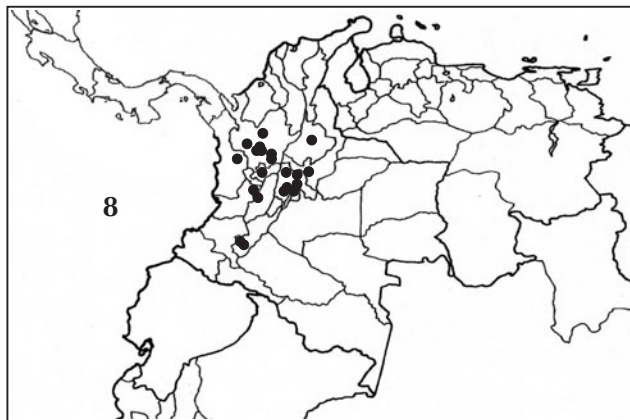
Hierba terrestre, monopodial, ramificada subapicalmente, 50-150 cm de alto. **Raíces** generalmente basales del tallo principal, carnosas, blancas, 1.5-3 mm de grosor. **Tallos** ramificados, tipo caña, teretes en la base a lateralmente aplanados en el ápice, cubiertos en la base por vainas tubulares no foliares, finamente estriadas, rugosas y fibrosas con el tiempo, 15-33 mm de largo; el principal 44 x 0.7-0.8 cm; las ramificaciones subapicales, 6-13 x 0.4-0.7 cm. **Hojas** 13 en el tallo principal, 4-5 en las ramificaciones, extendidas, articuladas, dísticas, desiguales en tamaño, la basal muy pequeña; vainas tubulares, rugosas, finamente estriadas, 11-55 mm de largo; lámina angostamente oblonga a oblongo lanceolada, obtusa, coriácea, margen crenulado, extendido, 1-8 x 1.0-1.8 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, florece una sola vez, racemosa, erecta, pluriflora, laxa, 3-8 cm de largo; pedúnculo muy corto, lateralmente aplanado, 4-5 mm de largo. **Bráctea florales** mucho más cortas que el ovario, linear lanceoladas, acuminadas, abrazadoras, 4-10 mm de largo. **Flores** 15-20, ligeramente carnosas, glabras, sucesivas (aunque varias abiertas de manera simultánea), no resupinadas, sépalos y pétalos amarillos a verdes, en ocasiones teñidos de púrpura intenso en la superficie ventral (excepto el margen), labelo blanco amarillento con el disco purpúreo; sin datos de fragancia. **Ovario** terete, delgado, ligeramente inflado justo detrás del perianto, no ornamentado, 30-42 mm de largo. **Sépalos** reflexos, libres, glabros, oblongo elípticos, 3-nervados, 12-14 x 3-5 mm; el **dorsal** obtuso, diminutamente apiculado, margen entero, extendido; los **laterales** oblicuos, agudos, con una arista prominente, margen apical eroso. **Pétalos** extendidos, linear oblanceolados, ápice obtuso a redondeado, 1-nervados, margen papiloso, extendido, 11-13 x 1-1.8 mm. **Labelo** unido a la columna, incipientemente trilobado, base profundamente cordada, 5-7 x 6-8 mm; bicalloso, los callos prominentes, laminares; disco provisto una quilla central delgada e intercallosa y un par de venas engrosadas cortas del lado externo de los callos; lóbulos laterales transversalmente falcado ovoides, margen ligeramente crenado, conduplicado en la base, 2.5 x 4.5 mm; lóbulo medio transversalmente oblongo, diminutamente apiculado, margen subentero, algo involuto en el ápice, 2-3 x 4-6 mm. **Columna** delgada, ligeramente arqueada, el ápice con un par de alas subcuadradas, oblicuas, 7-9 mm de largo. **Clinandrium** reducido, margen entero. **Antera** no vista. **Polinios** 4, obovoides, algo lateralmente aplanados. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** pequeños, de menos de 1/3 del largo de la cavidad estigmática. **Nectario** poco profundo, apenas penetrando ¼ del ovario, ligeramente inflado (sin formar vesícula), no ornamentado. **Cápsula** no vista.

Terrestrial monopodial **herb** with sub-apical branching. **Roots** generally basal, from the main stem, fleshy, thick. **Stems** cane-like, terete towards the base, laterally compressed towards the apex, the base covered by non-foliar, tubular, striated, rugose sheaths, becoming fibrous with time; the main stem much taller than the branches. **Leaves** 13 on the main stem, 4-5 on the branches, erect-spreading, articulate, oblong to oblong-lanceolate, obtuse, coriaceous, margin crenulate, spreading. **Inflorescence** apical, flowering only once, racemose, erect, lax, many-flowered; peduncle very short, laterally compressed. **Floral bracts** much shorter than the ovary, linear-lanceolate, acuminate, amplexicaul. **Flowers** 15-20, slightly fleshy, glabrous, successive, though several are open simultaneously, non-resupinate, sepals and petals yellow to green, occasionally tinged with deep purple on the ventral surface (except for the margin), lip yellowish white, the disc purple. **Ovary** terete, thin, slightly inflated behind the perianth, smooth, long. **Sepals** reflexed, free, glabrous, oblong-elliptic, 3-veined; the dorsal sepals obtuse, minutely apiculate, margin entire, spreading; lateral sepals oblique, acute, prominently awned, margin erose-papillose. **Petals** erect spreading, linear-oblanceolate, apex obtuse to rounded, 1-veined, apical margin papillose, spreading. **Lip** united to the column, somewhat 3-lobed, base deeply cordate; bicallose, the calli prominent, laminar; disc provided the a narrow central keel, and a pair of thickened veins outside the calli; lateral lobes transversely ovate, falcate, the inner basal margin, margin slightly crenate; midlobe transversely oblong, minutely apiculate, margin sub-entire, the apex somewhat involute. **Column** thin, slightly arching, apex with a pair of sub-quadrate, oblique wings. **Clinandrium-hood** reduced, margin entire. **Polinia** 4, obovoid, somewhat laterally compressed. **Rostellum** apical, slit. **Nectary** shallow, penetrating ¼ of the ovary, slightly inflated, smooth.

OTHER SPECIMENS AND RECORDS: See appendix.

DISTRIBUTION AND ECOLOGY: Widely distributed in the Andes of Colombia, mainly on the Cordillera Central and Oriental, but also towards the northern end of the Cordillera Occidental, terrestrial at 2000-3150 m altitude. Flowering throughout the year, mainly from February to May.

RECOGNITION: *Epidendrum scytocladium* belongs to the Andean Group, Vernixium Subgroup which is characterized by the monopodial, sub-apical branching habit, erect, inflorescences, lax, non-resupinate flowers, the lip 3-lobed. The species is recognized by the oblong to oblong-lanceolate, obtuse 1-8 cm long leaves; short peduncle of the inflorescence, yellow to greenish flowers, the lip with the characteristic purple markings around the disc, sepals 12-14 mm long, petals linear-oblanceolate, 3-lobed lip with the base deeply cordate, and the retrose lateral lobes transversely ovate, falcate, the midlobe transversely oblong, with a minute apicule, ovary 30-42 mm long. It has long been confused with *Epidendrum decurviflorum* Schltr., an endemic from Cauca in southern Colombia, which is vegetative and florally very similar, but the inflorescence has a 2 cm long peduncle, the sepals are unequal in size (dorsal 14 mm long, laterals 16 mm long), petals oblanceolate-sub-spatulate, 12 mm long, the 3-lobed lip has a slightly cordate base, the lateral lobes transversely oblong-quadrate, the midlobe transversely quadrate, and the ovary up to 25 mm long. *Epidendrum orgyale* Lindl. has simultaneous, yellow flowers, an entire, widely cordiform, acute lip, the margin serrulate. *Epidendrum cardioglossum* Rchb.f. has the inflorescence arching-nutant, short, 2-4 cm long, simultaneous, resupinate, greenish yellow flowers with wide, oblanceolate petals, 3-4 mm wide.



NOTE: The peculiar quarter-moon lateral lobes of the lip on the illustration of the type are, we believe, mistaken in that the base of the lobes are folded, and the line where they are folded is missing. The true ovate shape is provided on the left side of the lip in the illustration here provided, as compared to the right side, which shows the base folded, as in the illustration of the holotype (Mansfeld, 1929.)

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek σκυτος leather, and κλαδος branch, in reference to the leathery leaves and branching habit of this species.

REFERENCES: Garay, L. A. 1970. Orquídeas colombianas nuevas o críticas (Decena V), *Orquideología* 5(2): 82-85. Mansfeld, R. 1929. *Repert. Spec. Nov. Regni Veg., Beih.* 57: fig. 202.

Authors: E. Santiago & E. Hágater

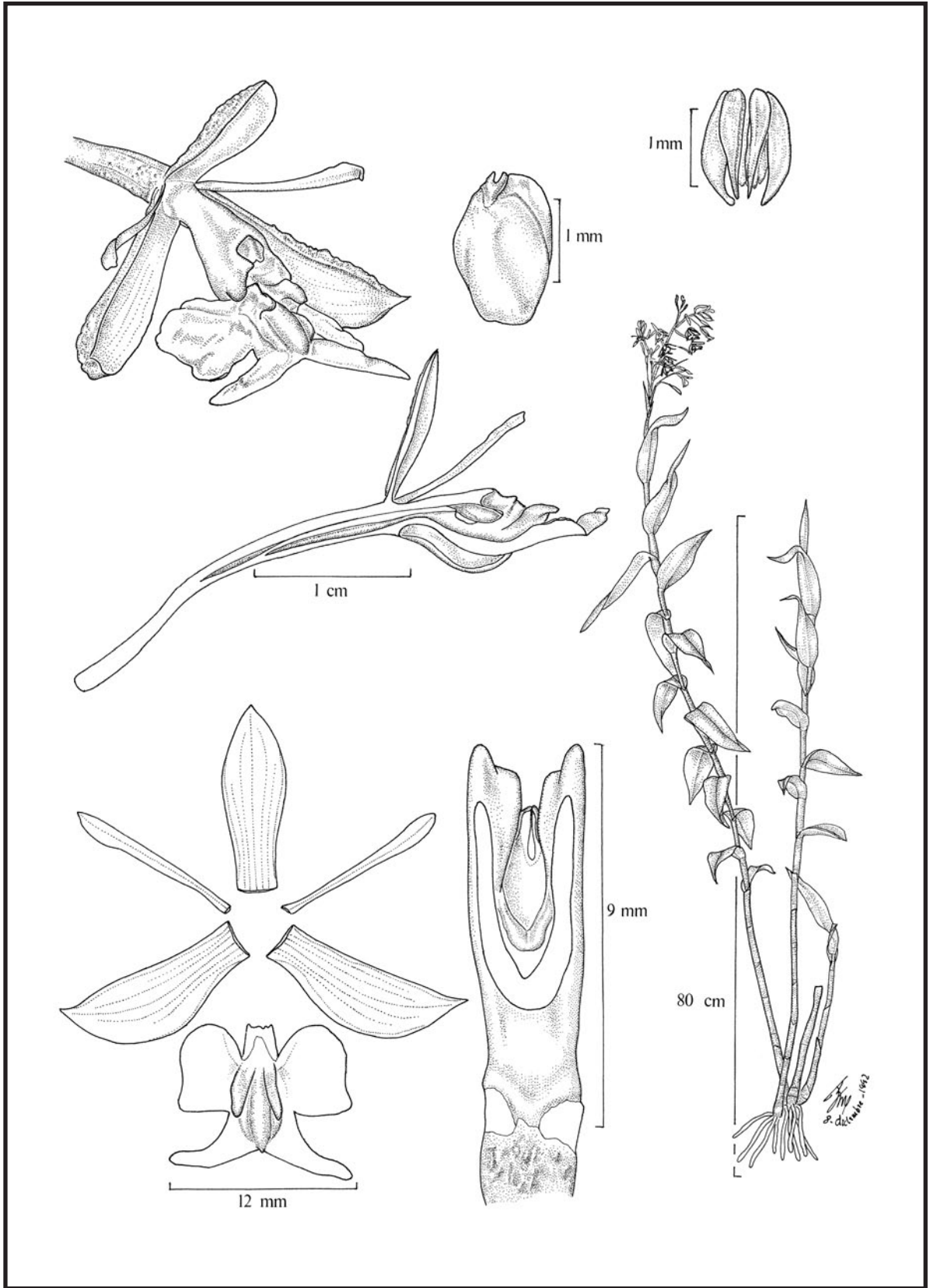
Illustrator: R. Jiménez M.

Editors: E. Hágater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009. Plate 1292



EPIDENDRUM X SPATHIPORPHYREUM Hågsäter & Dodson

Plate 1293

EPIDENDRUM X SPATHIPORPHYREUM Hágsater et Dodson, *nothosp. nat. nov.*

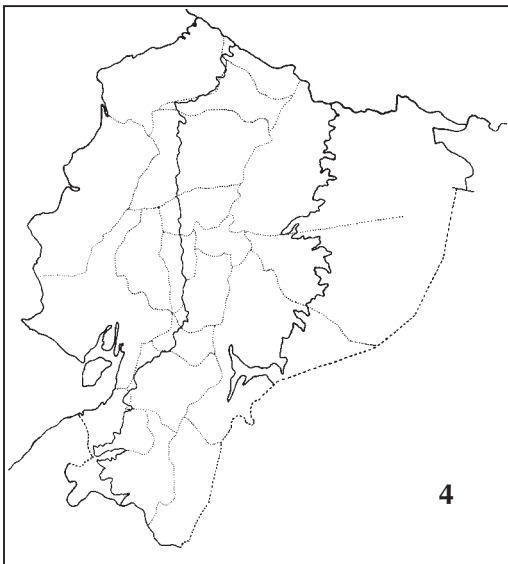
Type: ECUADOR: Pichincha: Sin datos de localidad, 20 November 1988, hort. **Alfonso Pozo sub E. Hágsater 9601**. Holotype: QCA! (Illustration voucher). Clonotypes: pressed cult. 11 December 1992, AMO! pressed cult. 21 May 1997, MO! QCNE!

Hybrida naturalis inter *Epidendro spathulatum* Schltr. et *Epidendro porphyreum* Lindl., floribus rubris, cum columna et labello roseo-rubellis, sepalis dorsaliter verrucosis, labelli lobules lateralibus dolabriformibus, lobulo medio bilobato cum lobulis divaricatis et acutis, callis prominentibus subcorniformibus, cum disco albo, aetate lutescentibus.

Hierba epífita, cespitosa, erecta, de 110 cm de alto. **Raíces** basales, delgadas, blanquecinas, 2.3-3 mm de grosor. **Tallos** tipo caña, sencillos, teretes en la mitad basal, ligeramente comprimidos en la mitad apical, rectos, 90-100 x 0.6-0.8 cm; cubiertos en la parte basal por 4-5 vainas tubulares, lisas, escariosas, papiráceas, 3.5-4.5 cm de largo. **Hojas** 22-24, distribuidas a lo largo de los 2/3 apicales del tallo, subcoriáceas, verdes; vaina foliar tubular, cartácea, 3.5-4.5 cm de largo; lámina lanceolada a angostamente elíptica, aguda, dorsalmente carinada, 6.5-16 x 2.8-3.8 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, paniculada, laxa, suberecta, 24 cm de largo; con racimos paucifloros de 5-7 cm de largo cada uno con una bráctea triangular lanceolada, abrazadora, largamente acuminada, verde, papirácea, de hasta 3 cm de largo; pedúnculo lateralmente aplanado con 8 brácteas (que lo cubren en su totalidad) tubulares, acuminadas, escariosas, papiráceas, progresivamente más cortas, 4-10 cm de largo. **Brácteas florales** mucho más cortas que el ovario, triangulares, acuminadas, progresivamente más cortas, 3-12 mm de largo. **Flores** ca. 50, sucesivas, resupinadas, algo carnosas, sépalos rojizos por el dorso, algo amarillentos en la superficie ventral, pétalos blanco-rojizos, labelo blanco marfil tornándose naranja-rojizo cuando viejo, columna blanca ligeramente rosado-rojiza; sin fragancia apreciable. **Ovario** pedicelado, terete, ligeramente verrucoso en la parte apical, de color rosado, 20-28 mm de largo. **Sépalos** libres, entreabiertos, oblanceolados a subespatulados, agudos, 7-nervados, cóncavos, verrucosos en la parte dorsal, margen entero, extendido, 11 x 3.5 mm; los **laterales** falcados, apiculados, 12 x 4 mm. **Pétalos** libres, entreabiertos, linear oblanceolados, agudos, 1-nervados, margen entero, extendido, 11 x 1 mm. **Labelo** unido a la columna, trilobado, margen subentero, 9 x 12 mm; bicalloso, callos prominentes, carnosos, subcorniformes, lateralmente aplanados, alargados hasta la base del lóbulo medio; disco tricarinado, carinas prominentes, la central alargada hasta el seno apical, el par lateral algo más corto; lóbulos laterales dolabriformes con el ápice truncado, 4 x 5 mm; lóbulo medio bifurcado, formado por dos lóbulos divergentes, falcados, obtusos, 9 x 11.5 mm. **Columna** recta, delgada, 9 mm de largo; el ápice con un par de dientes diminutos y un par de alas redondeadas, cortas. **Clinandrio** reducido, margen entero. **Antera** subovoide, 4-locular. **Polinios** 4, semejantes en tamaño, del tipo ala de pájaro; caudículas laminares, ligeramente más cortas que los polinios. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** prominentes, cubriendo un tercio de la cavidad estigmática. **Nectario** profundo llegando cerca de la mitad del ovario, no inflado, no ornamentado. **Cápsula** no vista.

Epiphytic, caespitose, erect **herb.** **Roots** basal, thin, whitish. **Stems** cane-like, simple, the basal half terete, slightly laterally compressed above, straight; the basal part covered by 4-5 tubular sheaths, smooth, scarios, papery. **Leaves** 22-24, distributed throughout the apical 2/3 of the stem, sub-coriaceous, green; foliar sheath tubular, chartaceous; blade lanceolate to narrowly elliptic, acute, dorsally carinate. **Inflorescence** apical, paniculate, lax-flowered, sub-erect; racemes few-flowered, subtended by a triangular-lanceolate, amplexicaul, long-acuminate, green, papery bract; peduncle laterally compressed with 8 bracts that totally cover it, tubular, acuminate, scarios, papery, progressively shorter. **Floral bracts** much shorter than the ovary, triangular, acuminate, progressively shorter. **Flowers** ca. 50, successive, resupinate, somewhat fleshy, sepals dorsally reddish, somewhat yellowish ventrally, petals reddish white, lip ivory-white turning reddish-orange with age, column white, slightly reddish pink; without fragrance. **Ovary** pedicellate, terete, apically slightly verrucose, pink. **Sepals** free, partly spreading, oblanceolate to sub-spatulate, acute, 7-veined, concave, dorsally verrucose, margin entire, spreading; lateral sepals falcate, apiculate. **Petals** free, partly spreading, linear-oblanceolate, acute, 1-veined, margin entire, spreading. **Lip** united to the column, 3-lobed, margin sub-entire; bicallose, the calli prominent, fleshy, somewhat horn-like, laterally compressed, elongate to the base of the midlobe; disc 3-keeled, the keels prominent, the central keel reaching the apical sinus, the lateral pair somewhat shorter; lateral lobes dolabriform, the apex truncate; midlobe bifid, forming a pair of divergent, falcate, obtuse lobes. **Column** straight, thin; with a pair of minute teeth at the apex, and short, rounded wings. **Clinandrium-hood** reduced, margin entire. **Anther** sub-ovoid, 4-celled. **Pollinia** 4, similar in size, bird-wing type, caudicles laminar, slightly shorter than the pollinia. **Rostellum** sub-apical, slit. **Nectary** deep, penetrating half the ovary, not inflated, smooth.

OTHER SPECIMENS: ECUADOR: Pichincha: Niebli, 27 XII 1871, *Sodiros n.*, BP 65882! (seen on loan at AMES, photo, AMO)

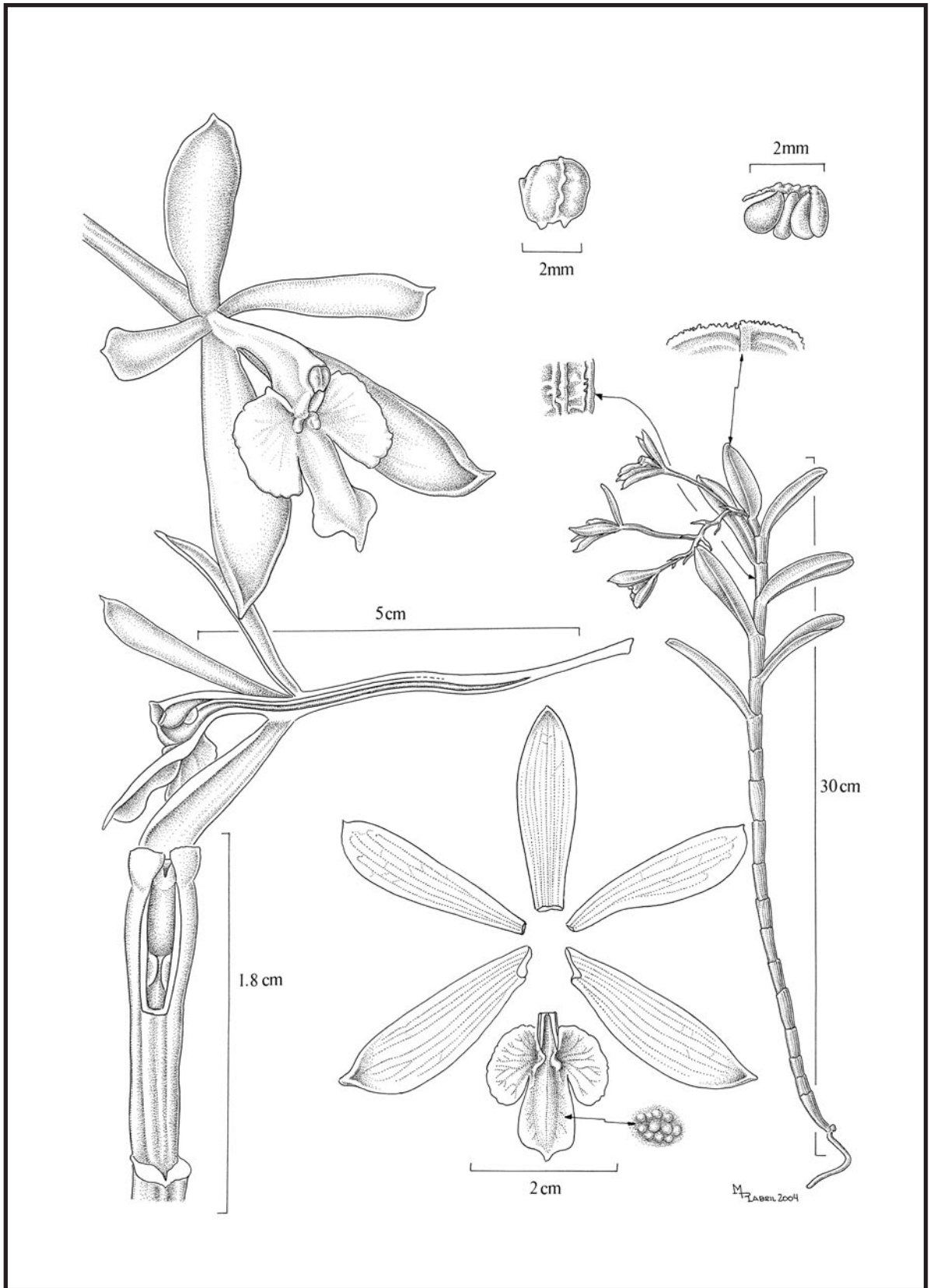


DISTRIBUTION AND ECOLOGY: Known only from Ecuador, from the western slope of the Andes, epiphytic. Flowering from November to May.

RECOGNITION: *Epidendrum x spathiporphyreum* belongs to Pseudopidendrum Group, *Paniculatum* Subgroup which is characterized by the caespitose habit, unbranched stems, apical, branched inflorescence, no true spathe, and the flowers with a long, thin column, a 3-lobed lip with the midlobe generally bifid and divaricate, and filiform petals. The hybrid is recognized by the red flowers, the column and lip reddish pink, sepals dorsally verrucose, the lateral lobes of the lip dolabriform, the midlobe bifid, the lobes divaricate, acute, and the calli prominent, horn-like, calli and disc white turning yellow with age. *Epidendrum spathatum* has orange flowers with a yellow-orange lip, the segments cucullate, the calli are long, and acute, the disc of the lip with 3 pad-like keels reaching the apex of the lip, the column ends in a pair of prominent rounded wings. There is a close resemblance to *E. porphyreum* but that species has larger flowers that are purple with a white splash in the lip, and the calli are much shorter.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In reference to the putative parents of this hybrid, *E. spathatum* and *E. porphyreum*.



EPIDENDRUM STEYERMARKII A.D.Hawkes

EPIDENDRUM STEYERMARKII A.D.Hawkes, Orquídea (Río de Janeiro) 18(5): 173. 1956.

Basionym: *Epidendrum matutinum* Rchb.f., Linnaea, 22(6): 840. 1849, (non Poir 1810) Type: VENEZUELA: Mérida, **J. W. K. Moritz 1065**. Holotype: W-R 49945!

Hierba terrestre, monopodial, erecta, ramificada arriba, de 75-200 [300] cm de alto. **Raíces** basales, carnosas, gruesas, escasas, 1.7-3.4 mm de grosor. **Tallos** ramificados en el ápice cuando maduros, tipo caña, teretes en la base a lateralmente aplanados hacia el ápice, erectos, rectos, ca. 40-75 x 0.35-1.1 cm, las ramificaciones 9-20 x 0.3-1.1 cm. **Hojas** 15, en el tallo principal, 6-8 en las ramas, distribuidas a lo largo de los tallos, alternas, articuladas, coriáceas, caedizas; vainas tubulares, ligeramente infladas cuando secas, sin llegar a ser infundibuliformes, estriadas y fuertemente rugosas, 6-35 x 3-11 mm; lámina elíptica a lanceolada, ápice redondeado, cortamente bilobado, margen apical entero a eroso, 3-12 x 1.3-3 cm. **Inflorescencia** apical, racemosa, florece una sola vez, arqueado nutante, laxa, pauciflora, 5-7 cm de largo; pedúnculo corto, terete, delgado, desprovisto de brácteas, 6 mm de largo. **Bráctea espatácea** ausente. **Brácteas florales** mucho más cortas que el ovario, angostamente lanceoladas, agudas, abrazadoras, 7-11 mm de largo. **Flores** 7-13, simultáneas, resupinadas, amarillas a verdosas, la columna y el labelo blancos; fragancia nocturna a salicilato de metilo. **Ovario** terete, delgado, no inflado, no ornamentado, 35-62 mm de largo. **Sépalos** entreabiertos, oblanceolados a oblongo elípticos, subagudos, aristados, carnosos, 6-nervados, las nervaduras laterales bifurcadas desde la base, dando la apariencia de ser 8-nervados, margen entero, 26-35 x 4.5-9 mm; los **laterales** fusionados de manera oblicua a la parte basal de la columna, ligeramente oblicuos. **Pétalos** oblanceolados a subespatulados, ápice redondeado, diminutamente apiculado, 3-nervados, las nervaduras laterales ramificadas dando la apariencia de ser 5-nervados, margen entero, 26-28 x 5-7 mm. **Labelo** unido a la columna, trilobado, base cordada, 15-20 x 12-16.5 mm; bicalloso, los callos pequeños, laminares, delgados; provisto de 3 quillas, lisas, bajas, alargadas que se desvanecen antes de llegar al ápice del lóbulo medio; lóbulos laterales extendidos, dolabriformes a subreniformes, margen eroso, 6.8 x 10 mm; lóbulo medio oblongo, gradualmente más ancho en el ápice, truncado apiculado, margen entero, 11-14 x 5-8.5 mm. **Columna** ligeramente arqueada, delgada en la base ensanchándose gradualmente hacia el ápice, 15-22 mm de largo. **Clinandrio** corto, margen entero. **Antera** subsférica, con una quilla delgada y algo sinuosa al frente, 4-locular. **Polinios** 4, obovoides, lateralmente comprimidos, desiguales; caudículas suaves y granuladas, tan largas como los polinios. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** prominentes, de 1/2 del largo de la cavidad estigmática. **Nectario** penetrando 2/3 del ovario, no inflado, no ornamentado. **Cápsula** no vista.

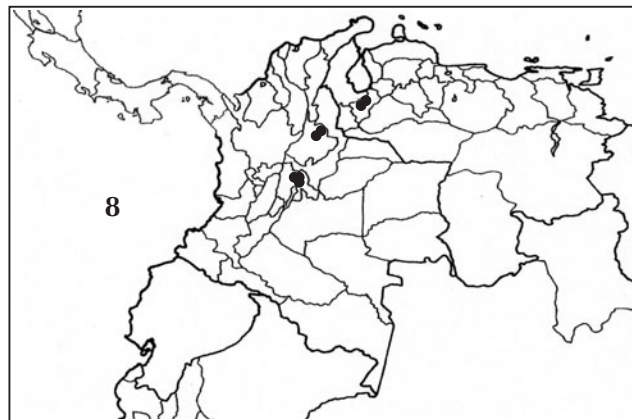
Terrestrial, monopodial, erect herb, branching above. **Roots** basal, fleshy, thick, few. **Stems** branching near the apex when mature, cane-like, terete at the base, laterally compressed towards the apex, straight, the branches shorter than the main stem. **Leaves** 15 on the main stem, 6-8 on the branches, distributed throughout the stems, alternate, articulate, coriaceous; sheaths tubular, slightly inflated when dry, striated and strongly rugose; blade elliptic to lanceolate, apex rounded, shortly bilobed, apical margin entire to erose. **Inflorescence** apical, racemose, flowering only once, arching-nutant, lax and few-flowered; peduncle short, terete, thin. **Floral bracts** much shorter than the ovary, narrowly lanceolate, acute. **Flowers** 7-13, simultaneous, resupinate, yellow to greenish, the column and lip white; fragrance nocturnal, of methyl salicylate. **Ovary** long, terete, thin, smooth. **Sepals** partly spreading, oblanceolate to oblong-elliptic, sub-acute, aristate, fleshy, 6-veined, the lateral veins bifurcate from the base, so as to appear 8-veined, margin entire; the lateral **sepals** fused obliquely to the basal part of the column, slightly oblique. **Lip** united to the column, 3-lobed, base cordate; bicallose, the calli small, laminar, thin; provided with 3, smooth, low keels, which disappear before reaching the apex of the midlobe; lateral lobes spreading, dolabriform to sub-reniform, margin erose; midlobe oblong, gradually wider towards the apex, truncate, apiculate, margin entire. **Column** slightly arching, thin at the base, widened gradually towards the apex. **Clinandrium-hood** short, margin entire. **Anther** subspherical, with a thin, somewhat sinuous keel in front, 4-celled. **Pollinia** 4, obovoid, laterally compressed, sub-equal; caudicles soft and granulate, as long as the pollinia. **Rostellum** apical, split. **Nectary** penetrating 2/3 of the ovary, smooth.

OTHER SPECIMENS: COLOMBIA: Without locality data, *Escobar 5048*, AMO! Entreé de Páramo del Jansbear, 6000 ft, *Funck 1184*, W-R! S. Nevada, 8000 ft, *Funck 1545*, W-R! **Cundinamarca:** Chocontá-Machetá, 2700 m, 31 V 1961, *Fernández 5786*, COL! NY! Nemocón, 2750 m, 21 IV 1968, *García-Barriga 19379*, COL! represa del Siga, 2750 m, 17 III 1996, *Hágsater 11484*, AMO! Chocontá-Guateque, 2900 m, 1 VII 1947, *Haight 5905*, COL! US! Junín-Claraval, 2450 m, 15 I 1967, *Huertas 6658*, COL! Chocontá-Gachetá, 2500 m, 1 VI 1940, *Renz 3136*, RENZ! Chocontá, 2800-3000 m, 4 VI 1953, *Schneider 684*, S! Páramo de Chocontá, 3000 m, 4 VI 1953, *Schneider 685*, COL! **Santander:** Corcoba 2400 m, 27 II 1939, *Alston 7303*, NY! *Ibid.* 19 VII 1965, *Barkley 35249*, AMES! Bucaramanga-Berlin, 3250 m, 8 XI 1981, *Luer 6617*, SEL! Páramo [de] "El Almorzadero", *Ospina 775*, JAUM! Bucaramanga (road to Cúcuta), 9000 ft, V 1948, *Sandeman 6036*, K-L! **VENEZUELA: Mérida:** Without locality data, *Engel 209*, W-R 49944! Pueblos del Saz, 1600-2500 m, II 1957, *Bernardi 6405*, NY! Páramo del Morro, 2700 m, 1 IV 1922, *Jahn 1057*, US! (Illustration voucher). El Morro, 2000 m, 13 V 1949, *Renz 5396*, RENZ! Zwischen El Molino and Canaguá, 2100 m, 5 VI 1949, *Renz 5481*, RENZ! Santa Cruz de Mora, 2000 m, 12 XI 1949, *Renz 6111*, RENZ! Mucujún-Tal, 2000 m, 20 III 1951, *Renz 6697*, RENZ!

OTHER RECORDS: VENEZUELA: Mérida: Sierra Nevada de Mérida, 2700 m, *Allston 6891*, note, HPUJ! **COLOMBIA: Santander:** Bucaramanga-Pamplona, *Ortiz V. 725*, slide, AMO!

DISTRIBUTION AND ECOLOGY: Found on the northern end of the Cordillera de los Andes, from above Bucaramanga, Colombia to the Sierra Nevada, east of Mérida, Venezuela, between 1800 to 3250 m altitude. Flowering from November to July.

RECOGNITION: *Epidendrum steyermarkii* belongs to the Andean Group and Cernuum Subgroup which is characterized by the monopodial, branching habit, the erect cane-like stems with sub-apical branching, racemose, nutant, inflorescence, compact, fleshy flowers, lip three-lobed. The species is recognized by the lax-flowered inflorescence, elongate ovary, 35-62 mm long, the large flowers, sepals 26-35 mm long, the midlobe of the lip oblong and apiculate, 11-14 mm long. *Epidendrum cornicallosum* Foldats has a dense inflorescence, shorter ovary, 25-35 mm long, smaller flowers, sepals 21-26 mm long, and the midlobe of the lip rectangular with a pair of semi-circular lobes at the apex. *Epidendrum pichinchae* Schltr. has a densely, many-flowered inflorescence with narrow, acuminate floral segments, and the midlobe of the lip forming a long isthmus with parallel sides, apically sub-rhombic with a prominent apiculae. *Epidendrum elatum* C.Schweinf. has a densely flowered inflorescence, ovary 25-50 mm long, and the flowers somewhat smaller, sepals 15-21 mm long, and the midlobe of the lip sub-quadrata, widely mucronate, 5 mm long. *Epidendrum adamsii* Hágsater & Dodson has the ovary 20-32 mm long, the flowers non-resupinate, sepals 12-15 mm long and the midlobe of the lip sub-quadrata, 5.2 mm long.



CONSERVATION STATUS: DD. Data deficient. Apparently frequent throughout its range.

ETYMOLOGY: In honor of Julian Alfred Steyermark (1909-1988), of St. Louis, Missouri, one of the most proficient plant collectors in Tropical America, with over 130,000 collections. Much of his work centered in Venezuela and Guatemala. He was associated with the Missouri Botanical Garden.

REFERENCE: Foldats, E. 1970. *Epidendrum steyermarkii*, *Flora de Venezuela*, 15(3): 405.

Authors: E. Santiago & E. Hágsater

Illustrator: M. López R.

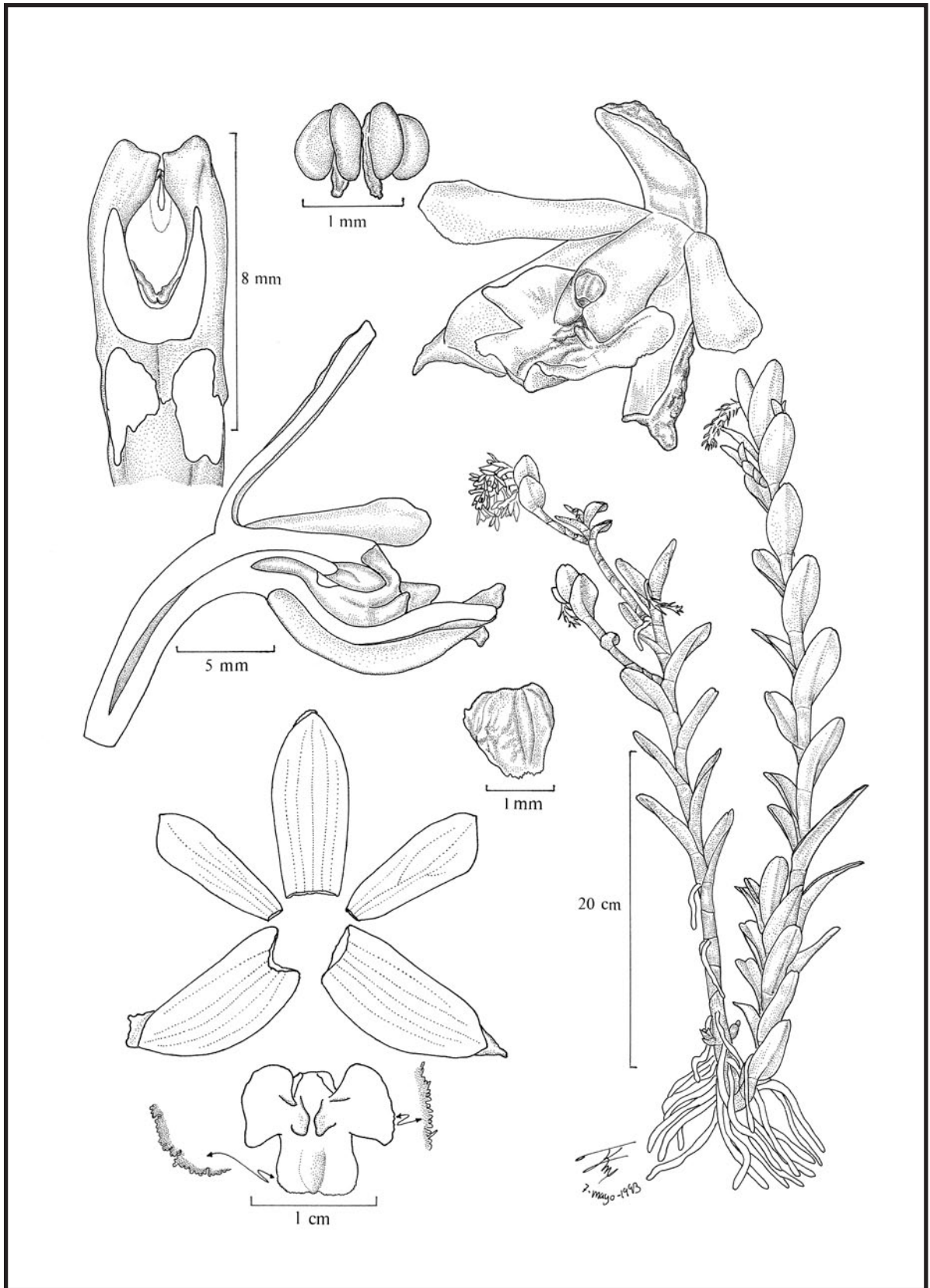
Editors: E. Hágsater & L. Sánchez S.

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México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009.

Plate 1294



EPIDENDRUM SUAVEOLENS Ames

Plate 1295

EPIDENDRUM SUAVEOLENS Ames, Schedul. Orchid. 1: 21. 1922.

Type: COLOMBIA: Cauca: Headwaters of Río López, Río Palo basin, Tierra Adentro, 2500-3000 m, January 1906. **Henri Pittier 1066**. Holotype: US! photo AMES! Fragment of holotype: AMES!*

Hierba terrestre, monopodial, erecta, ramificada arriba, 55-150 cm de alto. **Raíces** basales en el tallo principal, carnosas, blancas. **Tallos** ramificados arriba, tipo caña, teretes, rectos, el principal ca. 35-45 x 0.8-1.0 cm; las ramas que a su vez se ramifican, 9-13 x 0.3-0.6 cm. **Hojas** 12 o más en el tallo principal; 5 en las ramas, distribuidas a lo largo de los tallos, dísticas, articuladas, subcoriáceas; vaina tubular, estriada, finamente rugosa, 3-4.5 cm de largo; lámina oblongo elíptica, coriácea, ápice obtuso, bilobado, margen entero, 2.7-7.5 x 1.5-2.3 cm. **Bráctea espátea** ausente. **Inflorescencia** apical, del tallo maduro, florece una sola vez, racemosa, arqueada, pluriflora, laxa, 5-9 cm de largo; pedúnculo muy corto, subterete, no ornamentado. **Brácteas florales** más corta que el ovario, linear lanceoladas, acuminadas, 5-10 mm de largo. **Flores** 10-25, simultáneas, resupinadas; blanco verdosas a amarillo verdosas, fragancia dulce, débil, a geraniol. **Ovario** terete, delgado, algo inflado justo detrás del perianto, 15-25 mm de largo. **Sépalos** entreabiertos, libres, carnosos, agudos, 5-nervados, margen entero, extendido, 14-17 x 6-7 mm; el **dorsal** oblongo elíptico, con una quilla dorsal baja en el ápice; los **laterales** ovado oblongos, ligeramente oblicuos, el ápice con una arista erosa. **Pétalos** entreabiertos, libres, elípticos a oblongo oblanceolados, ápice redondeado, diminutamente apiculado, 3-nervados, margen extendido y entero, 12-15 x 4.5-7 mm. **Labelo** unido a la columna, trilobado, cordado en la base, márgenes finamente papiloso, 10-11 x 11-12 mm; bicalloso, los callos prominentes, laminares; disco tricarinado; lóbulos laterales suborbiculares, oblicuamente dolabriformes, margen irregularmente denticulado, 4-5 x 6-7 mm; lóbulo medio anchamente cuneado, emarginado, obscuramente apiculado, 6-7 x 6-7 mm. **Columna** recta, delgada, 8 mm de largo. **Clinandrio** reducido, margen entero. **Antera** ovoide, 4-locular. **Polinios** 4, obovoides, lateralmente comprimidos; caudículas suaves y granulosa, un poco más largas que los polinios. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** pequeños, de un tercio del largo de la cavidad estigmática. **Nectario** muy corto, sin penetrar el ovario, delgado, no inflado, no ornamentado. **Cápsula** no vista.

Terrestrial, monopodial, erect **herb**, branching above. **Roots** from the base of the main stem, fleshy, white. **Stems** cane-like, terete, straight, the main stem tall, branching above, the branches shorter, producing new branches. **Leaves** 12 or more from the main stem, 5 on the branches, distributed throughout, distichous, articulate, sub-coriaceous; sheath tubular, striated, minutely rugose; blade oblong-elliptic, apex obtuse, bilobed, margin entire. **Inflorescence** apical, from the mature stem, flowering only once, racemose, arching, lax, many-flowered; peduncle very short, sub-terete, smooth. **Floral bracts** much shorter than the ovary, linear-lanceolate, acuminate. **Flowers** 10-25, simultaneous, resupinate, greenish white to greenish yellow, fragrance sweet, weak, of geraniol. **Ovary** terete, thin, somewhat inflated behind the perianth. **Sepals** partly spreading, free, fleshy, acute, 5-veined, margin entire, spreading; dorsal sepal oblong-elliptic, with a low dorsal keel at the apex, lateral sepals ovate-oblong, slightly oblique, apex with a erose awn. **Petals** partly spreading, free, elliptic to oblong-oblanceolate, apex rounded, minutely apiculate, 3-veined, margin entire, spreading. **Lip** united to the column, 3-lobed, base cordate, margin minutely papillose; bicallose, the calli prominent, laminar, disc 3-keeled, lateral lobes of the lip sub-orbicular, obliquely dolabriform, margin irregularly denticulate; midlobe widely cuneate, emarginate, obscurely apiculate. **Column** straight, thin. **Clinandrium-hood** reduced, margin entire. **Anther** ovoid, 4-celled. **Pollinia** 4, obovoid, laterally compressed, caudicles soft and granulate, somewhat longer than the pollinia. **Rostellum** apical, slit. **Nectary** very short, without penetrating the ovary, not inflated, smooth.

OTHER SPECIMENS: COLOMBIA: Cauca: Laguna Cusiayo, 3400-3450 m, 6 X 1958, *Barclay 5925*, AMES! COL! MO! Páramo de Guanacas, X 1843, *Hartweg 1424*, G! K-L x2! W-R! Páramo de Las Papas, 3350 m, 25 IX 1958, *Idrobo 3347*, COL! P! Páramo de Las Papas, 3200-3510 m, 27 IX 1958, *Idrobo 3492*, COL! **Nariño:** El Volcán Galeras, 3300 m, 7 IV 1958, *Correll CO485*, AMES! El Encanto, 2700-2850 m, 26 VII 1948, *García-Barriga 13020*, COL! Volcán Galeras, ca. 3000 m, 11 I 1981, *Gentry 30471*, COL! JAUM! MO! NY! Páramo del Compañero, ca. 3100 m, 22 I 1979, *Luer 3760*, SEL! **ECUADOR: Azuay:** Páramo del Castillo, 9000-11000 ft, 18 VIII 1945, *Camp E-4805*, NY! **Carchi:** Tulcán-Maldonado, 3150 m, 29 IV 1993, *Dodson 10953*, MO! Tulcán-Maldonado, 3530 m, 7 V 1993, *Hágsater 11255*, AMO! (Illustration voucher). El Pun, 3100-3200 m, 26 II 1974, *Harling 12237*, GB! Tufiño, 3100-3200 m, 12 X 1986, *Jaramillo 9145*, F! QCA! Tulcán-El Carmelo, ca. 3400 m, 7 IV 1979, *Løjtnant 11861*, AAU! Playón de San Francisco-El Carmelo, ca. 3200 m, 12 IV 1979, *Løjtnant 12302*, AAU! GB! Ibid. ca. 3000 m, 14 IV 1979, *Løjtnant 12526*, AAU! GB! El Pun, 28 II 1953, *Prescott 638*, DS! NY! Tufiño-Maldonado, 3200 m, 20 XII 1991, *Rubio 2211*, QCNE! El Carmelo, 3300 m, 28 V 1958, *Stein 2885*, MO! **Imbabura:** Intag valley, 3000 m, 4 V 1980, *Holm-Nielsen 23266*, AAU! **Napo:** Cuyuja-Papallacta, 2800-2900 m, 5 VI 1973, *Holm-Nielsen 6855*, AAU! AMES! [**Sucumbios:**] Cerro Mirador, 3300-3700 m, 28 XII 1980, *Holm-Nielsen 29849*, AAU!

OTHER RECORDS: COLOMBIA: Cauca: Páramo de Guanacas, 3100 m, *Escobar 1179*, note and photograph (Garay, 1975).

DISTRIBUTION AND ECOLOGY: Widely distributed in the interandean valley from around Popayán, in southern Colombia through to Quito, Ecuador; terrestrial, at 3000-3700 m altitude. Flowering from September to May.

RECOGNITION: *Epidendrum suaveolens* belongs to the Andean Group, Cernuum Subgroup, characterized by the monopodial habit, cane-like stems with sub-apical branches which are considerably shorter than the main stem, coriaceous to sub-coriaceous leaves, apex bilobed, and fleshy flowers, the entire or lip 3-lobed. The species is recognized by the oblong-elliptic leaves 2.7-7.5 x 1.5-2.3 cm, the fleshy, greenish white to greenish yellow flowers, fragrant of geraniol, oblong-elliptic sepals 14-17 x 6-7 mm, the lateral lobes of the lip wider than the midlobe which is emarginate and minutely apiculate. *Epidendrum pastoense* Schltr. is vegetatively similar and has the same geographic distribution, but the flowers of that species are somewhat smaller, the oblong-triangular lateral sepals 11-12 mm long, with a prominent apical awn, the petals are elliptic, obtuse, and the apex of the midlobe of the lip tridentate, not emarginate.

Epidendrum mojandae Schltr. is endemic to Ecuador, with similar colored and sized flowers, but the lateral lobes of the lip are as wide as the midlobe, and the petals are narrower, oblong-lanceolate, 4 mm wide. *Epidendrum torquatum* Lindl. has smaller flowers, sepals 11-12 mm long, and the lateral lobes of the lip are flabelliform, and the cuneate midlobe is apically tridentate.

*NOTE: Mounted with the fragment of type at AMES is an illustration of the column and lip which shows a pair of spherical calli. The material we have examined consistently shows that the calli are laminar, as shown in the illustration here with published, prepared from *Hágsater 11255*.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Latin, *suavis*, sweet, pleasant, and *olens*, odorous, in reference to the sweet scent of the flowers.

REFERENCE: Garay L. A. 1975. Orquídeas colombianas nuevas o críticas, Decena XIII, *Orquideología* 10(1): 66-67, photo 127.



Authors: E. Santiago & E. Hágsater

Illustrator: R. Jiménez M.

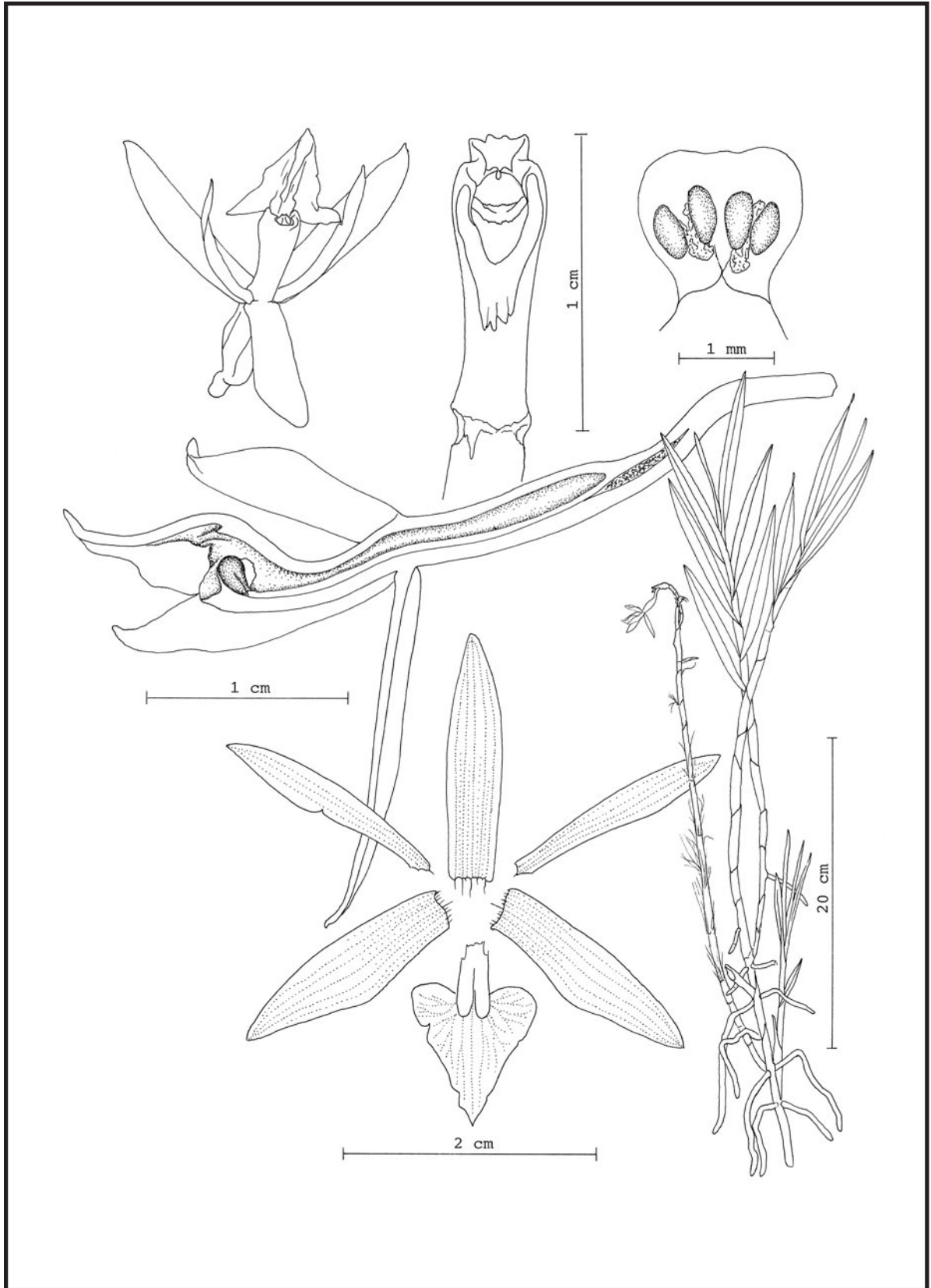
Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009.

Plate 1295



EPIDENDRUM TANDAPIANUM Dodson & Hágsater

Plate 1296

EPIDENDRUM TANDAPIANUM Dodson & Hágsater, Icon. Plant. Trop. ser. 2(5): pl. 490. 1989.

Type: ECUADOR: Pichincha: Tandayapa on road Nono to Nanegal, 2580 m, 9 June 1986, C. & T. Dodson 16500.

Holotype: QCNE! Isotype: MO!

Hierba terrestre o litófito, simpodial, subcespitosa, 50-90 cm de alto. **Raíces** espaciadas a lo largo de la parte basal de los tallos, carnosas, gruesas, blancas, 1-2 mm de grosor. **Tallos** sencillos, originando nuevos tallos de los entrenudos inferiores de tallos anteriores, tipo caña, teretes en la base y lateralmente aplanados hacia el ápice, delgados, rectos, 30-55 x 0.2-0.5 cm; cubiertos en la base por vainas tubulares no foliáceas, escariosas y fibrosas con la edad, 2-5 cm de largo. **Hojas** 9-10, distribuidas a lo largo de la mitad apical de los tallos, dísticas, articuladas, suberectas, subcoriáceas; vaina tubular, finamente estriada, ligeramente ancipitosa, 1.7-2.4 x 0.3-0.7 cm; lámina linear lanceolada, ápice agudo, diminutamente apiculado, margen entero, extendido, 5-15 x 0.7-1.3 cm. **Bráctea espatácea** ausente. **Inflorescencias** apicales y laterales, produciendo una sola flor en sucesión e incluso floreciendo a partir de tallos viejos desprovistos de hojas; la apical 7-14.5 cm de largo; pedúnculo ancipitoso, casi totalmente oculto por 2 brácteas tubulares, ancipitosas, acuminadas, escariosas, 3-6 cm de largo; las laterales subsésiles, 2 cm de largo. **Brácteas florales** mucho más cortas que el ovario, triangular ovadas, acuminadas, amplexicaulas, 9-13 mm de largo. **Flores** sucesivas, no resupinadas, carnosas, de color verde; sin fragancia. **Ovario** terete, estriado, inflado en la mitad apical, 18-20 mm de largo. **Sépalos** entreabiertos, libres, oblongo oblanceolados, agudos, 9-nervados, margen entero, extendido, [14]16-20 x 4-5 mm; los **laterales** oblicuos, ligeramente convexos. **Pétalos** entreabiertos, libres, linear oblanceolados, falcados, agudos, 3-nervados, margen entero, extendido, [13]15-19 x 2 mm. **Labelo** unido a la columna, entero, ligeramente triangular, con el ápice agudo, base cordada, 11 x 10 mm; bicalloso, los callos subglobosos; disco con 3 venas engrosadas cortas. **Columna** delgada, ligeramente arqueada, 10 mm de largo. **Clinandrio** algo prominente, aunque sin sobrepasar el ápice de la columna, margen eroso. **Antera** reniforme, 4-locular. **Polinios** 4, obovoides; caudículas suaves y granuladas, ligeramente más largas que los polinios. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** prominentes, casi de la mitad del largo de la cavidad estigmática. **Nectario** penetrando la mitad del ovario, no inflado, no ornamentado. **Cápsula** no vista.

Terrestrial or lithophytic, sympodial, sub-caespitose **herb**. **Roots** spaced along the lower part of the stem, fleshy, thick, white. **Stem** simple, originating from the lower internodes of the previous stem, cane-like, terete at base, laterally compressed towards the apex, thin, straight; covered at the base by tubular, non foliar, scarious sheaths, becoming fibrous with age. **Leaves** 9-10, distributed along the apical half of the stems, distichous, articulate, sub-erect, sub-coriaceous; sheath tubular, minutely striated, somewhat ancipitose; blade linear-lanceolate, apex acute, minutely apiculate, margin entire, spreading. **Inflorescence** apical and lateral, producing a single flower in succession, also flowering from old canes without leaves; apical inflorescence long, peduncle ancipitose, nearly totally hidden by 2 tubular, ancipitose, acuminate, scarious bracts; lateral inflorescences sub-sessile. **Floral bracts** much shorter than the ovary, triangular-ovate, acuminate, amplexicaul. **Flowers** successive, non-resupinate, fleshy, green; without fragrance. **Ovary** terete, striated, inflated along the apical half. **Sepals** partly spreading, free, oblong-oblanceolate, acute, 9-veined, margin entire, spreading; lateral sepals oblique, slightly convex. **Petals** partly spreading, free, linear-oblanceolate, falcate, acute, 3-veined, margin entire, spreading. **Lip** united to the column, entire, triangular, apex acute, base cordate; bicallose, the calli sub-globose; disc with 3 short, thickened, veins. **Column** thin, slightly arched. **Clinandrium-hood** somewhat prominent, without surpassing the body of the column, margin erose. **Anther** reniform, 4-celled. **Pollinia** 4, obovoid; caudicles soft and granulese, slightly longer than the pollinia. **Rostellum** apical, slit. **Nectary** penetrating half the ovary, not inflated, smooth.

OTHER SPECIMENS: ECUADOR: Imbabura: Selva Alegre, west of Otavalo, 1760 m, 1-2 V 1981, Kuhn 17, SEL!
Pichincha: Campamento Sigal between San Juan and Chiriboga, ca. 2350 m, 2 VIII 1955, Asplund 17152, S! between Alluriquin and Aloag, 2500 m, Besse 1343, SEL! between Calcalí and Nanegalito, 2175 m, 11 III 1992, Croat 72872, QCNE! from Quito to Santo Domingo, 2900 m, 22 X 1961, Dodson 1030, SEL! between Quito and Chiriboga, 2400-2800 m, 14 III 1963, Dodson 2386, SEL! km 72 Santo Domingo-Quito, 1900 m, 17 IX 1973, Dodson 5376, SEL! km 62 Quito-Santo Domingo via nueva por Tandapi, 2300 m, 1 II 1985, Dodson 15523A, MO! QCNE! Quito-Santo Domingo via Tandapi, 2600 m, 1 II 1985, Dodson 15564, MO! carretera vieja, Quito-Santo Domingo via Chillogallo-San Juan-Chiriboga, 1800 m, 3 V 1985, Dodson 15834, MO! camino Aloag-Santo Domingo km 30, 8650 ft, 8 VI 1983, Hágsater 7555, AMO x3! (Illustration voucher and flower card) Ibid. 5 II 1984, Hágsater 7632, AMO! between San Juan and Chiriboga, 1800-2200 m, Hirtz 217, SEL! Road Along-Tandapi, W of the pass, 1800 m, 4 VII 1979, Holm-Nielsen 18447, AAU! 5 km above Tandayapa, ca. 2000 m, 1 VI 1979, Løjtnant 14047, AAU! Santo Domingo-Quito Road, 6600 ft, 2 VIII 1980, Saulea 3911, F! NY! **COLOMBIA: [Cauca:]** Pisatumba, between Almaguer and Jayo, 2600-2900 m, Lehmann 6171, AMES! NY!

DISTRIBUTION AND ECOLOGY: on the upper western slope of the Andes in northern Ecuador and the Cordillera Central southern Colombia, terrestrial or lithophytic, at 1800-2900 m altitude. Flowering from February to October.

RECOGNITION: *Epidendrum tandapianum* belongs to the Tandapianum Group, which is recognized by the sub-caespitose habit, the 2-ranked leaves facing one side of the stem, and the inflorescence producing single flowers, with a large triangular or 3-lobed, bicallose lip. The species has linear-lanceolate leaves 5-15 x 0.7-1.3 cm, green flowers, an inflated ovary, sepals [14]16-20 mm long, linear-oblanceolate petals and an entire, triangular lip.

Epidendrum tandapioides Hágsater has thinner stems, narrower leaves, 6.5-12.5 x 0.5-0.7 cm, the ovary is not inflated, linear petals, and the lip somewhat 3-lobed. *Epidendrum triangulabium* Ames & C.Schweinf. from Panama has much smaller plants, elliptic leaves, smaller flowers and a triangular-sagittate lip.

NOTE: The original description indicates much smaller flowers.

CONSERVATION STATUS: DD. Data deficient. Apparently locally common in Ecuador.

ETYMOLOGY: In reference to the town of Tandapi, also known as Manuel Cornejo Astorga, Pichincha, Ecuador, above which the species has often been collected.



Authors: E. Santiago & E. Hágsater

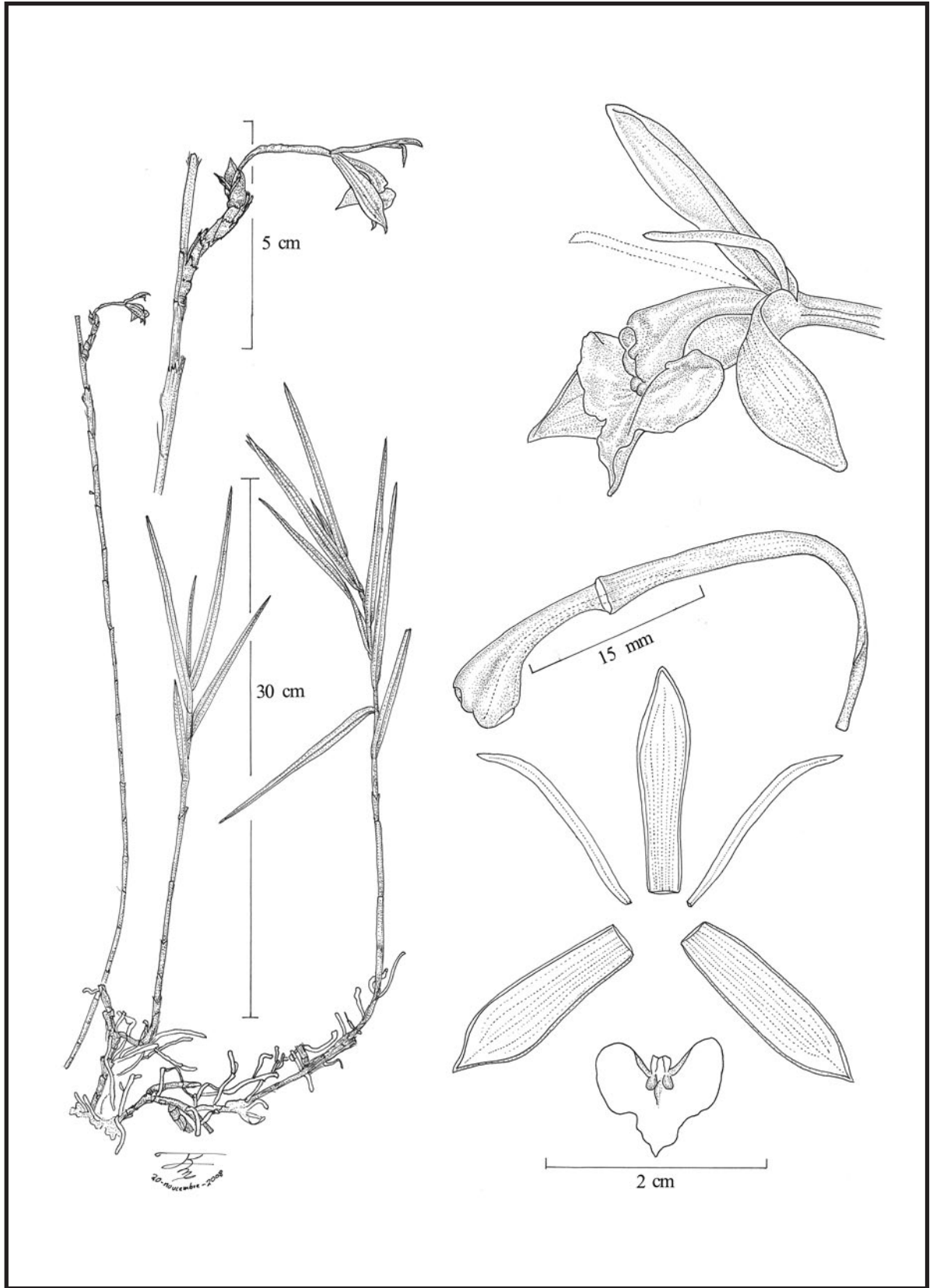
Illustrator: E. Hágsater

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Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009. Plate 1296



EPIDENDRUM TANDAPIOIDES Hågsäter

Plate 1297

EPIDENDRUM TANDAPIOIDES Hágsater, *sp. nov.*

Type: PERU: Cajamarca: Prov. San Ignacio, La Coipa, 2000 m, 9 mayo 1987, **Shirley Keel & César del Carpio 978**.

Holotype: USM! (Illustration voucher).

Epidendro tandapiani Dodson & Hágsater simile sed foliis angustioribus, petalis linearibus, ovario non inflato et labello parum trilobato, recedit.

Hierba epífita, simpodial, subcaespitosa, 25-50 cm de alto. **Raíces** carnosas, delgadas, blancas, espaciadas a lo largo de la parte basal de los tallos, 1.5-3 mm de grosor. **Tallos** sencillos, originando nuevos tallos de los entrenudos inferiores de tallos anteriores, tipo caña, teretes en la base y lateralmente aplanados hacia el ápice, delgados, rectos, 25-48 x 0.2-0.3 cm; cubiertos en la base por vainas tubulares no foliáceas, escariosas y fibrosas con la edad, 1.5-2 cm de largo. **Hojas** 7-9, distribuidas a lo largo de la mitad apical de los tallos, dísticas, articuladas, suberectas, subcoriáceas; vaina tubular, finamente estriada, ligeramente ancipitosa, 2-3 x 0.2-0.3 cm; lámina linear lanceolada, ápice acuminado, margen entero, extendido, 6.5-12.5 x 0.5-0.7 cm. **Bráctea espatácea** ausente. **Inflorescencias** apicales y laterales, subsésiles, produciendo una sola flor en sucesión e incluso floreciendo a partir de tallos viejos desprovistos de hojas, 2.5 cm de largo.

Brácteas florales mucho más cortas que el ovario, triangular ovadas, agudas, amplexicaulas, 9 mm de largo. **Flores** sucesivas, no resupinadas, carnosas, de color amarillo verdoso, "garganta" blanca, polinios amarillos; sin datos de fragancia. **Ovario** terete, delgado, estriado, no inflado, 30 mm de largo. **Sépalos** entreabiertos, libres, oblanceolados, agudos, 7-nervados, margen entero, extendido, 20 x 5 mm. **Pétalos** extendidos, libres, lineares, falcados, agudos, 1-nervados, margen entero, extendido, 18 x 1.3 mm. **Labelo** unido a la columna, incipientemente trilobado, base profundamente cordada, 11 x 12 mm; bicalloso, los callos pequeños, globosos; disco con una quilla intercallosa, laminar, muy corta; lóbulos laterales oblicuamente dolabriformes, margen entero, 4 x 6.5 mm; lóbulo medio subtriangular, diminutamente apiculado, margen irregular, 4.3 x 4.3 mm. **Columna** delgada, ligeramente arqueada, 14 mm de largo. **Clinandrio** corto, margen entero. **Antera** y **Polinios** no vistos. **Rostelo** apical, hendido. **Lóbulos laterales del estigma**, **Nectario** y **Cápsula** no vistos.

Epiphytic, sympodial, sub-caespitose **herb.** **Roots** fleshy, thin, white, spaced along the basal part of the stems, thick. **Stems** simple, originating from lower internodes of the previous stems, cane-like, terete at the base, laterally compressed towards the apex, thin, straight; base covered by tubular, non-foliaceous, scarios sheaths, becoming fibrous with age.

Leaves 7-9, distributed along the apical half of the stem, distichous, articulate, sub-erect, sub-coriaceous; sheath tubular, minutely striated, slightly ancipitose; blade linear-lanceolate, apex acuminate, margin entire, spreading. **Inflorescence** apical and lateral, sub-sessile, producing one flower at a time in succession, flowering also from old stems lacking leaves.

Floral bracts much shorter than the ovary, triangular-ovate, acute, amplexicaul. **Flowers** successive, non-resupinate, fleshy, greenish yellow, "throat" white, pollinia yellow. **Ovary** terete, thin, striated, not inflated, long. **Sepals** partly spreading, free, oblanceolate, acute, 7-veined, margin entire, spreading. **Petals** spreading, free, linear, falcate, acute, 1-veined, margin entire, spreading. **Lip** united to the column, slightly 3-lobed, base deeply cordate; bicallose, the calli small, globose; disc with a laminar, very short mid keel; lateral lobes obliquely dolabriform, margin entire; midlobe sub-triangular, minutely apiculate, margin irregular. **Column** thin, slightly arching, long. **Clinandrium-hood** short, margin entire. **Rostellum** apical, slit.

OTHER SPECIMEN: PERU: Amazonas: Bongara: Pomacochas road, km 318.5 (E. of Olmos) between Pomacochas and Río Utcubamba, 1810 m, 1 II 1964, *Hutchison 3938*, AMES! UC!

DISTRIBUTION AND ECOLOGY: Known only from northern Peru, just south of the Ecuadorian border, epiphytic, at 2000 m altitude. Flowering in May.

RECOGNITION: *Epidendrum tandapioides* belongs to the Tandapianum Group, which is recognized by the sub-caespitose habit, the 2-ranked leaves facing one side of the stem, and the inflorescence producing single flowers, with a large triangular or 3-lobed, bicallose lip. The species is recognized by the thin stems, linear-lanceolate leaves 6.5-12.5 x 0.5-0.7 cm, apical and lateral inflorescence producing one flower at a time, flowers greenish yellow, sepals 20 mm long, petals linear and the lip slightly 3-lobed. *Epidendrum tandapianum* Dodson & Hágsater has wider, linear-lanceolate leaves, 0.7-1.3 cm wide, green flowers, the ovary slightly inflated, sepals [14] 16-20 mm long, petals linear-oblanceolate, and an entire, triangular lip. *Epidendrum triangulabium* Ames & C. Schweinf. from Panama, is much smaller overall, has elliptic leaves, 1.3-2.6 x 0.6-1.3 cm, only apical inflorescences, sepals 11.5-12.7 mm long, linear-oblanceolate petals and a triangular-sagittate lip.

CONSERVATION STATUS: DD. Data deficient.

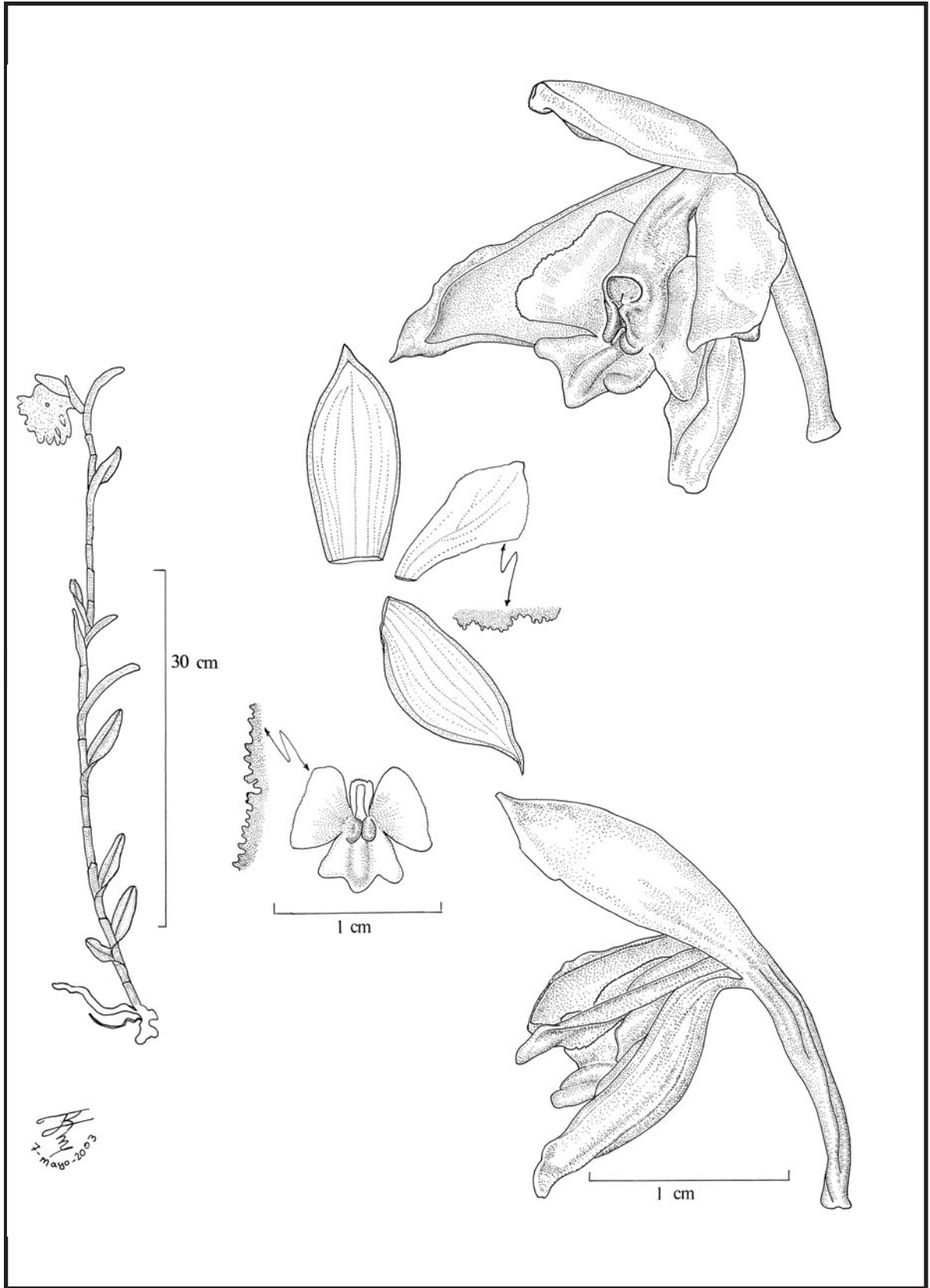
ETYMOLOGY: In reference to the similarity of this species with *Epidendrum tandapianum* which in turn refers to the town of Tandapi, in Pichincha, Ecuador.



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ICONES ORCHIDACEARUM 12. 2009. Plate 1297



EPIDENDRUM TORQUATUM Lindl.

Plate 1298

EPIDENDRUM TORQUATUM Lindl. in Bentham Pl. Hartw.: 149. 1844.

Type: ECUADOR: Loja: In terram supra montes prope Loxa, *Theodor Hartweg s.n.* Holotype: K-L! tracing, pro parte W-R 5867! (Illustration voucher, plant). Isotype: a single flower, W-R 55269! (Illustration voucher, flower).

Hierba terrestre, monopodial, de tallo principal erecto, ramificado arriba, hasta 2 m de alto. **Raíces** basales en el tallo principal. **Tallos** ramificados arriba, tipo caña, teretes, erectos, rectos, el principal de más de 25 x 1 cm; las ramificaciones 5.5-13 x 0.4-0.8 cm. **Hojas** 11-25 en el tallo principal, 4-7 en las ramificaciones, distribuidas casi a todo lo largo de los tallos, dísticas, articuladas, erecto extendidas, coriáceas; vaina tubular (algo infundibuliforme cuando seca), estriada, rugosa, 1-3.5 cm de largo; lámina oblonga, obtusa, ápice incipientemente bilobado, margen entero, extendido; las del tallo principal 4-6.5 x 1.6-2 cm; las de las ramas 1.3-5 x 1.0-2.0 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, florece una sola vez, racemosa, nutante, pauciflora, densa, 4-6.5 cm de largo; pedúnculo subterete, corto, 12 mm de largo. **Brácteas florales** más cortas que el ovario, linear triangulares, acuminadas, abrazadoras, 4-6 mm de largo. **Flores** 11-13, simultáneas, resupinadas, muy carnosas, glabras, amarillas a blanco verdosas; fragancia ligera, dulce. **Ovario** terete, delgado, liso, 10-11 mm de largo. **Sépalos** libres, entreabiertos, agudos, 7-nervados, margen entero, extendido, muy carnoso, 11-12 x 4-5 mm; el **dorsal** elíptico obovado; los **laterales** angostamente elípticos, oblicuos. **Pétalos** entreabiertos, libres, oblanceolado espatulados, obtusos, diminutamente apiculados, 3-nervados, margen subcrenulado, extendido, 9-10 x 3-4 mm. **Labelo** unido a la columna, trilobado, profundamente cordado en la base, 7 x 7 mm; bicalloso, los callos laminares, prominentes; disco unicarinado, la carina engrosada, prominente, muy carnosa que se alarga más allá del ápice de la lámina; lóbulos laterales oblicuamente flabeliformes, margen apical crenulado, 4.5 x 6.5 mm; lóbulo medio cuneado, ápice no emarginado, tridentado, 5 x 6.5 mm. **Columna** ligeramente arqueada, gruesa, el ápice con un par de alas laminares subcuadradas, truncadas, 7 mm de largo. **Clinandrio** reducido, margen entero. **Antera** reniforme, 4-locular. **Polinios** no vistos. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma, nectario y cápsula** no vistos.

Terrestrial, monopodial, erect, tall **herb**, branching above. **Roots** from the base of the main stem, fleshy. **Stems** cane-like, terete, erect, straight, main stem branching above, tall; branches much shorter. **Leaves** 11-25 on the main stem, 4-7 on the branches, distributed nearly throughout, distichous, articulate, erect-spreading, coriaceous; sheath tubular (somewhat infundibuliform when dry), striated, rugose; blade oblong, obtuse, apex slightly bilobed, margin entire, spreading, the leaves of the main stem similar in size to the larger ones on the branches. **Inflorescence** apical, flowering only once, racemose, nutant, densely few-flowered; peduncle sub-terete, short. **Floral bracts** shorter than the ovary, linear-triangular, acuminate, amplexicaul. **Flowers** 11-13, simultaneous, resupinate, very fleshy, glabrous, yellow to greenish white; slightly fragrant, sweet. **Ovary** terete, thin, smooth, short. **Sepals** free, partly spreading, acute, 7-veined, margin entire, spreading, very fleshy, the dorsal sepal elliptic-obovate; the lateral sepals narrowly elliptic, oblique. **Petals** partly spreading, free, oblanceolate-spatulate, obtuse, minutely apiculate, 3-veined, margin sub-crenulate, spreading. **Lip** united to the column, 3-lobed, base deeply cordate; bicallose, the calli laminar, prominent; disc 1-keeled, the keel thick, prominent, fleshy, forming an wide acumen at the apex of the lip; lateral lobes obliquely flabelliform, apical margin crenulate; midlobe cuneate, apex not emarginate, tridentate. **Column** slightly arching, thick, apex with a pair of subquadrate, truncate, laminar wings. **Clinandrium-hood** reduced, margin entire. **Anther** reniform, 4-celled.

OTHER SPECIMENS: ECUADOR: Carchi: El Carmelo, El Mirador, 12 km al S de Playón de San Francisco, 3360 m, 9 VII 1990, pressed cult. 20 XII 1990, *Hágsater 10620*, AMO! Tulcán-Maldonado, km 55, 3500 m, XI 1985, *Luther 866*, MO!

Cañar: Taday-Azogues, 3000-3300 m, 4 II 1977, *Harling 15015*, GB! **Imbabura:** Carretera San José de Minas-Otavallo, en carretera que va hacia antenas de canal 4, NE de Peñas Blancas, 19 I 1980, *Jaramillo 1956*, QCA! Sector San Luis de la Delicia, 2600-3000 m, 6 XII 1986, *Jaramillo 9285*, QCA!

DISTRIBUTION AND ECOLOGY: Known only from Ecuador, expected in neighboring Colombia, in the interandean valley, terrestrial, at 2800-3500 m altitude. Flowering from November to July.

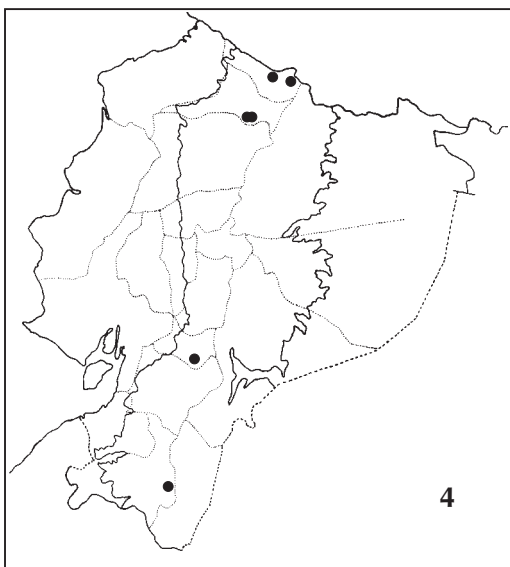
RECOGNITION: *Epidendrum torquatum* belongs to the Andean Group, Cernuum Subgroup, characterized by the monopodial habit, cane-like stems with sub-apical branches which are considerably shorter than the main stem, coriaceous to sub-coriaceous leaves, apex bilobed, and fleshy flowers, the lip 3-lobed.

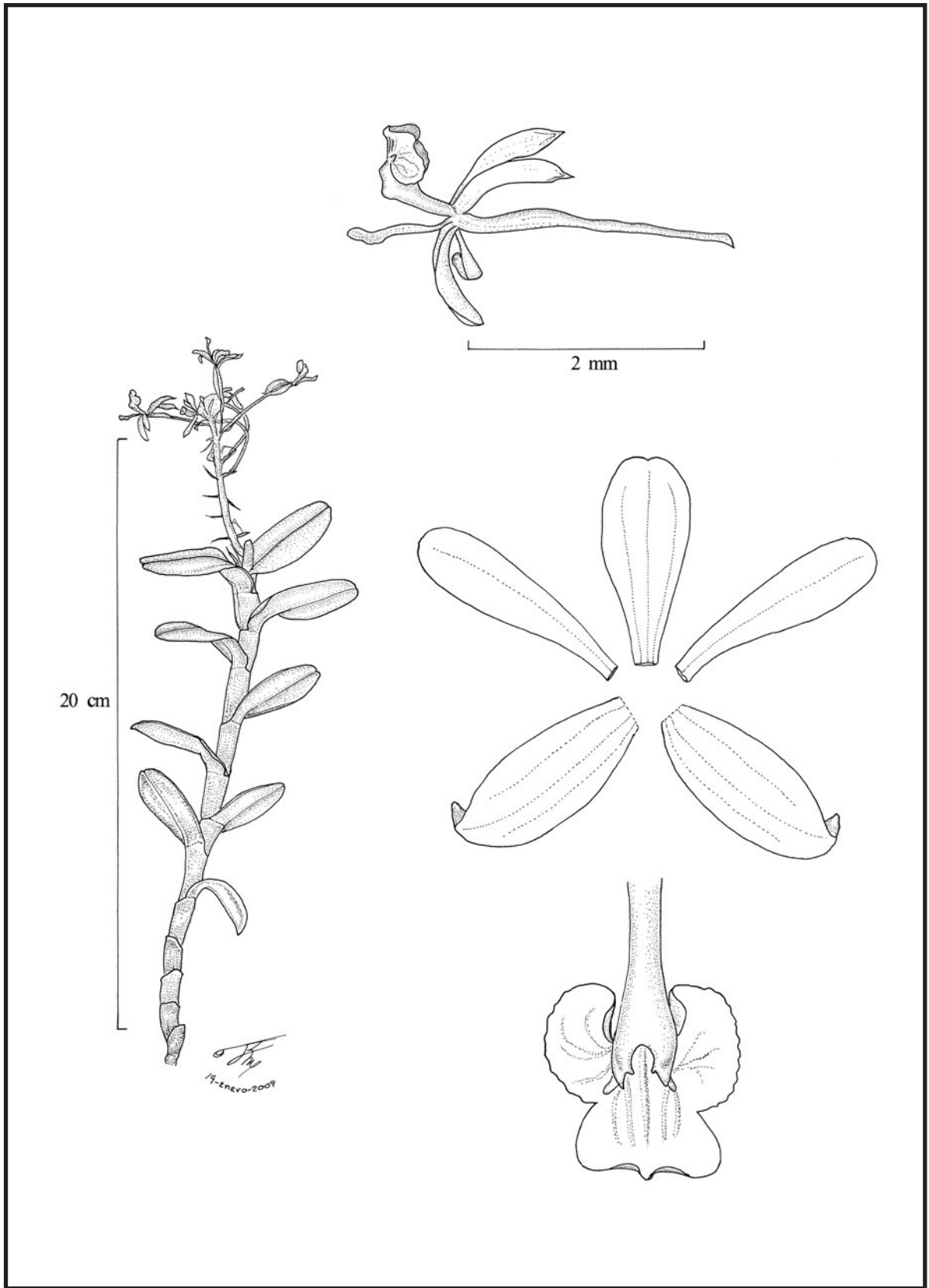
The species is recognized by the oblong, obtuse, 1.3-6.5 cm long leaves, fleshy flowers, lateral sepals narrowly elliptic, short acuminate, 11-12 mm long, the petals oblanceolate-spatulate, 3-4 mm wide, and the lateral lobes of the lip flabelliform, wider than the midlobe, the midlobe cuneate with a tridentate apex. *Epidendrum mojanidae* Schltr. is very similar, but the flowers are slightly larger, sepals 14-15 mm long, the lateral lobes of the lip are as wide as the midlobe, and the apex of the midlobe is emarginate, and minutely apiculate. *Epidendrum pastoense* Schltr., which grows on the border between Ecuador and Colombia, has a prominent mucro at the apex of the sepals, elliptic petals, and the lateral lobes of the lip dolabriform. *Epidendrum jaramilloi* Hágsater & Dodson is vegetatively similar, but the flowers are quite different, especially in the shape of the lip and the prominent thickened disc.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Latin *torquatus*, adorned with a collar or zone, twisted; it is not clear what Lindley referred to.

REFERENCE: Dodson, C. H., 1999 in Jørgensen et al. (eds.), Catalogue of the Vascular Plants of Ecuador, **Monogr. Syst. Bot. Missouri Bot. Gard.** 75: 668.





EPIDENDRUM VERNIXIUM Rchb.f.

Plate 1299

EPIDENDRUM VERNIXIUM Rchb.f., Bonplandia 2: 110-111. 1854.

Type: PERU: Without locality data, *Warszewicz s.n.* Holotype: W-R 49948! (specimen on the right, illustration voucher).

Hierba probablemente terrestre, monopodial, ramificada subapicalmente. **Raíces** no vistas. **Tallos** tipo caña, subapicalmente ramificados, cubiertos en la base por vainas tubulares no foliares, finamente estriadas y rugosas, 12-17 mm de largo; el principal no visto, probablemente alto; las ramificaciones 17.5 x 0.7 cm. **Hojas** probablemente numerosas en el tallo principal, 9 en las ramificaciones, erecto extendidas, articuladas, dísticas; vainas tubulares, rugosas, finamente estriadas, 7-22 mm de largo; lámina oblongo lanceolada, obtusa, coriácea, margen entero, extendido, 3-4 x 1.1-1.5 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, florece una sola vez, racemosa, erecta, pauciflora, laxa, 6 cm de largo; pedúnculo muy corto, 11 mm de largo. **Brácteas florales** mucho más cortas que el ovario, linear lanceoladas, acuminadas, abrazadoras, 5 mm de largo. **Flores** 20, simultáneas, no resupinadas, algo carnosas, sin datos de color ni fragancia. **Ovario** terete, delgado, ligeramente inflado justo detrás del perianto, 30 mm de largo. **Sépalos** ligeramente reflexos, libres, oblongos, agudos, 3-nervados, 12 x 3 mm; los laterales oblicuos, con una arista prominente. **Pétalos** extendidos, linear oblanceolados, ápice redondeado, 1-nervados, margen subdenticulado, 10 x 3 mm. **Labelo** unido a la columna, trilobado, base profundamente cordada, 6 x 5 mm; bicalloso, los callos delgados, ligeramente divaricados; disco provisto 5 quillas delgadas e intercallosas y un múltiples venas engrosadas cortas en la base de los lóbulos laterales; lóbulos laterales falcado-reniformes, con el margen lateral interno doblado sobre el haz de la lámina, margen denticulado, ca. 3.5 x 5 mm; lóbulo medio trapezoide, diminutamente apiculado, margen subentero, algo involuto en el ápice, ca. 2.5 x 4 mm. **Columna** delgada, ligeramente arqueada, 7 mm de largo. **Clinandrio** reducido, margen entero. **Antera** y **Polinios** no vistos. **Rostelo** apical, hendido. **Lóbulos laterales del estigma**, **Nectario** y **Cápsula** no vista.

Monopodial, probably terrestrial **herb**, sub-apically branched. **Stems** cane-like, sub-apically branched, base covered by tubular, non-foliar, minutely striated, rugose sheaths. **Leaves** 9 on the branches, probably numerous on the main stem, erect-spreading, articulate, distichous; sheaths tubular, rugose, minutely striated; blade oblong-lanceolate, obtuse, coriaceous, margin entire, spreading. **Inflorescence** apical, flowering only once, racemose, erect, lax, few-flowered; peduncle very short. **Floral bracts** much shorter than the ovary, linear-lanceolate, acuminate, amplexicaul. **Flowers** 20, simultaneous, non-resupinate, somewhat fleshy. **Ovary** terete, thin, slightly inflated behind the perianth, long. **Sepals** slightly reflexed, free, oblong, acute, 3-veined; lateral sepals oblique, prominently aristate. **Petals** spreading, linear-oblanceolate, apex rounded, 1-veined, margin sub-denticulate. **Lip** united to the column, 3-lobed, base deeply cordate; bicallose, the calli thin, slightly divaricate; disc provided with 5 thin keels and multiple short, thickened veins on the lateral lobes; lateral lobes falcate-reniform, the lateral margin sub-entire, somewhat involute at the apex. **Column** thin, slightly arched. **Clinandrium-hood** reduced, margin entire. **Rostellum** apical, slit.

OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: Known only from the type, "Peru".

RECOGNITION: *Epidendrum vernixium* belongs to the Andean Group, Vernixium Subgroup which is characterized by the monopodial, sub-apical branching habit, erect inflorescences, lax, non-resupinate flowers, the lip 3-lobed. The species is recognized by the oblong-lanceolate leaves 3-4 cm long, the erect inflorescence with up to 20 flowers, linear-oblanceolate petals, apically rounded, 10 mm long, the lateral lobes of the lip falcate-reniform, and the midlobe trapezoid, minutely apiculate. *Epidendrum scytocladium* Schltr. is vegetatively very similar but the petals are linear-oblanceolate, and the midlobe of the lip transversely oblong. *Epidendrum orgyale* Lindl. has an entire lip, widely cordiform, the margin serrulate. *Epidendrum cardioglossum* Rchb.f. has an arching-nutant inflorescence, resupinate flowers, the ovary is not inflated, petals are oblanceolate, and the lateral lobes of the lip are hemi-elliptic, not falcate.

CONSERVATION STATUS: DD. Data deficient. Apparently very rare.

ETYMOLOGY: From the Latin *vernicosus*, varnished, shining, in reference to the upper surface of the leaves which are described as varnished.



Authors: E. Santiago & E. Hágsater

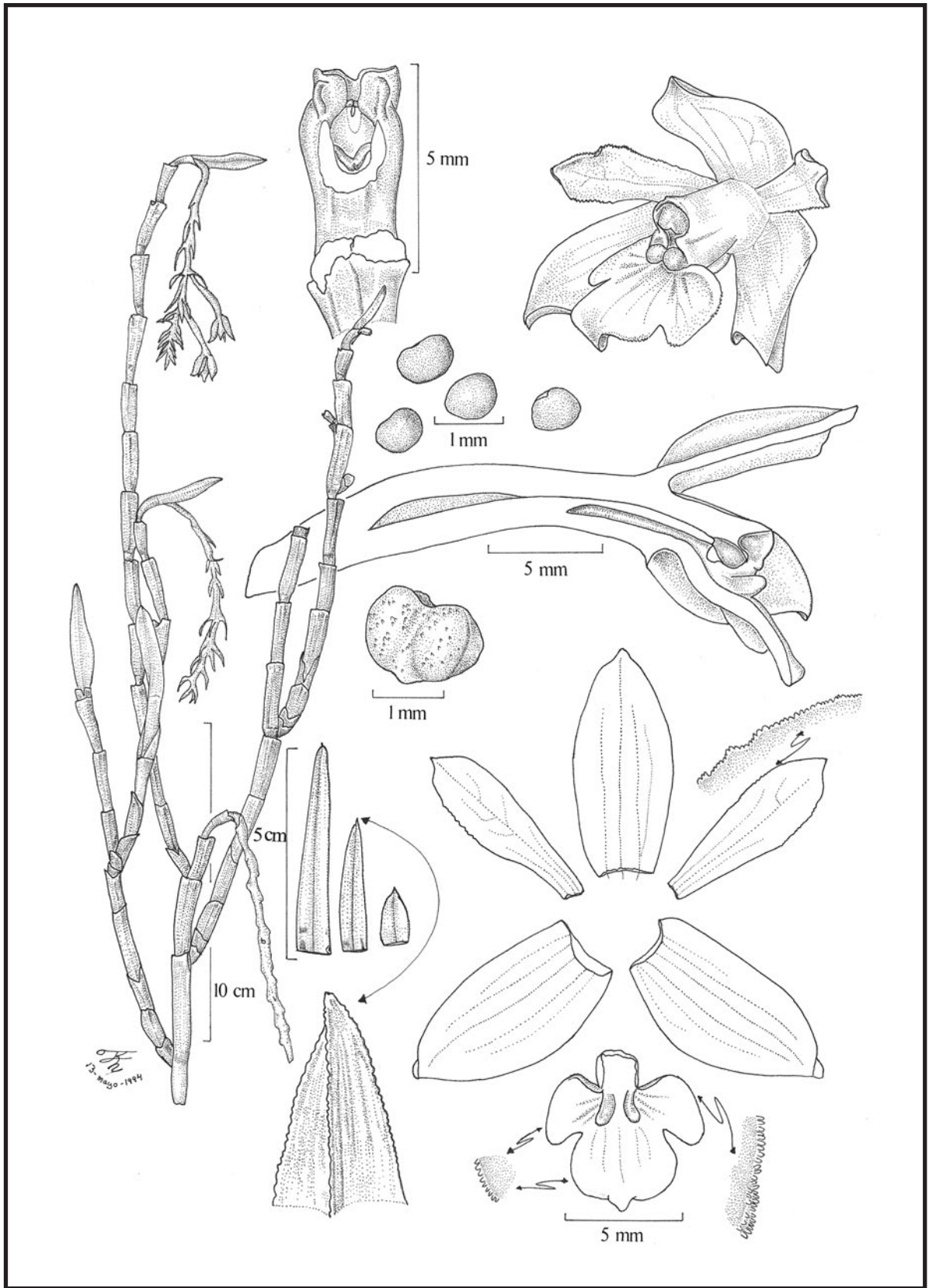
Illustrator: R. Jiménez M.

Editors: E. Hágsater & L. Sánchez S.

Herbario AMO

México, D.F. MÉXICO

ICONES ORCHIDACEARUM 12. 2009. Plate 1299



EPIDENDRUM ZIPAQUIRANUM Schltr.

EPIDENDRUM ZIPAQUIRANUM Schltr., Repert. Sp. Nov. Regni Veg., Beih. 7: 154. 1920.

Type: COLOMBIA: Cundinamarca: Zipaquirá, 2600-3000 m, February 1892, **F.C. Lehmann 7616**. Holotype: B destroyed.
Lectotype (here designated): AMES! (Illustration voucher). K-L! NY!

Hierba terrestre o epífita, monopodial, ramificada arriba, 55-100 cm de alto. **Raíces** de los entrenudos basales en el tallo principal y ocasionalmente escasas en la base de algunas ramificaciones, carnosas, gruesas, blancas, 2-5 mm de grosor. **Tallos** ramificados subapicalmente cuando maduros, tipo caña, teretes, erectos, rectos, el principal de 25-35 x 0.3-0.8 cm; las ramificaciones generalmente ascendentes, casi paralelas al tallo principal, algo más cortas y su vez produciendo ramas de menor tamaño, 13-35 x 0.2-0.3 cm; cubiertos por vainas tubulares no foliosas, finamente rugosas, estriadas y fibrosas con el tiempo, 8-30 mm de largo. **Hojas** numerosas en el tallo principal; 9-20 en las ramificaciones, distribuidas a lo largo de los tallos, articuladas, disticas, coriáceas, suberectas, desiguales en tamaño (las del tallo principal generalmente más grandes); vaina tubular, finamente rugosa y estriada en seco, fibrosa con el tiempo, 1.4-3 x 0.5-0.6 cm; lámina lanceolada, ápice agudo, apiculado, superficie ventral estriada en seco, con una quilla dorsal crenulada, margen diminutamente crenado, extendido, 1.5-8.5 x 0.8-1.7 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, florece una sola vez, racemosa (en ocasiones se producen racimos cortos a partir de un mismo pedúnculo), nutante, densa, 4-10 cm de largo; pedúnculo corto, terete, no ornamentado, 1-1.5 cm de largo; provisto de una bráctea prominente, similar a una hoja, 1.5-1.8 cm de largo; raquis 8-9 cm de largo. **Flores** sucesivas, (8-12) 20-35, resupinadas, de color amarillo verdoso a crema amarillentas, fragantes. **Brácteas florales** prominentes, de más de la mitad del largo del ovario a más cortas, triangular lanceoladas, largamente acuminadas, abrazadoras, 4-14 mm de largo. **Ovario** terete, delgado, no inflado, no ornamentado, 8-16 mm de largo. **Sépalos** entreabiertos, libres, carnosos, glabros, elípticos, obtusos, con una quilla dorsal pequeña, 5-nervados, margen entero, extendido, [6-7] 8-11 x [2.5] 3.5-5 mm; los **laterales** ligeramente oblicuos. **Pétalos** entreabiertos, libres, oblanceolado espatulados, obtusos, diminutamente apiculados, 3-nervados, la nervadura central cortamente ramificada, margen papiloso, extendido, [5-6] 7-9 x [1.8] 2.5-4 mm. **Labelo** unido a la columna, trilobado, base cordada, margen diminutamente papiloso, [3] 4.5-7 x [4] 6-8 mm; bicallose, los callos delgados, ligeramente divaricados; disco tricarinado, las carinas laterales cortas e incipientes, la central intercalosa desvaneciéndose antes de llegar al ápice de la lámina; lóbulos laterales semi-ovados, oblicuos, ápice redondeado, 2-4 x 2-4 mm; lóbulo medio anchamente ovado, truncado en el ápice, con un apículo prominente, 2-4 x 3-5.5 mm. **Columna** recta, gruesa, [4] 5-6 mm de largo. **Clinandrio** prominente (aunque sin sobrepasar el ápice de la columna), entero, margen incipientemente crenado. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** pequeños, ocupando un tercio del largo de la cavidad estigmática. **Nectario** poco profundo, apenas penetrando el ovario justo detrás del perianto, no inflado, no ornamentado. **Antera** reniforme, papilosa, 4-localar. **Polinios** 4, subovoides. **Cápsula** subesférica, con el perianto persistente; pedicelo terete, delgado, 4-10 mm de largo; cuerpo 20-29 x 16-24 mm; cuello apical ca. 5 mm de largo.

Monopodial, sub-apically branching, terrestrial or epiphytic **herb**. **Roots** from the basal internodes of the main stem and occasionally scarce at the base of some branches, fleshy, thick, white. **Stems** branching sub-apically when mature, cane-like, terete, erect, straight, the main stem generally taller than the branches which are ascending, nearly parallel to the main stem, somewhat shorter with progressively smaller branches; covered by non-foliar, tubular sheaths, these minutely rugose, striated, becoming fibrous with time. **Leaves** numerous on the main stem, 9-20 on the branches, distributed throughout the stems, articulate, distichous, coriaceous, sub-erect, unequal in size (those of on the main stem larger); sheaths tubular, minutely rugose, striated when dry, becoming fibrous with time; blade lanceolate, apex acute, apiculate, ventral surface striated when dry, with a dorsal, crenulate keel, margin minutely crenate, spreading. **Inflorescence** apical, flowering only once, racemose (occasionally producing short racemes from the same peduncle), nutant, dense-flowered; peduncle terete, unornamented, short, provided with a prominent bract, similar to a leaf. **Flowers** successive (8-12) 20-35, resupinate, greenish yellow to yellowish cream colored, fragrant. **Floral bracts** prominent, more than half as long as the ovary to shorter, lanceolate, long-acuminate, amplexicaul. **Ovary** terete, thin, not inflated, unornamented. **Sepals** partly spreading, free, fleshy, glabrous, elliptic, obtuse, with a small dorsal keel, 5-veined, margin entire, spreading; the lateral sepals slightly oblique. **Petals** partly spreading, free, oblanceolate-spatulate, obtuse, minutely apiculate, 3-veined, the central vein short branched, margin papillose, spreading. **Lip** united to the column, 3-lobed, base cordate, margin minutely papillose; bicallose, the calli thin, slightly divaricate; disc 3-keeled, the lateral keels short and incipient, the central keel disappearing before the apex of the midlobe; lateral lobes semi-ovate, oblique, apex rounded, smaller than the midlobe; midlobe widely ovate, apex truncate, with a prominent apicule. **Column** straight, thick, short. **Clinandrium-hood** prominent, entire, margin slightly crenate. **Rostellum** sub-apical, slit. **Nectary** shallow, barely penetrating the ovary behind the perianth, not inflated, unornamented. **Anther** reniform, papillose, 4-celled. **Pollinia** 4, sub-obovoid. **Capsule** sub-spherical, perianth persistent, pedicel terete, short, apical neck short.

OTHER SPECIMENS AND RECORDS: See appendix.

***NOTE:** The specimens from Venezuela have somewhat smaller flowers (sepals 5-6 mm long) when compared to the flowers of the type and nearly all collection of this species from Colombia. However, though scarce, some specimens with small flowers have also been found in both Cundinamarca and Boyacá.

DISTRIBUTION AND ECOLOGY: Known from the Cordillera Oriental of Colombia from the Ecuadorian border into the Cordillera de los Andes in Venezuela as far as Mérida, both terrestrial and epiphytic from 2100 to 3900 m altitude, but mostly between 3000-3500 m. Flowering throughout the year.

RECOGNITION: *Epidendrum zipaquiranum* belongs to the Andean Group, Cernuum Subgroup, characterized by the monopodial habit, cane-like stems with sub-apical branching, the branches shorter than the main stem, coriaceous to subcoriaceous leaves, fleshy flowers and entire or 3-lobed lip. The species is recognized by the sub-apical branches nearly parallel to the main stem, coriaceous, lanceolate, acute, apiculate leaves, yellowish cream to greenish yellow, fragrant flowers. It has often been treated as a synonym of



Epidendrum chioneum Lindl., which is vegetatively similar but has snow-white, non fragrant flowers. *Epidendrum kirkbridei* Hágsater & E.Santiago has apically rounded, obtuse leaves, the pink flowers with white calli, and small floral bracts, ca 6 mm long. *Epidendrum torquatum* Lindl. has oblong-lanceolate leaves with a rounded apex, larger flower (sepals 15 mm long), the lateral lobes of the lip as large as the midlobe, with a single keel on the midlobe. *Epidendrum jaramilloi* Hágsater & Dodson has narrowly lanceolate leaves with the apex rounded and bilobed, somewhat larger (sepals 9-13 mm long), green to greenish yellow flowers, with the dorsal surface tinged purple-brown. The latter two are apparently endemic to Ecuador.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In reference to the type locality of the Páramo de Zipaquirá, north of Bogotá, Colombia.

REFERENCES: Dunsterville G. C. K. & L. A. Garay. 1972, as *Epidendrum chioneum* Lindl., **Venezuelan Orchids Illustrated** 5: 80. Foldats, E. 1970, as *Epidendrum chioneum*, **Flora de Venezuela**, 15(3):194-196.

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ICONES ORCHIDACEARUM 12. 2009. Plate 1300