

STUDIES IN AMERICAN ORCHIDS IV.¹

BY

LESLIE A. GARAY

IN the following pages, various new species are described and several new combinations of taxonomic importance are proposed, all of which were discovered during routine checking of collections from the Andes. The arrangement of genera follows the phylogenetic system proposed by Rudolf Schlechter in *Notizblatt des Botanischer Gartens und Museum zu Berlin-Dahlem* 9 (1926) 563–591.

***Duckeella pauciflora* Garay sp. nov.**

Saxicola, usque ad 50 cm. alta; radicibus satis crassiusculis, leviter puberulis; foliis 2–3 basilaribus, lineari-lanceolatis, satis coriaceis, 15–30 cm. longis, 3–5 mm. latis; scapo simplici vel in parte superiore pauciramoso, erecto, stricto, 30–50 cm. alto; inflorescentia abbreviata, pauciflora; bracteis navicularibus, lanceolato-triangularibus, ovariis pedicellatis multoties brevioribus, 4–5 mm. longis; floribus satis magnis, succedaneis, flavis; sepalo postico oblongo-obovato, concavo, reflexo, apice acuto, 7-nervio, 20–22 mm. longo, 6–7 mm. lato; sepalis lateralibus leviter obliquis, oblongo-obovatis, concavis, reflexis, 7-nerviis, 20–22 mm. longis, 6–7 mm. latis; petalis valde

¹ Previous numbers of this series were published in the *Canadian Journal of Botany*, vol. 34 (1956) 241–260, 721–743 and in *Bot. Mus. Leaflet*, Harvard Univ. 18 (1958) 103–108.

tenuis, late ovato-rhombeis, acutis vel obtusis, reflexis, 9-nerviis, 18–21 mm. longis, 8–12 mm. latis; labello complicato, 3-lobo; lobis lateralibus oblongis, obtusis vel subacutis, 3.5–4 mm. longis, lobo intermedio ovato-oblongo, acuto vel obtusiusculo, 14–17 mm. longo, 5–8 mm. lato; disco supra basim multi-cristato, cristis antice in fimbriis dissolutis; columna 8 mm. longa, apice bi-auriculata; ovariis pedicellatis 1.5–2 cm. longis.

This is the second species of the genus to be noted. A third, as yet undescribed, from the Guiana Highlands, is under study at present by Mr. Schweinfurth. *Duckeella pauciflora* differs from *D. Adolfii* Campos Porto & Brade in having a short raceme, larger flowers and differently shaped petals and lip.

COLOMBIA: Comisaría del Vaupés, Río Kubiyú (tributary of Río Vaupés); Cerro Kañendá, savannahs about 15 miles upstream from mouth. Quartzite base. Altitude about 800–900 feet. Nov. 10, 1952. *Richard Evans Schultes & Isidoro Cabrera 18309* (TYPE in Herb. Ames no. 69675; DUPLICATE TYPE in U.S. Nat. Herb.); *Schultes & Cabrera 18399* (Herb. Ames no. 69674).—Yapobodá. *P. H. Allen 3203* (U.S. Nat. Herb. no. 1951970).

***Sobralia lancea* Garay sp. nov.**

Saxicola, usque ad 50 cm. alta; radicibus fasciculatis, satis crassis pubescentibus; caulibus caespitosis, erectis, parte basali vaginatis, supra paucifoliatis, teretibus, glabris; foliis lanceolatis, apice longe acuminatis, basi in vaginam caulem amplexentem angustatis, subcoriaceis, plicatis, 16–25 cm. longis, 1–1.5 cm. latis; inflorescentia valde abbreviata, bracteis lanceolatis, bifariis, arctissime adpressis omnino oblecta; floribus succedaneis, tenuissimis, glabris; sepalis petalisque inter se simillimis, oblongo-lanceolatis, brevissime acuminatis, 5–7 nerviis, 3 cm. longis, 5 mm. latis; labello ovato-pandurato, basi rotundato, apice undulato; disco a basi usque ad constrictionem bilamellato, lamellis leviter crenulatis, supra dentiformibus, 2.4 cm. longo, supra basim 12 mm., ad

EXPLANATION OF THE ILLUSTRATION

PLATE XXXIV. *DUCKEELLA PAUCIFLORA* *Garay*. 1, plant, one third natural size. 2, flower, expanded, natural size. 3, lip, twice natural size.

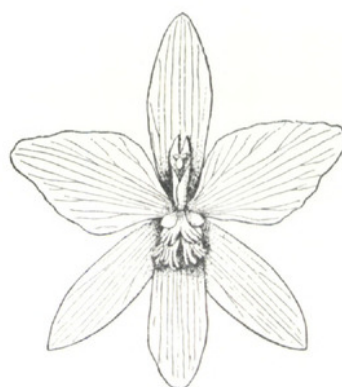
Drawn by RUTH BARTON

DUCKEELLA
pauciflora
Garay



2

3



JB

apicem 8 mm. lato; columna gracili, alata, 1 cm. longa, falculis nullis; ovariis graciliter pedicellatis, usque ad 2.5 cm. longis.

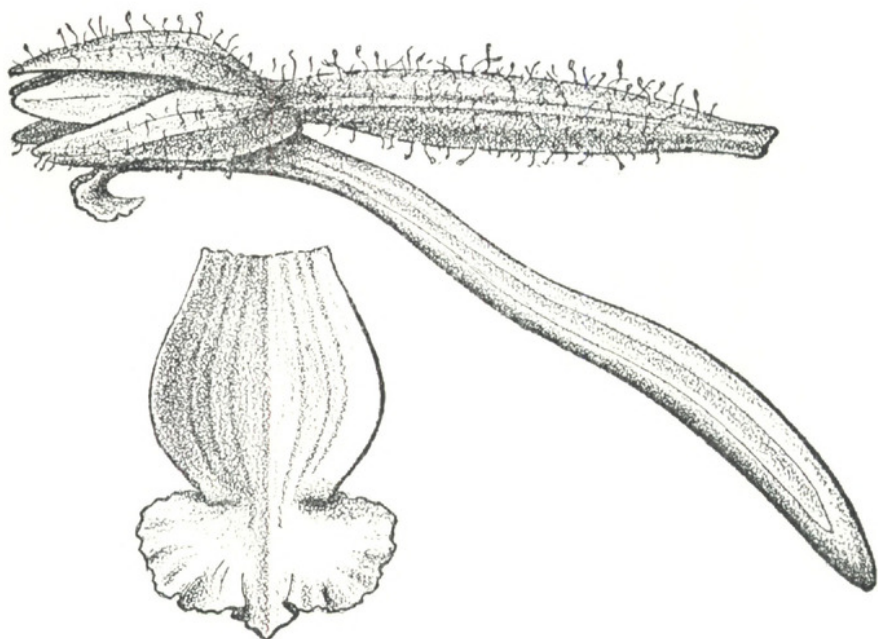
Apparently, the Peruvian *Sobralia candida* (Poepp. & Endl.) Rchb.f. is the only species in the genus with which this new taxon might be confused. Vegetatively these two species are very similar, though *S. lancea* possesses longer and more acuminate leaves. In the floral structures, however, a number of discrepancies can be observed: the sepals and petals are acute in *S. candida* and acuminate in *S. lancea*; in the former the lip is 3-lobed, with the apical lobe wider than the lateral ones; in the latter the lip is pandurate, and the apical portion is much narrower than the basal part. In addition to these differences, *S. candida* is described as having "snow-white" flowers, while the color of *S. lancea* is canary-yellow with purple lamellae on the lip.

COLOMBIA: Auchicayá (Cali-Buenaventura), 500 meters alt. August 11, 1952. M. Köie 4787 (TYPE in Herb. Ames no. 68437; DUPLICATE TYPE in Herb. Bot. Mus. Univ. Copenhagen).

***Erythroides cylindrostachys* Garay sp. nov.**

Terrestris, usque ad 30 cm. alta; rhizomate longe repenti, satis carnosus, crassus; radicibus crassiusculis, leviter flexuosis, puberulis, albidis; caulibus suberectis vel ascendentibus, primum remote vaginatis, deinde 3-5-foliatis, glabris; foliis ovato-lanceolatis, acuminatis, basi in petiolum attenuatis, mox in vaginam caulem amplectentem dilatatis, 14-20 cm. longis, 2-4.5 cm. latis; inflorescentia cum pedunculo ca. 2 cm. longo densissime puberula, valde compacta, cylindracea, 9-13 cm. longa; bracteis lanceolatis, acuminatis, ovariis brevioribus, 1.6 cm. longis; floribus satis magnis, albidis; sepalo postico ovato-lanceolato, acuto, concavo, 3-nervio, intus glabro, extus sparse glanduloso-hirsuto, 1.2 cm. longo, 4 mm. lato; sepalis lateralibus reflexis, leviter obliquis, ovato-

lanceolatis, 3-nerviis, intus glabris, extus glanduloso-hirsutis, 1.2 cm. longis, 4 mm. latis; petalis ovato-spathulatis, apice acutis vel obtusis, uninerviis, intus extusque glabris, cum sepalo postico galeam formantibus, 1.2 cm. longis, 3 mm. latis; labello trilobo, lobis lateralibus quadratis, antice obtusis, lobo intermedio recurvo, quadrato-reniformi, brevissime apiculato, margine



ERYTHRODES CYLINDROSTACHYS Garay

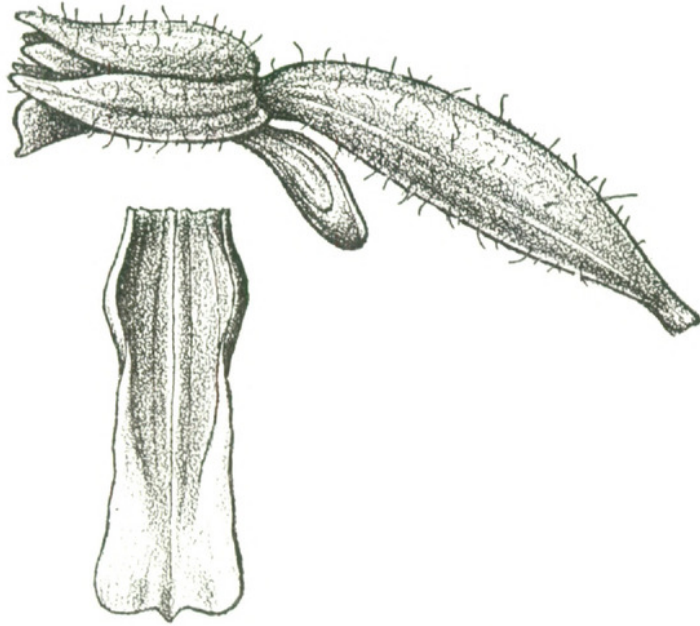
valde undulato, 9 mm. longo, antice 7 mm. lato; calcare cylindrico, leviter sinuato, acuto, 3 cm. longo; ovario cylindrico, glanduloso-hirsuto, 2.2 cm. longo.

This new species has no close alliance among the known taxa. The shape of the lip, together with the long and thick spur, is very different from that in any concept yet described.

COLOMBIA: Departamento del Valle, Cordillera Occidental, vertiente occidental; monte La Guarida, filo de la cordillera sobre La Carbonera (entre Las Brisas y Albán). 1950-2000 meters alt. Oct. 16, 1946. *J. Cuatrecasas* 22232 (Type in Herb. Ames).—La Cumbre. 1800-2100 meters alt. May 14, 1922. *F. W. Pennell & E. P. Killip* 5769 (U.S. Nat. Herb. no. 1141933; Herb. Ames no. 47353).

Erythroides quadrata *Garay sp. nov.*

Terrestris, usque ad 50 cm. alta; radicibus satis crassis, villosulis; caulibus leviter ascendentibus vel erectis, dimidio inferiori 5–6-foliatis, supra remote vaginatis; foliis erecto-patentibus, petiolatis; lamina ovata vel ovato-lanceolata, acuta, basi abrupte vel sensim in petiolum angustata, 7–10 cm. longa, 2.5–4 cm. lata; racemo



ERYTHROIDES QUADRATA *Garay*

cylindrico, satis dense multifloro, ca. 8 cm. longo; bracteis lanceolatis, acuminatis, ovariis aequilongis seu paulo brevioribus; floribus in genere inter minores; sepalo postico ovato, obtuso, uninervio, concavo, intus glabro, extus sparse piloso, 3 mm. longo, 1.5 mm. lato; sepalis lateralibus falcato-oblongis, acutis vel obtusis, uninerviis, intus glabris, extus sparse pilosis, 3.5 mm. longis, 1.5 mm. latis; petalis cum sepalo postico galeam formantibus, obovatis, acutis, vel obtusis, basim versus attenuatis, glabris, 3 mm. longis, 0.75 mm. latis; labello quadrato-oblongo, basi valde concavo, supra medium utrinque plicato, antice truncato et in medio brevissime apiculato, 3 mm. longo, antice 1.5 mm. lato; disco a basi usque ad

plicam unicarinato; calcare porrecto, clavato, 2 mm. longo, 1 mm. crasso, ovario tertia parte brevior.

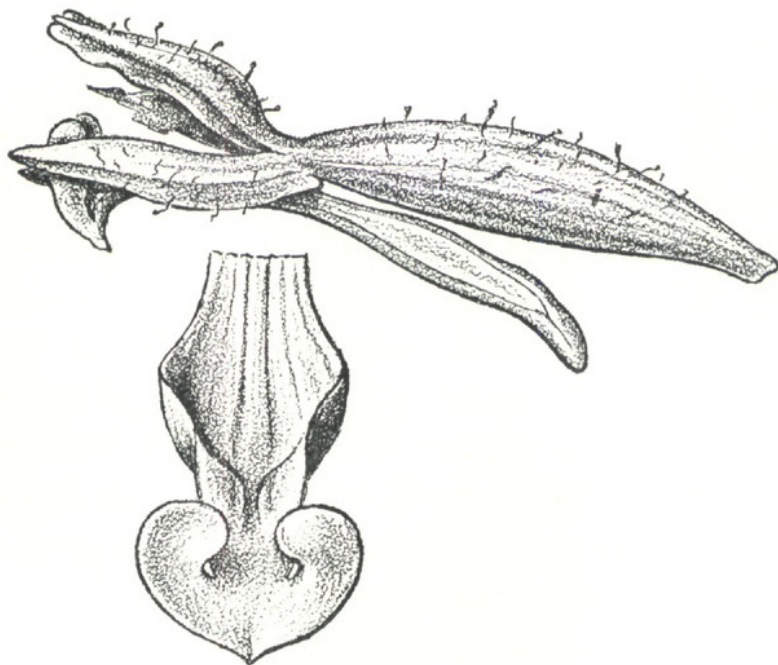
This new species may be compared with the Colombian *Erythroides zeuxinoides* (Schltr.) Ames, but differs from it in having much smaller flowers and a very dissimilar lip. The flowers, judged from the specimen, are greenish-white in color.

COLOMBIA: Departamento del Magdalena, Cordillera Oriental, Sierra de Perijá, 6 km. east-northeast of Manaure, 42 km. east of Valledupar, 7 km. from the Venezuelan border. 2100 meters alt. Feb. 1, 1945. *Martin L. Grant 10748* (TYPE in U.S. Nat. Herb. no. 2107290).

ECUADOR: Chimborazo, Riv. Chasuan. *R. Spruce 6138*. Herb. Reichenbach nos. 37766, 37767.

***Erythroides xystophylloides* Garay sp. nov.**

Terrestris, erecta, 20–25 cm. alta; rhizomate cauliformi, repenti; radicibus ex internodiis orientibus, filiformibus, leviter flexuosis, sparse pubescentibus; caulibus erectis, primum remote vaginatis, deinde 4–6-foliatis; foliis anguste lanceolatis, subacutis vel acuminatis, basi attenuatis, deinde in vaginas dilatatis transeuntibus;



ERYTHROIDES XYSTOPHYLLOIDES Garay

lamina 2.5–3 cm. longa, 4–5 mm. lata; pedunculo erecto, remote 3-vaginato; racemo pauci- (6–8-) floreo; bracteis lanceolato-setaceis, ovariorum pedicellatorum dimidium aequantibus; floribus in genere inter minores, albidis; sepalo postico ovato, obtuso, valde concavo, uninervio, extus sparse pilosulo, 5 mm. longo, 1.75 mm. lato; sepalis lateralibus ovato-oblongis, leviter obliquis, obtusis, extus sparse pilosis, uninerviis, 5 mm. longis, 1.5 mm. latis; petalis oblique spathulatis, uninerviis, glabris, quarta parte apicali sese tegentibus et conglutinatis, 5 mm. longis, 1 mm. latis; labello conduplicato, e basi elliptico-cucullato apice in laminam anchoriformem rotundatam subito dilatato, 5 mm. longo, in medio 2 mm., apice 4 mm. lato; calcare gracili, 4 mm. longo, 1 mm. crasso.

In general appearance this new species seems to be a miniature form of *Erythrodes xystophylla* (Rchb.f.) Ames. These two species may be distinguished from each other, apart from size, by the shape of the lip, which is bilobed in *E. xystophylla* and anchoriform in the new concept. In natural position, the lip is conduplicate-cucullate with the anchoriform tip reflexed and rolled inwardly.

COLOMBIA: Dept. Cundinamarca; Cordillera Oriental, Ojo de Agua, south side Guavio River, 32 km. east of Gachalá. 2035 meters alt. Nov. 1, 1944. *Martin L. Grant 10557* (TYPE in Herb. Ames no. 69102; DUPLICATE TYPE in U.S. Nat. Herb.).

***Stelis nexipous* Garay sp. nov.**

Epiphytica, caespitosa, usque ad 25 cm. alta; radicibus filiformibus flexuosis, glabris; caulibus secundariis erectis vel paulo arcuatis, vaginis 3 alte amplexantibus maxima pro parte obtectis, 6–12 cm. longis; folio coriaceo, oblongo-ligulato, apice obtusiusculo, basi in petiolum brevem sensim angustato, petiolo incluso 6–10 cm. longo, 0.7–1.2 cm. lato; inflorescentia singula, erecta vel interdum paulo arcuata, usque supra basim multiflora, 8–14

cm. longa; bracteis infundibuliformibus, acutiusculis, quam ovaria pedicellata longioribus, 3–4 mm. longis; sepalis lateralibus inter se liberrimis sed cum sepalo postico maxima pro parte in synsepalum connatis; synsepalum antice 3-lobum, per lobum 3-nervio, intus minutissime hirsutulo, ad basim leviter cochleato, 1–1.3 cm. longo, inter lobis laterales 1 cm. lato; petalis valde carnosiss, cuneato-flabellatis, obtusis, dimidio superiore valde incrassatis, basi 3-nerviis, 0.75 mm. longis, 1.25 mm. latis; labello valde carnosissimo, triangulari, basi valde incrassato, ante incrassationem leviter excavato, 0.75 mm. longo latoque; columna humili, crassa, sursum abrupte dilatata, brachiis divaricatis; ovario cum pedicello, 2–3 mm. longo.

Stelis nexipous is rather peculiar in the shape of its sepals. In appearance it does not resemble any other species in the genus. The genus *Physothallis*, which was established on a similar monosepalous character, has a column typical of the genus *Physosiphon*, and I am now convinced that the two genera are inseparable. However, the concept *Physothallis* is just as abnormal in the genus *Physosiphon* as the species described herein is in the genus *Stelis*. A few more cases like that of *S. nexipous* will help to confirm my feelings that we are dealing in the *Pleurothallidinae* with a very natural biological unit or genus which encompasses all the generic concepts proposed up-to-date within that subtribe.

ECUADOR: Prov. Napo-Pastaza, Mera, towards Mangayacu; epiphyte in rastrojo. Ca. 1100 m. alt. March 7, 1956. *Erik Asplund 19638* (TYPE in Herb. State Mus. Nat. Hist., Stockholm, Sweden; DUPLICATE TYPE in Herb. Ames).

***Platystele ornata* Garay sp. nov.**

Epiphytica, caespitosa, pusilla, usque ad 2.5 cm. alta; radicibus filiformibus flexuosis, glabris; caulibus secundariis vix rite evolutis, ullis, vagina unica omnino obtectis; folio obovato-spathulato, apice obtuso, ca. 2 cm.

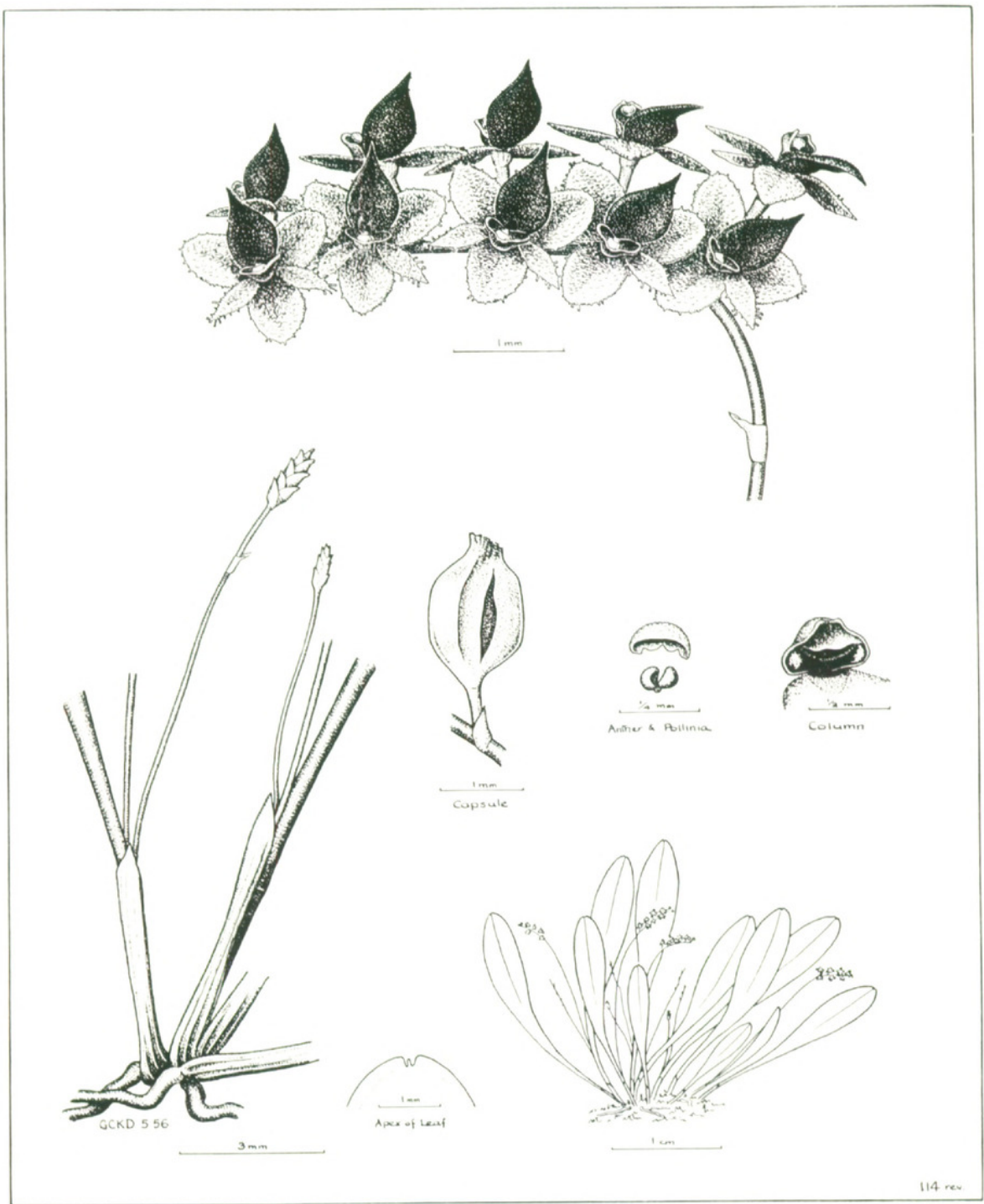
EXPLANATION OF THE ILLUSTRATION

PLATE XXXV. *STELIS NEXIPOUS* *Garay*. 1, plant, one half natural size. 2, flower, three times natural size. 3, petal, fifteen times natural size. 4, lip, twenty times natural size.

Drawn by ELMER W. SMITH

STELIS
nexipous
Garay





PLATYSTELE ORNATA Garay
Drawn by G. C. K. DUNSTERVILLE

longo, 3 mm. lato; inflorescentia capillari, erecta vel paulo arcuata, subdense pluriflora, ca. 2 cm. longa; bracteis infundibuliformibus, 0.1 mm. longis; sepalis ovatis, acutis, extus sparse glanduloso-pilosulis, ca. 0.5 mm. longis; petalis obovatis, apice acutis, margine glanduloso-pilosulis, sepalis paulo brevioribus; labello ovato-lanceolato, leviter cochleato, apice acuminato, sepalis magnitudine, disco nudo; columna humili, crassa, generis; ovario cum pedicello quam bracteis longiore.

This new species is easily separable from the others in the genus by its glandular-hirsute floral segments.

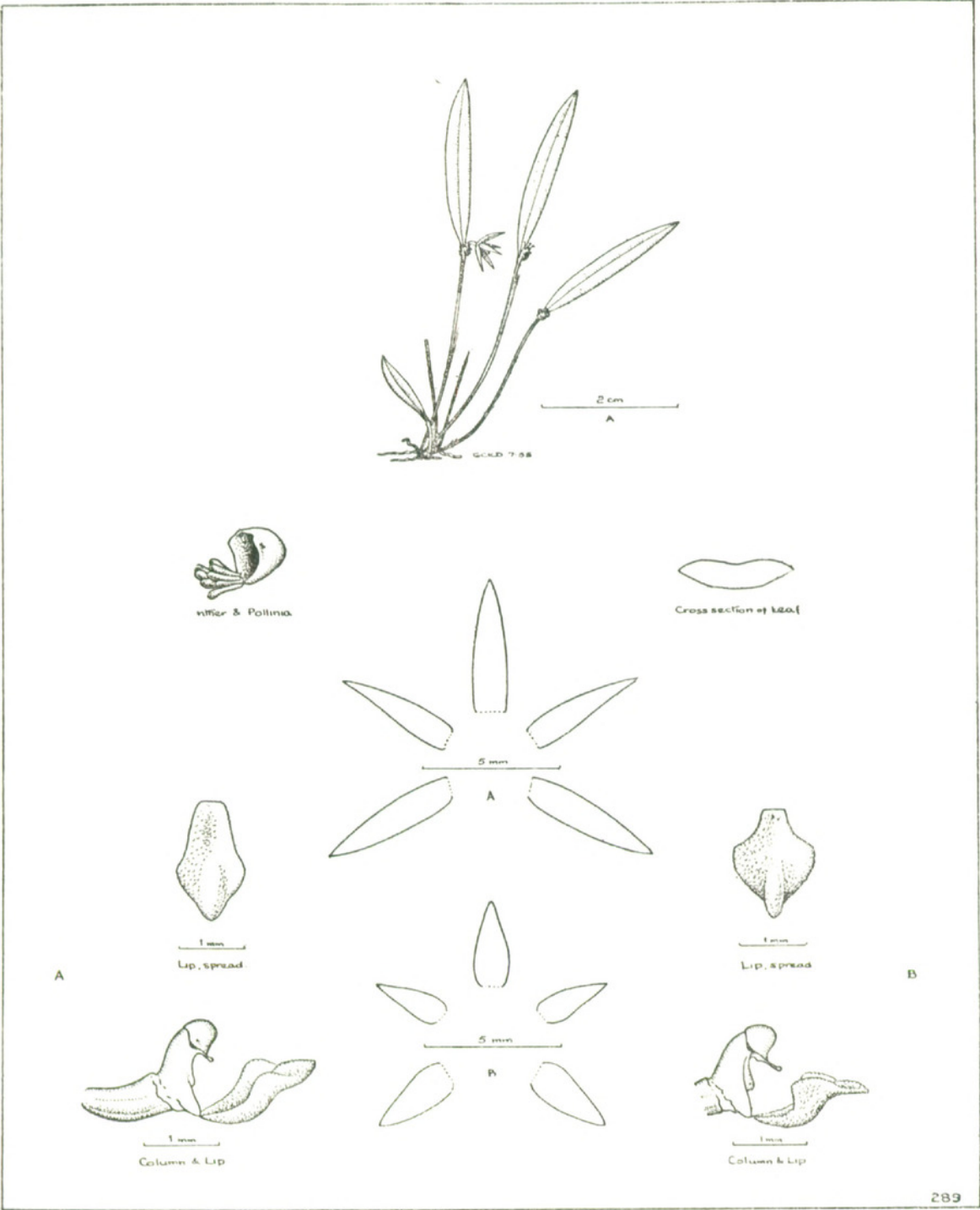
VENEZUELA: New road, Santa Teresa to Altagracia. Dec. 28, 1953. *G. C. K. Dunsterville 114* (TYPE in Herb. Ames).

***Octomeria deltoglossa* Garay sp. nov.**

Epiphytica, caespitosa, usque ad 8 cm. alta; radicibus filiformibus, flexuosis, glabris; caulibus secundariis erectis vel paulo arcuatis, vaginis 3, arcte adpressis omnino obtectis, 2–5 cm. longis; folio carnosio, oblongo-ligulato vel oblongo-lanceolato, apice acuto vel acutiusculo, basim versus sensim angustato, 2–4 cm. longo, 1–3 mm. lato; floribus aggregatis, diaphanis; sepalis inter se simillimis, ovatis vel oblongo-ovatis, acutis, 3–5 mm. longis, 1–1.5 mm. latis; sepalis lateralibus paulo obliquis; petalis sepalis simillimis sed paulo minoribus, 3–4.5 mm. longis, 1–1.2 mm. latis; labello valde carnosio, deltoideo, apice acuto et pulvinato-incrassato, 1.5–1.8 mm. longo, 1–1.3 mm. lato; columna crassa, arcuata; ovario pedicellato ca. 2 mm. longo.

This new species is closely related to the Brazilian *Octomeria rhodoglossa* Schltr., but differs from it in having smaller flowers and a dissimilar lip.

VENEZUELA: Rio Carrao. *G. C. K. Dunsterville 289* (TYPE in Herb. Ames).—Territorio Amazonas, Cerro Sipapo (Paraque), 1400 m. alt. *B. Maguire & L. Politi 27727* (Herb. N.Y. Bot. Gard.).



OCTOMERIA DELTOGLOSSA Garay
Drawn by G. C. K. DUNSTERVILLE

Malaxis tipuloides (Lindl.) O. Ktze. var. **exigua**
Garay var. nov.

A typo floribus multo minoribus differt. Planta usque ad 30 cm. alta; foliis 5, basilaribus, aggregatis, ovato-lanceolatis, acutis vel subacuminatis, 12–13 cm. longis, 1–1.5 cm. latis; racemo erecto, densissime multifloro; bracteis lanceolato-setaceis, pedicellis aequilongis; floribus parvulis; forma sepalorum et petalorum et labelli illa typi simillima; sepalis tantum 4–5 mm. longis.

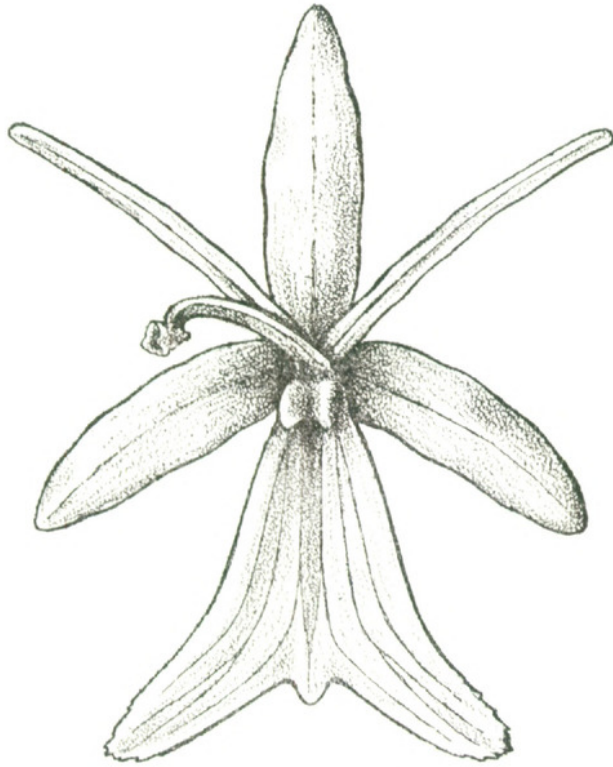
Whether to recognize this collection as a new species or merely as a variety of *M. tipuloides* was a matter of deliberation for a long time. No morphological differences of specific value can be observed in the floral structures between this collection and the typical species. However, the small dimensions are so striking that I feel it necessary to establish it at least as a variety.

COLOMBIA: Dept. Cundinamarca. Cordillera Oriental; Hato Grande, east side of Río Muchindote, 13 km. east of Gachetá. 2600 meters alt. June 14, 1944. *Martin L. Grant 9456*. Collected under the auspices of the U.S. Foreign Economic Administration: Colombian Cinchona Mission (TYPE in Herb. Ames; DUPLICATE TYPE in U.S. Nat. Herb.).

Liparis serpens *Garay sp. nov.*

Terrestris, 5–8 cm. alta; rhizomate satis gracili, flexuoso, prorepenti, vaginis remotis, scariosis, cucullatis, acutis, 7–10 mm. longis obsesso; folio juxta basim pseudobulbi singulo, prominenter petiolato, lamina ovato-cordata, acuta vel subacuminata, basi abrupte rotundata, margine leviter crispata, petiolo incluso 3–5.5 cm. longa, 1.5–3 cm. lata; pseudobulbo vix evoluto, ca. 5–7 mm. longo; inflorescentia singula, erecta vel leviter arcuata, satis gracili, 4.5–8 cm. longa, dimidio superiore dense multiflora; bracteis ovato-lanceolatis, acutis, quam ovariis pedicellatis brevioribus, 3–4 mm. longis; sepalis ovatis, obtusis, margine revolutis, nervo mediano prominenti,

4.5–5 mm. longis, 1.25 mm. latis; sepalis lateralibus leviter obliquis; petalis ligulatis, margine revolutis, univerviis, 5 mm. longis, 0.3 mm. latis; labello a basi cuneata subito dilatato, antice bilobo, in medio apiculato; lobis divergentibus oblongis, margine exteriori apicem versus serrulato-denticulata; disco in medio leviter in-



LIPARIS SERPENS *Garay*

crassato, ad basim callo transverse semiquadrato, antice leviter excavato ornato, 6 mm. longo, in medio 3 mm. lato, inter lobos apicales 6 mm. lato; columna gracili, leviter arcuata, apice incrassata auriculataque, ca. 3 mm. longa; ovario cum pedicello alato, ca. 5 mm. longo.

Liparis serpens is closely related to *L. neuroglossa* Rehb.f. and *L. elegantula* Kränzl. It differs from the former in its trailing habit and in the shape of the lip. *Liparis elegantula*, which is very similar vegetatively, appears to be constantly bifoliate and to have a differently shaped lip.

COLOMBIA: Dept. Cundinamarca, Quebrada del Chicó, Bogotá. Terrestrial in shady woods. Flowers light green, lip bright green with violet veins. 2700–2800 meters alt. *Martin Schneider 95* (TYPE in Herb. Ames no. 68507.)

***Epidendrum superpositum* Garay sp. nov.**

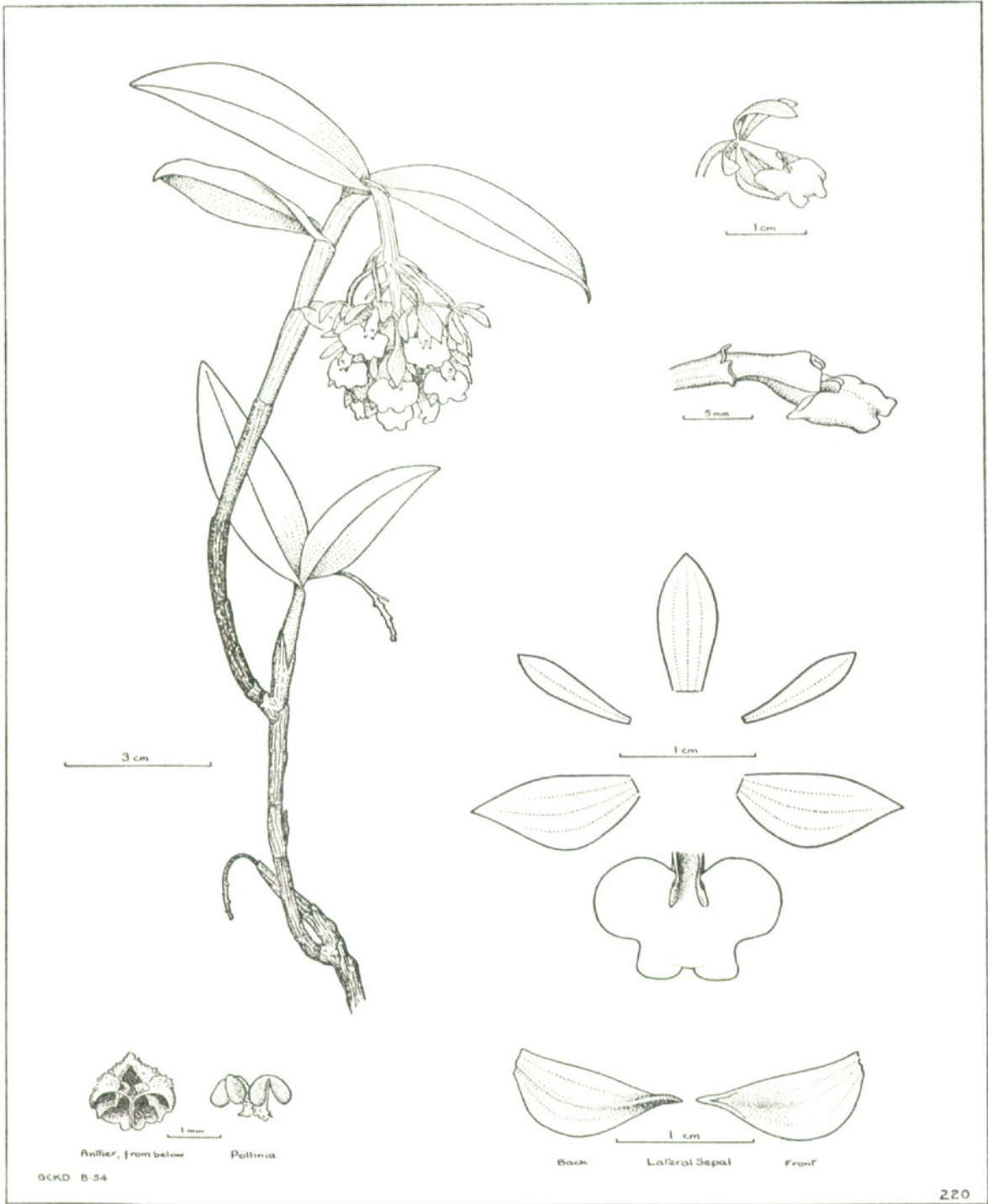
Epiphytica, ramosa, usque ad 40 cm. alta; radicibus crassiusculis, glabris; caulibus superpositis, erectis vel paulo arcuatis, vaginis amplis omnino obtectis, apice 2–3-phyllis; foliis ovatis, acutis, satis coriaceis, 3–6 cm. longis, 0.8–1.4 cm. latis; pedunculo abbreviato, 1–2 cm. longo; racemo densifloro, subcapitato, recurvo; bracteis setaceis ovarii brevioribus; sepalo postico obovato, apice acuto, 3-nervio, 8–10 mm. longo, 3–4 mm. lato; sepalis lateralibus obliquis, obovato-falcatis, apice cuspidatis, 3-nerviis, 8–10 mm. longis, 4–6 mm. latis; petalis linearibovatis, obtusis, 1-nerviis, 8–10 mm. longis, 1–1.5 mm. latis; labello trilobo, lobis lateralibus late rotundatis, margine leviter undulatis, lobo terminali antico, in medio exciso, sic bilobulato, disco basi bicalloso, 5–8 mm. longo, 10–12 mm. lato; columna labello adnato; ovario cum pedicello ca. 1.5 cm. longo.

This new species is apparently similar in appearance to *Epidendrum obliquum* Schltr., *E. soratae* Rehb.f. and *E. Steinbachii* Ames, but it differs from them in various floral structures, especially in the shape of the lip.

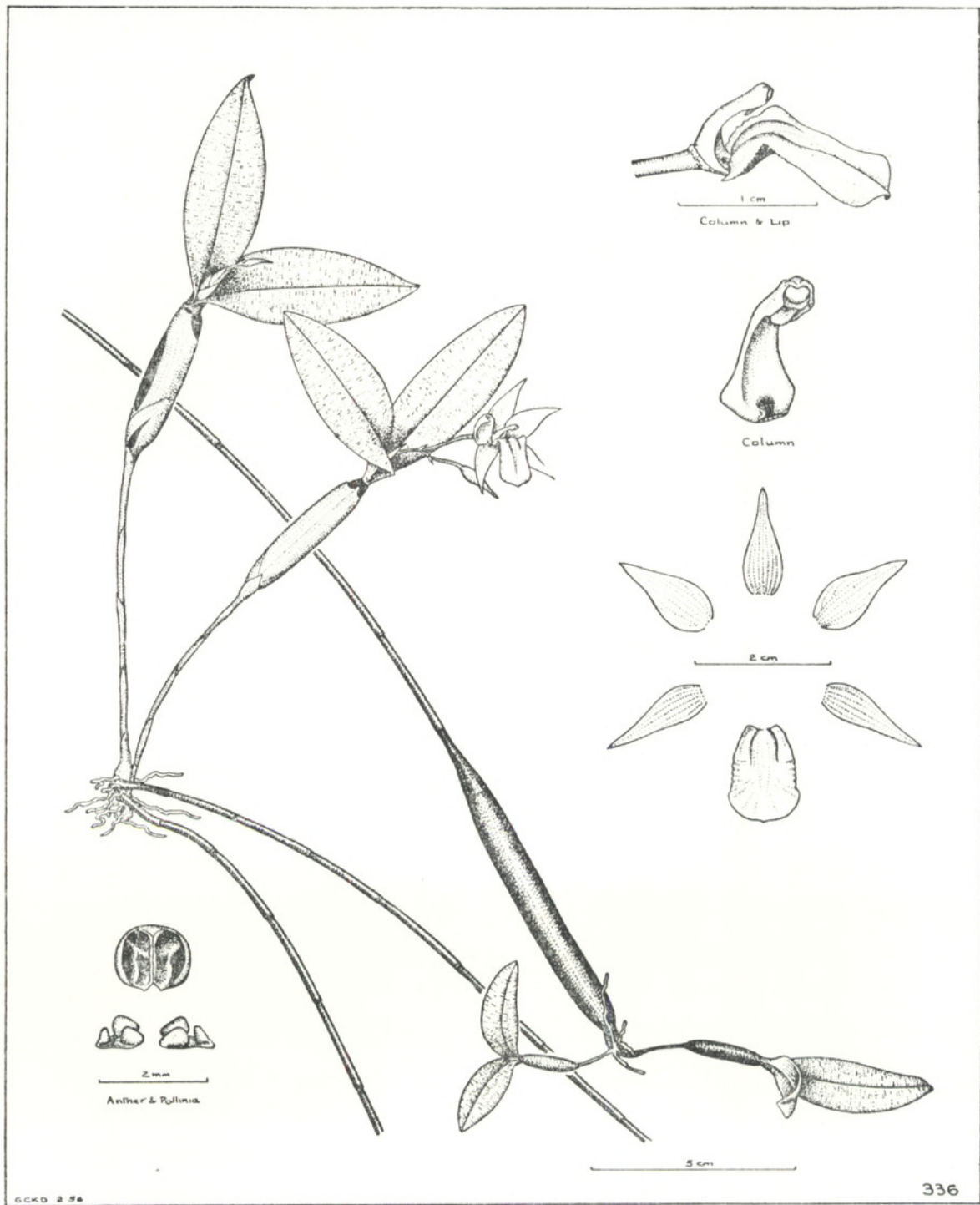
VENEZUELA: Junquito. G. C. K. *Dunsterville 220* (TYPE in Herb. Ames no. 68942).

***Hexadesmia Dunstervillei* Garay sp. nov.**

Epiphytica, caespitosa vel prolifera, usque ad 20 cm. alta; radicibus filiformibus, flexuosis, glabris; pseudobulbis longe stipitatis, cylindraceis, bifoliatis, usque ad 6 cm. longis; foliis ellipticis vel oblongo-ellipticis, utrinque attenuatis, apice acutis, 2–7 cm. longis, 0.7–2 cm. latis; inflorescentia satis abbreviata, pauci- (1–2-) flora:



EPIDENDRUM SUPERPOSITUM Garay
Drawn by G. C. K. DUNSTERVILLE



HEXADESMIA DUNSTERVILLEI Garay
Drawn by G. C. K. DUNSTERVILLE

bracteis ovato-lanceolatis, acuminatis, ca. 2.5 mm. longis; sepalis lanceolato-ovatis, acuminatis, 5–7-nerviis; sepalo postico 15–16 mm. longo, 4–6 mm. lato; sepalis lateralibus leviter obliquis, 15–16 mm. longis, 4–5 mm. latis; petalis ovato-lanceolatis, acuminatis, 15–16 mm. longis, 6–7 mm. latis; labello subquadrato-flabellato, apice acuto, disco bicarinato, 14–15 mm. longo, 8–9 mm. lato; columna leviter arcuata, basim versus paululo dilatata et in pedem brevissimum producta.

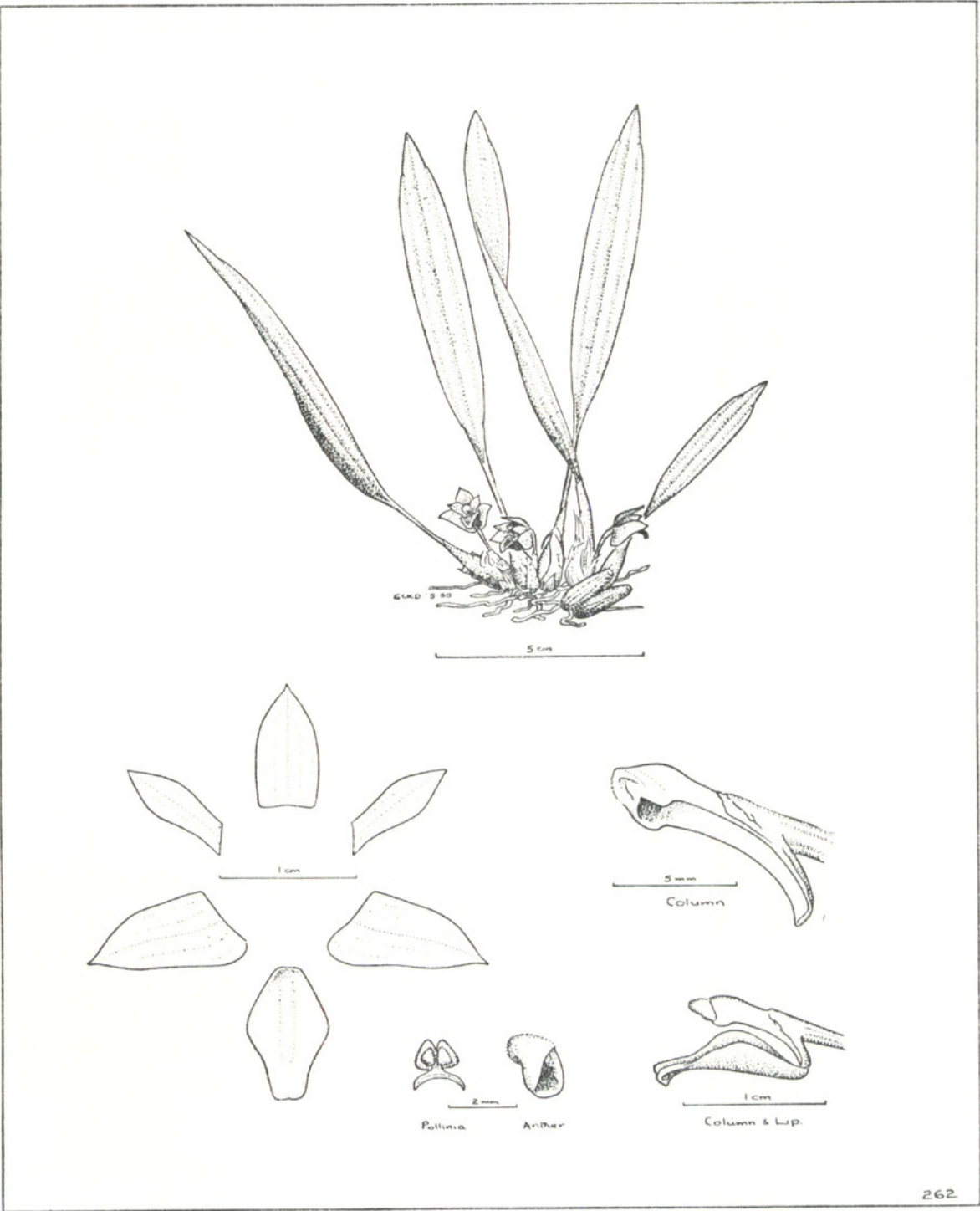
Hexadesmia Dunstervillei closely resembles *H. Jimenesii* Schltr. from Costa Rica but is easily separable from that taxon by the shape of the lip. This new species is dedicated to my good friend G. C. K. Dunsterville, President of the Shell Oil Co. in Venezuela, with whom I am preparing an iconography of the Orchids of Venezuela.

VENEZUELA: Estado Miranda, Santa Teresa, Guatopo. Dec. 31, 1955. G. C. K. *Dunsterville* 336 (TYPE in Herb. Ames).

***Bifrenaria minuta* Garay sp. nov.**

Epiphytica, caespitosa, minuta, usque ad 12 cm. alta; radicibus filiformibus leviter flexuosis, glabris; pseudobulbis aggregatis, ovoideis, unifoliatis, 1.5–2 cm. altis; folio pergameneo, subplicato, apice acuto, basi in petiolum 2–3 cm. longum attenuato, petiolo incluso 10–12 cm. longo, 1–1.5 cm. lato; inflorescentia juxta basim pseudobulborum nata, uniflora; pedunculo capillari, ca. 1–1.5 cm. longo; sepalo postico ovato-oblongo, apice acuto, 5-nervio, 9 mm. longo, 4.5 mm. lato; sepalis lateralibus oblique ovatis vel ovato-oblongis, apice acutis, 5-nerviis, 10 mm. longis, 6 mm. latis; petalis trulliformibus apice acutis, 3-nerviis, 8.5 mm. longis, 3 mm. latis; labello rhombeo, antice truncato, disco vix calloso, 10 mm. longo, 6 mm. lato; columna leviter clavata, basi in pedem producta; ovario cum pedicello ca. 6 mm. longo.

This new species is quite unique in the genus on ac-



BIFRENARIA MINUTA Garay
Drawn by G. C. K. DUNSTERVILLE

count of the extremely small flowers. It is apparently a borderline species between *Bifrenaria* and *Maxillaria*.

VENEZUELA: Río Carrao. G. C. K. Dunsterville 262 (TYPE in Herb. Ames.)

***Bifrenaria grandis* (Kränzl.) Garay comb. nov.**

Lacaena grandis Kränzl. in Fedde Repert. 25 (1927) 25.

An examination of an isotype (*Buchtien* 501) in the U.S. National Herbarium reveals that Kränzlin's concept is a member of the genus *Bifrenaria*, section *Lindleyella*, and is closely allied to the Colombian *B. picta* (Schltr.) Schweinf. *Bifrenaria grandis* is native of Bolivia.

***Maxillaria equitans* (Schltr.) Garay comb. nov.**

Camaridium equitans Schltr. in Fedde Repert. Beih. 7 (1920) 176.

Marsupiararia equitans Hoehne in Arquiv. Bot. Est. S. Paulo 2, pt. 4 (1947) 71.

A recent collection (*Cuatrecasas* 22092) from the Departamento del Valle in Colombia shows that this species has somewhat falcate leaves, similar to those of *M. vandiformis* Schweinf., a character not mentioned by Schlechter in the original description. Since *Camaridium* is not tenable, the above transfer is proposed.

***Maxillaria Sophronitis* (Rehb.f.) Garay comb. nov.**

Ornithidium Sophronitis Rehb.f. in Bonpl. 2 (1854) 18.

This rather showy species has not previously been transferred to the genus *Maxillaria*. It is known from Venezuela only and has recently been collected by Mr. Dunsterville (*Dunsterville* 388).

***Scelochilus corydaloides* (Kränzl.) Garay comb. nov.**

Rodriguezia corydaloides Kränzl. in Fedde Repert. 25 (1928) 24.

An examination of the type (*Buchtien* 528) indicates that this taxon is referable to the genus *Scelochilus*.

***Rodriguezia Teuscheri* Garay sp. nov.**

Epiphytica, caespitosa, ca. 12 cm. alta; radicibus flexuosis, glabris; pseudobulbis ovoideis, lateraliter compressis, unifoliatis, 2–3 cm. longis; folio coriaceo, elliptico vel oblongo-elliptico, canaliculato, apice acutiusculo, basi in petiolum brevem producto, 8–10 cm. longo, 2.5–3 cm. lato; inflorescentia juxta basim pseudobulborum nata, erecta vel paulo arcuata, pauciflora, ca. 8 cm. longa; bracteis ovatis, acutis, ca. 5 mm. longis; sepalo postico valde concavo, obovato, apice obtusiusculo, 1.5 cm. longo, ca. 1 cm. lato; sepalis lateralibus usque ad apicem connatis, reflexis, concavis, falcatis, ca. 2.5 cm. longis; petalis obovato-spathulatis, apice obtusis vel subtruncatis, 1.5 cm. longis, 1 cm. latis; labello in ambitu trapezoideo, antice emarginato, in medio sinuato, basi in processum carnosum producto, disco per totam longitudinem lamellis 2, parallelis ornato; lamina labelli ca. 2 cm. longa, antice 1.5 cm. lata; columna clavata, satis gracili, ca. 1.7 cm. longa; ovario cum pedicello ca. 2.5 cm. longo.

The specific name is given in honor of Dr. Henry Teuscher, Curator of the Montreal Botanical Garden, Canada, whose keen interest in and knowledge of orchidology is widely known and recognized.

ECUADOR: 100 km. from Guayaquil. *H. Teuscher s.n.* (TYPE in Herb. Ames). Flowered in cultivation at the Montreal Botanical Garden.

***Cryptocentrum Lehmannii* (Rchb.f.) Garay comb. nov.**

Aëranthus (Cryptoplectri) Lehmanni Rchb.f. in Otia Bot. Hamb. (1878) 10.

EXPLANATION OF THE ILLUSTRATION

PLATE XLI. Habit photograph of *RODRIGUEZIA TEUSCHERI* *L. A. Garay*. This is a photograph of the type material as cultivated in the Montreal Botanical Garden, Canada.

Photograph by ROMEO MELOCHE

PLATE XLI



Campylocentrum Lehmanni (Rehb.f.) Schltr. in Fedde Repert. Beih. 8 (1921) 164.

An excellent record of the type of the Ecuadorian *Aëranthus Lehmanni* in the Ames Herbarium reveals that this concept is undoubtedly referable to the genus *Cryptocentrum*. Apparently *C. Jamesonii* Benth. is the only other species of the genus which has been reported from Ecuador. Although these two taxa seem to be very similar vegetatively, *C. Lehmannii* may be separated by the presence of six to seven sheaths on the peduncle in contrast to one or two in *C. Jamesonii*, as well as by the pandurate and long-acuminate lip in the former, whereas it is ovate in the latter.

In his system of the *Orchidaceae*, Schlechter assigned the genus *Cryptocentrum* to the subtribe *Maxillarieae*. In view of the peculiar vegetative and floral structures, however, I cannot agree with this opinion. We find here a type of vegetative growth closely resembling a monopodial development. The leaves are arranged distichously on a shortened stem, but only a few terminal ones seem to be persistent, at least during anthesis, while the lower part of the stem bears the remnants of the sheathing bases of the leaves of previous years. The one-flowered peduncles are always borne in the axils of these sheathing bases on the lower portion of the stem. This condition is observable in every species assigned to *Cryptocentrum*, with the exception of *C. pseudobulbosum* Schweinf. In *C. pseudobulbosum*, we find, in addition, a well developed pseudobulb, quite an unusual condition, but, from the systematic point of view, exceedingly important. With the evidence from *C. pseudobulbosum*, it is obvious that this genus has to be kept among the genera with sympodial growth. It may be mentioned as a mere curiosity that this vegetative growth is entirely homologous with that of the old world genus *Phreatia*.

In the floral structure of *Cryptocentrum*, furthermore, we find evidence of a more complex nature than would be normal for the subtribe *Maxillarieae*. The lateral sepals are connivent at the base and form a very prominent sepaline spur to which the claw of the lip is internally adnate for its entire length. This feature is observable in the genus *Sepalosiphon* in addition to *Cryptocentrum*. (*Sepalosiphon* is known only from New Guinea.) Though we have here a striking homology in floral structures, the two genera are vegetatively very dissimilar. In both cases the column is very short, more or less petaloid and without a foot. The incumbent anther rests on a more or less ascending and acicular rostellum.

In applying these observations to Schlechter's "*Systema Orchidacearum*," we find that the characters of the subtribe *Maxillarieae* are very different, as shown in the following tabular comparison.

MAXILLARIEAE	CRYPTOCENTRUM
Rostellum not evident.	Rostellum prominent.
Column elongate and with a definite foot which forms, with the lateral sepals, a more or less prominent mentum.	Column short and footless. No mentum present.
Lateral sepals not spurred.	Lateral sepals spurred.
Lip articulate with the column foot; disc with a longitudinal callus.	Lip adnate to the spur; disc ecallose.

It is clear that *Cryptocentrum* cannot be maintained in the subtribe *Maxillarieae*. In following through Schlechter's system, the characters of *Cryptocentrum* as tabulated above, give us substantial ground to warrant the erection of a new subtribe, which should be placed between *Ornithocephaleae* and *Saundersieae*.

Cryptocentreae *Garay subtribus nova.*

Pollinia 4. Plantae epiphyticae, pusillae. Pseudobulbi rudimentarii vel deficientes. Caules satis abbreviati, pseu-

domonopodium formantes. Folia disticha. Inflorescentiae uniflorae. Sepala calcarata. Labellum sepalorum calcarari intus adnatum. Columna apoda. Rostellum prominens, aciculare. Stipes polliniorum abbreviata.

Genera: *Cryptocentrum* Benth.

Anthosiphon Schlechter.

Notylia Norae *Garay sp. nov.*

Epiphytica, pusilla, ca. 2.5 cm. alta; radicibus filiformibus, flexuosis, glabris; foliis equitantibus, oblique ovato-lanceolatis, carnosis, 5–8 mm. longis, 1.5–2 mm. latis; inflorescentia erecta vel paulo arcuata, pauciflora; bracteis ovatis, acutis, ca. 1 mm. longis; floribus diaphanis, lilacinis; sepalo postico ovato, conduplicato, apice acuto, 1-nervio, 3 mm. longo, 1.7 mm. lato; sepalis lateralibus liberis, anguste oblongo-lanceolatis, acutis, 1-nerviis, 4 mm. longis, 0.8 mm. latis; petalis ovato-lanceolatis, acutis, 1-nerviis, 4 mm. longis, 1 mm. latis; labello longe unguiculato, deinde in laminam ovatam in medio leviter constrictam expanso, apice acuto, basi minutissime ciliato, 3-nervio, 3.5 mm. longo, antice 1.8 mm. lato; columna erecta, capitata, ca. 2 mm. longa; ovario cum pedicello ca. 2.5 mm. longo.

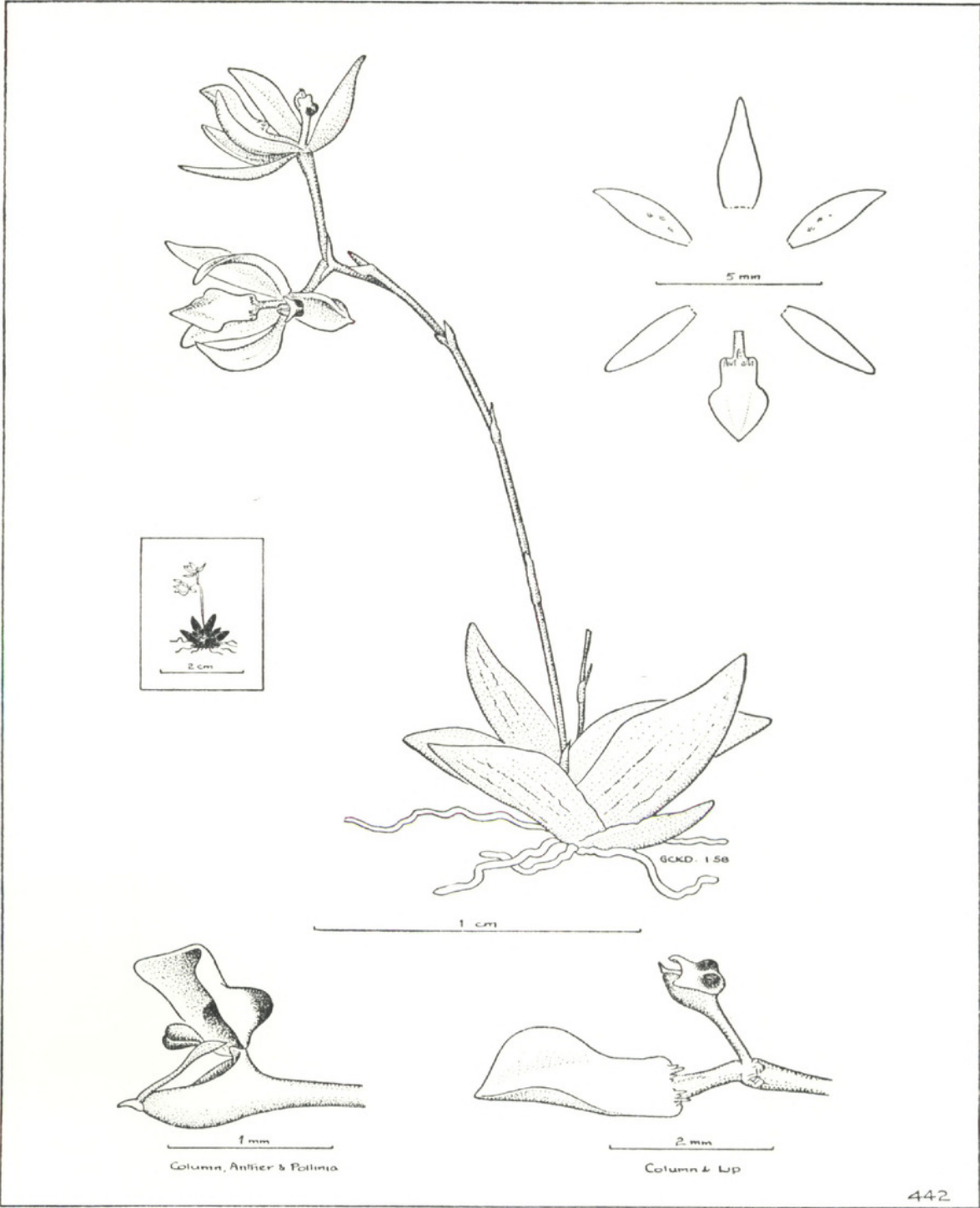
Notylia Norae is related to the Bolivian *N. lilacina* Kränz. but differs from it in the shape of the petals and lip.

It gives me great pleasure to dedicate this beautiful miniature orchid to Mrs. Dunsterville, whose inspiration and special interest in botanicals has been of indispensable help in the preparation of the Iconography of the Venezuelan Orchids.

VENEZUELA: Kavanupa, Río Uaiparu. On small tree near water's edge. G. C. K. Dunsterville 442 (TYPE in Herb. Ames).

Telipogon Teuscheri *Garay sp. nov.*

(§ *Brevicaules*). Radicibus satis longis, copiosis; cauli-



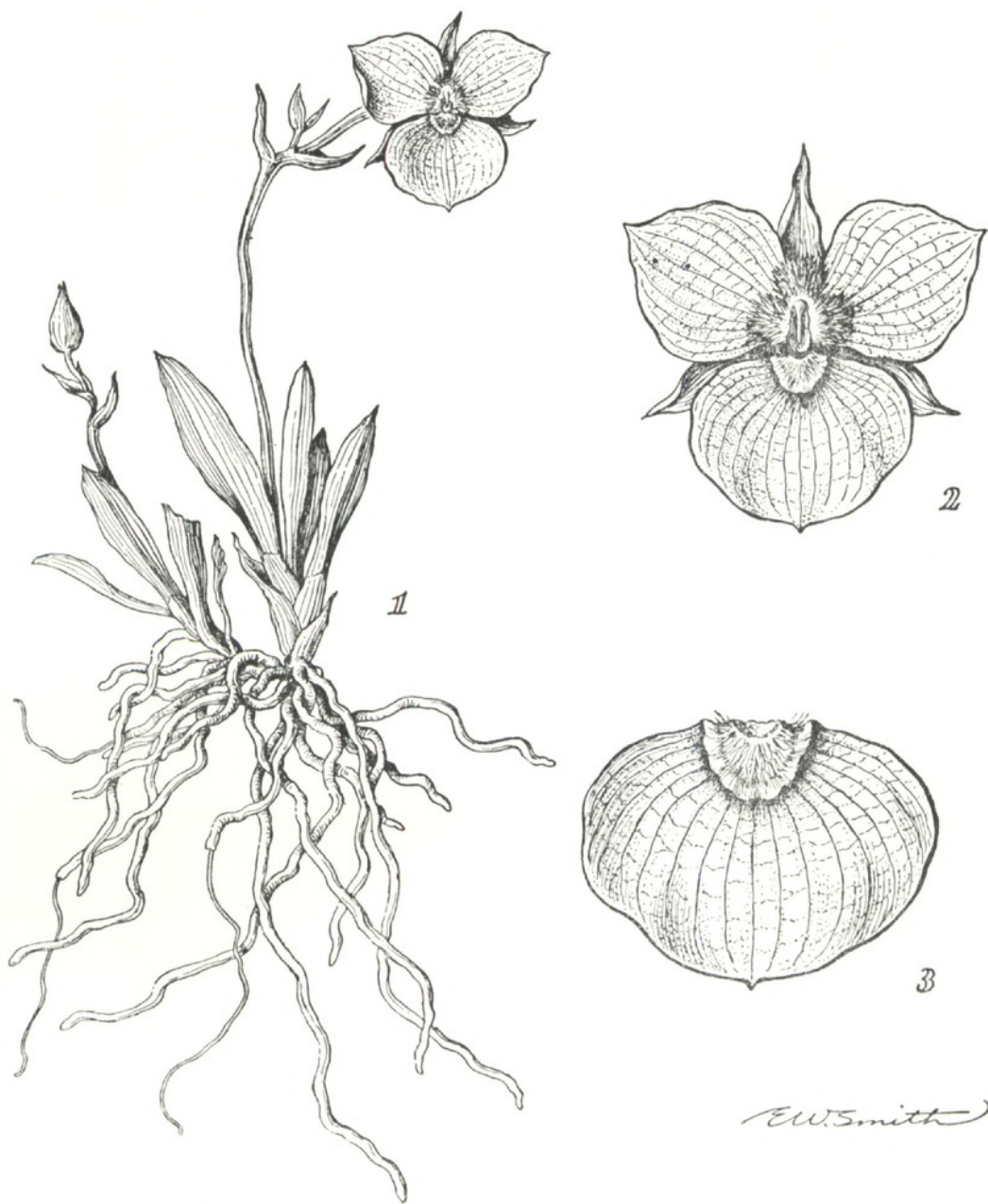
NOTYLIA NORAE Garay
Drawn by G. C. K. DUNSTERVILLE

EXPLANATION OF THE ILLUSTRATION

PLATE XLIII. TELIPOGON TEUSCHERI *Garay*. 1, plant, two thirds natural size. 2, flower, expanded, slightly enlarged. 3, lip, twice natural size.

Drawn by ELMER W. SMITH

TELIPOGON *Teuscheri*
Garay



bus abbreviatis, ca. 4-foliatis; foliis satis carnosis, oblongo-lanceolatis, acutis, basi articulatis, 2.5–4 cm. longis, 4–8 mm. latis; inflorescentiis erectis, vel leviter flexuosis, quam foliis duplo longioribus, apice 2–4-floris; pedunculo compresso, alato, usque ad 7 cm. longo; bracteis ovato-lanceolatis, dorso leviter carinatis, ovariis duplo brevioribus; floribus in genere inter mediocres; sepalis ovato-triangularibus, acutis, 3-nerviis, dorso prominenter carinatis, 14 mm. longis, supra basim 6 mm. latis; petalis rhombeo-ovatis, acutis vel subacuminatis, 11-nerviis, 16 mm. longis, 13 mm. latis; labello transverse subrotundo, acuto, in medio breviter apiculato, 17-nervio, 13 mm. longo, 17 mm. lato; disco basim callo deltoideo, hirsuto ornato; columna humili, hispido-setacea; ovario graciliter pedicellato, cum pedicello ca. 2 cm. longo.

Telipogon Teuscheri differs from *T. semipictus* Rchb.f. in having a well developed callus at the base of the lip and somewhat smaller flowers. *Telipogon Wallisii* Rchb.f. is very similar to this new species, but its flowers are smaller and its petals are only 7-nerved.

ECUADOR: Santa Rosa. 11,000 ft. alt. June 1956. *H. Teuscher* 12 (TYPE in Herb. Ames).



Garay, Leslie A. 1958. "Studies in American Orchids IV." *Botanical Museum leaflets, Harvard University* 18(5), 186–218. <https://doi.org/10.5962/p.295183>.

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