

SOME ORCHIDS, MAINLY SOUTH AMERICAN

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RESUMEN

Algunas orquídeas, especialmente sudamericanas. — El autor en este trabajo describe algunas Orquídeas nuevas para Sudamérica y en otras amplía su distribución o modifica su posición sistemática.

Las nuevas entidades creadas son : *Sobralia parviflora*, *Cranichis Castellanosii*, *Cranichis parviflora*, *Malaxis quadrata*, *Centropetalum lanceolatum* y *Pachyphyllum nubivagum*. Las especies que pasan de género son : *Codonorchis tetraphylla* (Poepp. et Endl.) Williams (*Pogonia tetraphylla* Poeppig-Endlicher), *Cranichis Lehmanniana* (Kränzl.) Williams (*Goodyera Lehmanniana* (Kränzlin), *Spiranthes Castillonii* (Hauman), Williams (*Stenorhynchus Castillonii* Hauman), *Pachyphyllum costaricense* (A. et S.) Williams (*Centropetalum costaricensis* Ames et Schweinfurth); finalmente, establece la identidad de la *Habenaria Paivaana Reichenbach* f. con la *Habenaria angustiloba* Lillo et Hauman y cambia el nombre de *Cranichis micrantha* Gris. por *Cranichis parviflora* Williams.

The present paper concerns mainly the Orchidaceae of South America. The specimens on which these observations are based have been collected by a number of people, who will be identified by the specimens cited. I am particularly indebted to my correspondents in South America who, with characteristic generosity, have shared their orchid specimens with me.

The type specimens of all of the new species and all other specimens cited are preserved in the Ames Herbarium, Harvard University, Cambridge, Mass., U. S. A., unless other herbaria are given as possessing the specimens.

Habenaria Paivaeana Reichenbach filius, *Xen. Orch.* 3 (1878) 17.

Syn. *Habenaria angustiloba* Lillo et Hauman, in *Anales Museo Nac. Hist. Nat.* 29 (1917) 357.

Dr. Horacio R. Descole has been kind enough to send me an isotype specimen of *H. angustiloba* Lillo et Hauman for the Ames Herbarium. This specimen compares very favorably with the original collection of *H. Paivaeana* Reichb. f. made by Mandon in Bolivia. I have seen the following specimens from Argentina:

Argentina: Provincia de Tucumán. Departamento de Burruyacu. Cerro El Duraznillo. Altitud 900 metros. En pajonales. 3-III-1914. Monetti 2055 (Herb. Lillo n° 16101 y Herb. Ames, isotipo de *H. angustiloba*); Tucumán. Sierras Calchaquíes. Portezuelo del Garabatal. En un bosque de *Alnus jorullensis* en las praderas. Altitud 3000 metros. 6 de enero, 1933. Burkart 5330; Tucumán. Famailá. Altitud 1000 metros. 10-IV-1922. Venturi 1752 *in part*; Departamento Tafti. Las Chamicas. Altitud 1000 metros. I. 1924. Venturi 2765 *in part*.

Habenaria Platantherae Reichenbach filius, in *Linnaea* 41 (1876)

55. — Kränzlin in *Englers Bot. Jahrb.* 16 (1893) 185. — Cogniaux, in *Martius Fl. Bras.* 3, pars 4 (1893) 92. — Kränzlin, *Orch. Gen. et Sp.* 1 (1893) 394.

Señor Bernardo Rosengurtt has collected this rare and interesting species two times recently. One specimen was collected in the same locality (Maldonado) where Gibert made the original collection in 1869.

In both of Rosengurtt's collections I find a small tooth at the base of the petals. This tooth has been overlooked in the original specimen, as well it might be, or possibly does not exist on that specimen.

Uruguay: Maldonado. Cerro de Ánimas. Rara en prados húmedos. Flor blanca, 20-I-1938. Rosengurtt B2422; Cerro Largo. Cerro de las Cuentas. Rara in uliginosis. Flor blanca. 23-II-1938. Rosengurtt B2575.

Habenaria setifera Lindley, in *Ann. Mag. Nat. Hist.* 4 (1840) 381.

In so far as I am able to learn this species has not been reported previously from Argentina.

Argentina: Venturi 1752 in part and 2765 in part (The same numbers cited under *H. Paivaeana* Reichb. f. above).

Codonorchis tetraphylla (Poepp. et Endl.) L. O. Williams comb. nov.

Syn. *Pogonia tetraphylla* Poeppig et Endlicher *Nov. Gen. ac Sp.* 2 (1938) 16, t. 122.

Codonorchis Poeppigii Lindley, *Gen. et Sp. Orch. Pl.* (1840) 410. — Kränzlin, in *Engler's Bot. Jahrb.* 44, Beibl. 101 (1910) 4. — Hauman, in *Anales Soc. Cient. Argentina.* 90 (1921) 116.

This species is the type of Lindley's genus *Codonorchis*. The name *Codonorchis Poeppigii* was no more than a new name for *Pogonia tetraphylla* and was no doubt applied by Lindley because the species is not always four-leaved.

Sobralia parviflora L. O. Williams sp. nov.

Herba terrestris, erecta, usque ad 6 dm. alta. Folia lanceolata, acuminata. Inflorescentia terminalis vel axillaris; bractee triangulari-lanceolatae. Sepala omnino similia, oblanceolata, acuta, supra medium latiora. Petala sepalis similia sed paulo obliqua. Labellum oblongo-obovatum, paulo retusum, basi bi-vel pluri-callosum.

A strict terrestrial herb up to 6 dm. tall. Stems sheathed with the persistent, striated leaf-sheaths, about 5 mm. thick. Roots covered with a pale, soft tomentum. Leaves lanceolate, acuminate, several-nerved, 9-20 cm. long., 1.5-3 cm. broad. Inflorescence terminal or lateral from the axils of leaves, toward the summit of the plant, simple or usually with two or three branches about as long as the leaves, small-flowered. Bracts of the inflorescence triangular-lanceolate, acute or acuminate, 2-5 mm. long. Flowers very small for the genus, 2-3 cm. long. Sepals similar, oblanceolate, acute, widest above the middle, about 23 mm. long and 6 mm. broad. Petals similar to the

sepals but slightly oblique and occasionally somewhat undulate toward the apex, about 21 mm. long and 5 mm. broad. Lip oblong-obovate, somewhat retuse, about 24 mm. long and 13 mm. broad; anterior half strongly plicated and lacerated; with two or more calluses at the base which become raised and divided, from the middle to the apex of the lip the calluses become highly lacerated callus plates covering much of the anterior half of the lip. Column of the genus, about 12 mm. long; stelidia inconspicuous, lanceolate, acute.

Bolivia : Without exact locality or date. Bang 2290 (Type in the Gray Herbarium, Harvard University).

Columbia : Provincia de Bogotá. Quetame. Altitud 1500 [metros ??]. XII-1853. Triana 1611; Villavicencio. Altitud 500 metros. I-1930. Pérez Arbeláez 198.

Both of the specimens from Columbia are preserved in the Herbario Nacional Colombiano.

Sobralia parviflora is easily distinguished from all other species of *Sobralia* by a combination of the small flowers and the branched inflorescence. There seem to be no closely allied species.

Granichis Castellanosii L. O. Williams sp. nov.

Herba terrestris, erecta, gracilis, usque ad 1 dm. alta. Folia ovato-lanceolata vel elliptico-oblonga, acuminata vel obtusa. Inflorescentia conferta; bractee lanceolatae, acutae. Sepalum dorsale ovato-lanceolatum, acutum vel obtusum, uninerviium, cucullatum. Sepala lateralia sepalo dorsali similia sed paulo obliqua. Petala oblique-lanceolata, obtusa vel acuta, unguiculata, margine anteriore ciliata. Labellum obcordatum, obtusum, paulo unguiculatum, leviter cucullatum.

A slender, erect terrestrial herb up to 1 dm. tall. Roots fasciculated, densely pilose. Leaves basal, erect, two or three in our specimens; petiole sulcate, 3-4 mm. long; blade ovate-lanceolate to elliptic-oblong, acuminate to obtuse (?), 4,5 7 cm. long, 1,3-2,5 cm. broad. Scape slender, erect, crisped-glandular pubescent above, becoming, glabrous below, loosely invested by three acuminate sheaths. Inflorescence crowded; bracts

lanceolate, acute, up to 3 mm. long, shorter than the ovary: Flowers medium sized for the genus. Dorsal sepal ovate-lanceolate, acute or obtuse, onenerved, cucullate, about 2 mm. long and 1,2 mm. broad. Lateral sepals similar but slightly oblique. Petals abruptly dilated from the short slender claw, obliquely lanceolate, obtuse or acute, about 2 mm. long and 1 mm. broad, strongly ciliate on the anterior margin, the hairs obscurely moniliform. Lip obcordate, obtuse, short unguiculate, slightly cucullate, somewhat constricted toward the apex, 3-nerved with some secondary nerves. Column of the genus, about 1 mm. long.

Argentina: Provincia de Jujuy. El Cucho. 7-III-1937. Castellanos 20038 (Type in the Ames Herbarium n° 46880).

Cranichis Castellanosii may be easily distinguished from all of the species of the genus known to the author by the ciliation of the petals being only on one, the anterior, margin. In addition the shape of the lip, the shape of the petals and the small size of the plant are distinctive.

***Cranichis Lehmanniana* (Kränzl.) L. O. Williams comb. nov.**

Syn. *Goodyera Lehmanniana* Kränzlin, in *Engl. Bot. Jahrb.* 26 (1899) 498.

Cranichis pastoensis Schlechter, in *Fedde Repert. Beih.* 7 (1920) 215.

Schlechter has pointed out, I believe correctly, that this plant is a *Cranichis* and not a *Goodyera*. However he seems to have been in error in giving the plant a new name. *Cranichis Lehmanni* Reichb. f. (*Otia Bot. Hamb.* (1878) 4) and *Cranichis Lehmanniana* (Kränzl.) L. Wms. may not be considered the same as one is genitive the other adjectival in form. (See *International Rules of Botanical Nomenclature*, ed. 1935, Art. 70, note 4).

Columbia: Alto de Cebollas above Pasto. At 2800-3000 meters altitude. Lehmann 6149 (Herb. Ames); Department of Cundinamarca. Zipaquira. Spring head in meadow. Perianth white. At 2650 meters altitude. 20-24-X-1917. Pennell 2535 (U. S. Nat. Herb.).

Cranichis parviflora L. O. Williams nom. nov.

Syn. *Cranichis micrantha* Grisebach, in *Abhandl. K. Gesellsch. Wiss. Gött. (Symb. ad Fl. Argentinam)* 24 (1879) 337. — Cogniaux, in *Martius Fl. Bras.* 4, pars 3 (1895) 248, non Sprengel (1826).

The Argentine species must have a new name because of the earlier use of the name, by Sprengel, as applied to a plant from Jamaica.

Spiranthes Castillonii (Hauman) L. O. Williams comb. nov.

Syn. *Stenorrhynchus Castillonii* Hauman, in *Anales Soc. Cient. Argentina* 90 (1921) 130, fig. 12.

The generic position of this plant is difficult to decide but it is not a *Stenorrhynchus*. The species will no doubt be best placed in the genus *Spiranthes* in the broad sense.

An interesting note, by Hauman, concerning Schlechter's «*Spiranthinae*» (*Beih. Bot. Centralbl.* 37 (1920) Ab. II, pp. 317-454) will be found in *Anales Soc. Cient. Argentina* 90 (1921) 119.

Argentina : Jujuy. Volcán. Loma de la laguna. Altitud 2200 metros. Flores amarillo con verde. 16-XI-1924. Schreiter 2841.

Malaxis quadrata L. O. Williams sp. nov.

Herba erecta, gracilis, terrestris, usque ad 3 dm. alta. Folia ovato-lanceolata, breviter acuminata, integra. Inflorescentia conferta, subumbellata; bractee acuminatae, scariosae. Sepalum dorsale lanceolatum, acutum, dorso paulo echinatum, uninerviū. Sepalia lateralia oblongo-lanceolata, acuta vel obtusa, uninervia. Petala lineari-filiformia. Labellum oblongum, leviter panduratum, basi biauriculatum, apice apiculatum et laceratum; discus excavatus.

An erect, slender, terrestrial herb about 3 dm. tall. Roots filiform, apparently glabrous. Pseudobulbs two-leaved, slender, covered with the leaf-sheaths. Leaf blades ovate-lanceolate, short acuminate, entire, erect or ascending, nearly opposite, up to 13 cm. long and 6 cm. broad. Inflorescence dense, subumbellate; subtending bracts scarious, acuminate, up to about 4

mm. long. Flowers long pedicellate at anthesis. Dorsal sepal lanceolate, acute, somewhat echinate dorsally, one-nerved, about 5-6 mm. long and 2 mm. broad at the base. Lateral sepal oblong-lanceolate, somewhat oblique, obtuse or acute, echinate dorsally, one-nerved, 3-4 mm. long, 1.5-2 mm. broad. Petals linear-filiform, about 4 mm. long and 0.5 mm. broad. Lip oblong, slightly pandurate, biauriculate at the base, 4-5 mm. long, 2-3 mm. broad; apex short apiculate and lacerated on either side of the median apiculation; disc with an oblong-ovate excavation extending from the base to beyond the middle of the lip, the excavation divided by a longitudinal partition. Column short, with a prominent lateral stolidium on either side toward the base. Ovary echinate or with gland-like pubescence.

Ecuador: Forest of Chiguinda. East Andes of Sigüig. At 1600-2000 meters altitude. Blooms May. Lehmann 6544 (Type in Herb. Ames n° 14868).

Malaxis quadrata is easily distinguished from all other American species of *Malaxis* by the oblong-pandurate lip.

Hexadesmia boliviensis Rolfe, in *Mem. Torr. Bot. Club* 6 (1896) 122.

I am inclined to believe that this species belongs in the genus *Scaphyglottis* rather than in *Hexadesmia* but I have not been able to find pollinia on the rather mature isotype specimen available and that is the only specimen which I have seen. The species seems to be closely allied to *Scaphyglottis Huebneri* Schltr., a species which was described from Perú.

The description of the lip given by Rolfe would seem to be quite inaccurate. In the isotype specimen which I have seen the lip may be described best as: entire or nearly so, rhombic-oblong, obtuse. Rolfe described it, in part, as follows: «... obovate-spatulate, 3-lobed...; lateral lobes rounded; front lobe roundish-oblong, emarginate».

Schlechter has referred Buchtien 5047 and 5048, which were collected in Bolivia, to this species (*Fedde Repert.* 27 (1929) 58). I have seen the first of these numbers and it would seem to belong to *Scaphyglottis Sanctae-Martae* Schltr.

Sophronites violacea Lindley, in *Bot. Reg.* 26 (1840) misc. 18. —
Hooker filius in *Bot. Mag.* 3rd Series 62 (1886) t. 6880.

Brazil: Rio de Janeiro. 1-VIII-1915 Rose et Russell 20633.

The specimen of this rare species is in the United States National Herbarium.

Diadenium micranthum Poeppig et Endlicher, in *Nov. Gen. ac Sp.*
Pl. 1 (1835) 41, t. 71.

This rare species previously has been known only from Perú. The specimen at hand is accompanied by Dr. White's color notes which, in addition to collection data, are transcribed here.

Bolivia: Rurrenabaque. Beni [River]. At 900-1000 feet altitude. 30-XI-1921. White 1100.

«Epiphyte. Perianth magenta, deep in inner parts of flower shading to magenta white on tips of perianth. Tip of spur greenish white. No perceptible fragrance. Rare. Mountain stream associated with other orchid species. Leaves reddish magenta on upper surface, green on lower. Full sun».

Centropetalum lanceolatum L. O. Williams sp. nov.

Herba epiphytica, usque ad 3 dm. longa. Folia oblongo-lanceolata, acuta, paulo apiculata, coriacea. Inflorescentia axillaris, uniflora. Sepalum dorsale elliptico-ovatum, acutum, canaliculatum, carnosum. Sepala lateralía lanceolata, acuta, basi leviter gibbosa. Petala oblanceolata, acuta. Labellum lanceolatum, acutum, infra medium callo unico donatum. Stelidia columnae labello leviter adnato.

An epiphytic herb up to 3 dm. long. Roots slender, glabrous. Stem more or less curved, simple or branched, densely distichous-leaved. Leaves oblong-lanceolate, acute, minutely apiculate, coriaceous, about 3-3,5 cm. long, 7-11 mm. broad; persistent leaf-bases striate, sheathing the stem. Inflorescence axillary, one-flowered, very short, in the axils of the upper leaves; bracts inconspicuous. Dorsal sepal elliptic-ovate, acute, canaliculate, fleshy, about 6 mm. long and 3 mm. broad. Lateral sepals lan-

ceolate, acute, about 8 mm. long and 1,5 mm. broad, fleshy, strongly keeled along the median line, somewhat gibbous at the base and forming a slight mentum. Petals oblanceolate, acute, about 6,5 mm. long and 1,25 mm. broad. Lip lanceolate, acute, the apex slightly naviculare, about 6 mm. long and 2 mm. broad, with a single quadrate, quadripartite callus just below the middle. Column of the genus, about 5 mm. long, strongly winged, the wings lightly connate with the lip at the sides of the callus. Ovary alate.

Columbia: Páramo de Zuanacas. Central Andes of Popayán. At 3300 3500 meters altitude. Lehmann 8588 (Type in Herb. Ames n° 23114).

A collection with the same data as the above may belong to this species. It is Lehmann 6756.

Centropetalum lanceolatum is easily distinguished from all of the other species of *Centropetalum* by the large size of the plant, by the narrow lip and the callus as well as by other details of the flower.

The Lehmann collections must be rather widely distributed in the herbaria of the world yet many of the specimens apparently never have been determined nor appeared in literature. Some of the specimens of the collection in the Ames Herbarium are without flowers and hence nearly indeterminable but many of them have fine flowers, as does the type of the present species.

***Pachyphyllum costaricense* (A. et S.) L. O. Williams comb. nov.**

Syn. *Centropetalum costaricensis* Ames et Schweinfurth, *Sched. Orch.* 10 (1930) 110. — Ames in Standley *Fl. Costa Rica (Bot. Series, Field Mus. Nat. Hist., vol. 18 (1937) 205.*

There is no doubt that this species belongs to *Pachyphyllum* rather than *Centropetalum*. The type of inflorescence, the structure and size of the flowers as well as the stelia not being connate with the lip are all characters which point toward *Pachyphyllum*. The flowers are old and the pollinia lacking so their characters are not available for study.

Pachyphyllum cyrtophyllum Schlechter, in *Fedde Repert.* 15 (1918) 216 in textu; in *Fedde Repert. Beih.* 10 (1922) 80.

Syn. *Pachyphyllum falcifolium* Schlechter in *Fedde Repert.* 10 (1912) 460, non Reichenbach filius.

Pachyphyllum confusum Kränzlin, in *Engler's Pflanzenr.* IV. 50. (*Pseudomonopodiales*) (1923) 22.

Kränzlin, in his monograph of *Pachyphyllum*, overlooked the fact that Schlechter had twice proposed the same new name for the homonym *Pachyphyllum falcifolium* Schltr. Kränzlin's *Pachyphyllum confusum* is a superfluous name for the same unit.

Pachyphyllum Hartwegii Reichenbach filius, in *Bonplandia* 2 (1854) 219; in *Walp. Ann.* 6 (1861) 822; *Xen. Orch.* 1 (1856) 166, t. 53, III, fig. 8-12. — Kränzlin, in *Engler's Pflanzenr.* IV. 50. (*Pseudomonopodiales*) (1923) 24.

I have determined the following specimens on the basis of a photograph of the type and the several diagnoses. The plant is apparently quite rare.

Columbia : Department of Cauca. «Canaan» Mt. Purface. Cordillera Central. Epiphytic herb in forest. At 3100-3200 meters altitude. 11-13 VI-1922. Pennell et Killip 6603; Without locality. Collected 1760-1808. Mutis 1754 (in U. S. Nat. Herb.).

Pachyphyllum micranges Schlechter, in *Fedde Repert. Beih.* 7 (1920) 203. — Schlechter et Mansfeld, in *Fedde Repert. Beih.* 57 (1929) t. 72, fig. 281.

Ecuador : Our specimen without further data. Lehmann 6865. The above specimen has been determined from the characters and the figure cited. The type of the species came from Columbia.

Pachyphyllum muscoides (Kränzl.) Schlechter, in *Fedde Repert.* 17 (1918) 216.

Syn. *Orchidotypus muscoides* Kränzlin, in *Engler's Bot. Jahrb.* 37 (1906) 383, in *Engler's Pflanzenr.* IV. 50. (*Pseudomonopodia-*

les) (1923) 59. — Ames Sched. *Orch.* 9 (1925) 53; in Standley *Fl. Costa Rica (Bot. Series, Field Mus. Nat. Hist., vol. 18) (1937) 267.*

The characters upon which this plant would rest, if it were maintained as a genus, is the adnation of the perianth parts into a tube. However in examining the flowers of the smaller members of the genus *Pachyphyllum*, which occur in the Andian region, one finds that most of them show adnation of the perianth parts to a more or less pronounced degree. The adnation exhibited in *Pachyphyllum muscoides* is merely a matter of degree and hardly of generic consequence.

In addition to the Peruvian and Costa Rican specimens already cited in literature I have seen the following specimen.

Columbia: Department of Caldas. « Pinares » above Solento. Cordillera Central. Forest. At 2600-2800 meters altitude. 2-10-VIII-1922. Pennell 12090 in part. (The remainder of the collection is a sterile, but habitually similar, species of *Pachyphyllum* without ciliations on the leaves.)

***Pachyphyllum nubivagum* L. O. Williams sp. nov.**

Herba epiphytica parva, usque ad 15 cm. longa. Folia lanceolata, acuta, disticha, carnosa, recurvata. Inflorescentia axillaris, disticha, pauciflora, quam folia brevior. Bracteae triangulares, acutae. Sepala ovato-lanceolata, obtusa vel acuta, uninervia. Labellum oblongum vel oblongo-ovatum, obtusum, infra medium bicallosum. Columna generis.

Small epiphytic herbs up to 15 cm. long. stems simple or branched, erect or ascending, 1-2 mm. thick, covered with the persistent leaf-sheaths. Leaves lanceolate, acute, distichous, fleshy, recurved, with a prominent keel on the dorsal surface along the median line, 5-7 mm. long, 1,5-2 mm. broad. Inflorescence axillary, distichous, few-flowered, shorter than the leaves; bracts triangular, acute, 0,5-1 mm. long. Dorsal sepal ovate-lanceolate, obtuse or acute, one-nerved, about 1,5 mm. long and 0,75 mm. broad. Lateral sepals similar to the dorsal sepal but slightly smaller and somewhat gibbous at the base. Petals oblong to oblong-obovate, obtuse, one-nerved, slightly

oblique, about 1,2 mm. long and 0.6 mm. broad. Lip oblong to oblong-ovate, obtuse, about 1,5 mm. long and 0,75 mm. broad, with an inconspicuous keel extending from the base to a little beyond the middle where it develops into two parallel calluses which are either strongly mammilate or with the free tips globose; the callus about 0,3 mm. long. Column of the genus.

Columbia: Eastern Cordillera. Department of Santander. Vicinity of Las Vegas. Epiphytic herb in woods. At 2600-3000 meters altitude. 12-23-XII-1926. Killip et Smith 15875; Western slopes of Páramo Rico. Epiphyte in woods. At 3300-3600 meters altitude. 15-19-I-1927. Killip et Smith 17777 in larger part; Eastern slope of Páramo de las Coloradas above La Baja. At 3900 meters altitude 27-I-1927. Killip et Smith 18387; Páramo de Romeral. Epiphyte. At 3800-4100 meters altitude. 29-30-I-1927. Killip et Smith 18569; Western slope of Páramo de las Puentes above La Baja. Epiphyte in oak forest. At 3300-3400 meters altitude. 25-31-I-1927. Killip et Smith 18161 (Type in Herb. Ames n° 48009).

Pachyphyllum nubivagum resembles a number of the other Andian species of *Pachyphyllum* in facies but seems to be easily distinguished from all of them in the structure and shape of the lip and of the petals. The flowers, said to be greenish-yellow, are smaller than in most of the species.

The relatively high altitude at which this plant occurs, 2600-4100 meters, has suggested the specific name which means «wandering among the clouds».

Pachyphyllum Pasti Reichenbach filius, in *Bonplandia* 3 (1855) 239; *Xen. Orch.* 1 (1856) 165, t. 58, fig. I, 1-4.

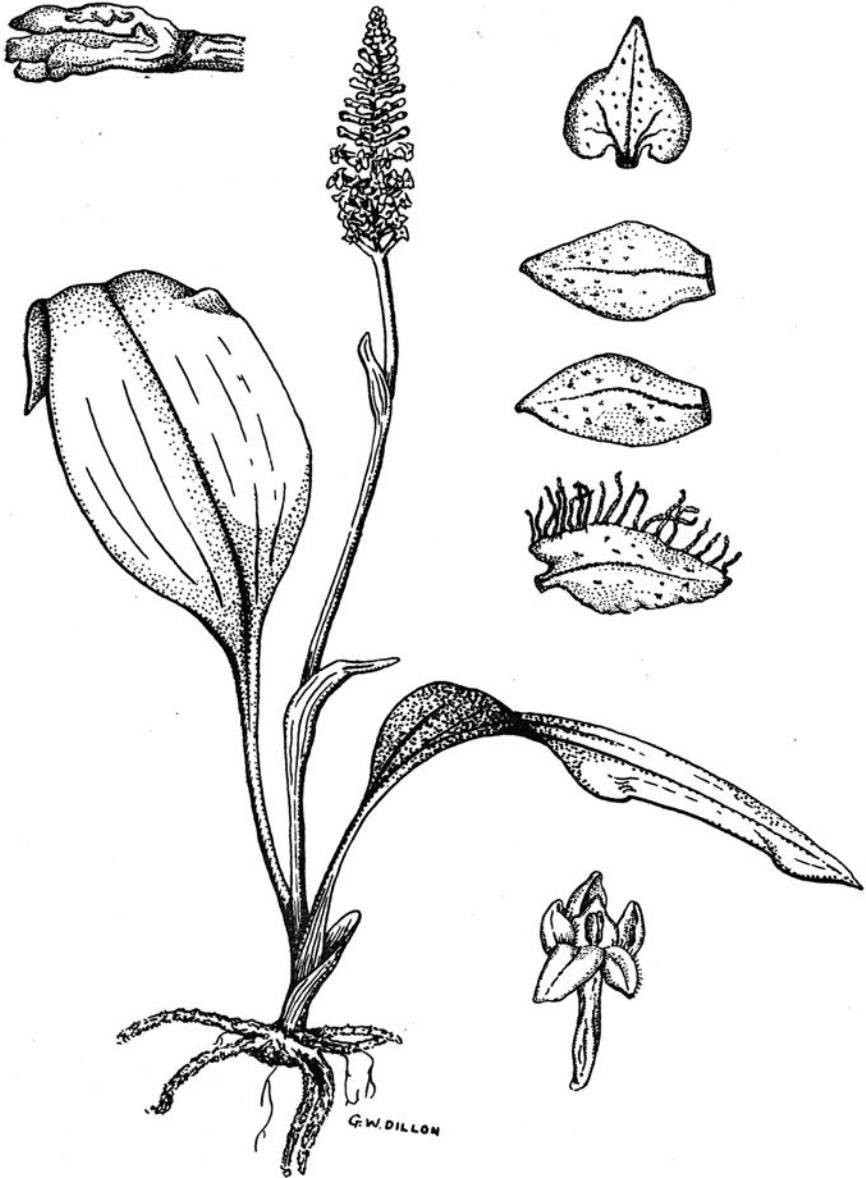
Syn. *Pachyphyllum Stubelii* Schlechter, in *Fedde Repert. Beih.* 7 (1920) 204. — Schlechter et Mansfeld, in *Fedde Repert. Beih.* 57 (1929) t. 73, f. 283.

I am unable to distinguish Schlechter's species from the earlier one of Reichenbach filius. I have seen the following Columbian specimens.

Columbia: Department of Cundinamarca. Mt. Chuscal. West of Zipaquira. Epiphytic herb in forest-island in sheltered valley.

At 3200-3300 meters altitude. 22-IX-1927. Pennell 2594 (in Herb. Ames., U. S. Nat. Herb., Herb. N. Y. Bot. Gard.) and 2594*a* (Herb. N. Y. Bot. Gard.); Department of Bolívar. Below Páramo de Chaquiro. Cordillera Occidental. Epiphytic herb. in shrub zone. At 2800-3100 meters altitude. 24-II-1918. Pennell 4353 (Herb. N. Y. Bot. Gard.); Department of Caldas. Cerro Tatama. Cordillera Occidental. Epiphytic herb in shrub zone below páramo. At 3300-3500 meters altitude. 8-10-VIII-1922. Pennell 10517.

Botanical Museum, Harvard University. Cambridge, Mass., U. S. A.



Cranichis Castellanosii L. O. Williams. Habit, natural Size. Enlarged flower $\times 4.5$
Perianth parts $\times 9$. Column, much enlarged