NEOTROPICAL ORCHID MISCELLANEA

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Abstract. Literature and herbarium studies of various orchid taxa that occur in the New World leads to the recognition of four new species, epitypification, lectotypification, and synonymisation of some neglected names, and the transfer of three names. Furthermore, reviews are presented on the synonymy and identity of the red-orange flowered *Fernandezia* species in Colombia and Venezuela, and the circumscription of *Odontorrhynchus chilensis* in Chile. The new species proposed are *Aspidogyne jussariensis, Liparis vasquezii, L. yanachagae,* and *Microchilus tunquianus* ; new combinations are *Bulbophyllum pinelianum, Maxillaria humilis,* and *Microstylis* section *Chrysanthera*; new lectotypifications and synonymy are *Epidendrum acinacifolium* (= *Tolumnia variegata*), *E. calcaratum* (= *Ionopsis utricularioides*), *E. minimum* (= *Polystachya foliosa*), and *E. obtusifolium* (= *E. nocturnum*); *Polystachya extinctoria* (= *P. concreta*) is neotypified; new synonyms are *Centropetalum lanceolatum* (= *Fernandezia sanguinea*), *Fernandezia aurantiaca, F. ortiziana* (both = *F. myrtillus*), *Fernandezia tica* (= *F. sanguinea*), *Gomesa stricta* (= *Pleurothallis quadrifida*), *Nasonia hartwegii* (= *Fernandezia myrtillus*), *Odontorrhynchus domeykoanus, O. erosus, O. variabilis* (all = *O. chilensis*), and *Pachyphyllum favosifolium* (= *Fernandezia sanguinea*).

Keywords: Neotropics, new orchids, synonymy, typification

This paper came about partly through research on the Brazilian orchids described by J. M. C. Vellozo (1831–1881) and the incidental encounters with various names not accounted for in the literature. Another part arose from preliminary studies of the genus *Fernandezia* Ruiz & Pavon, where great confusion was found among the identities of the larger, orange-red flowered taxa in Colombia and Venezuela. Still another component arose from an effort to continue studies of the genus *Gavilea* Poepp., which led to a check of undetermined specimens in the related genus *Chloraea* Lindl., where there was found a Chilean collection of *Odontorrhynchus* Correa, and thus an examination of the circumscription of *O. chilensis* (A. Rich.) Garay. The new taxa proposed in *Aspidogyne* Garay and *Liparis* L.C. Rich. are of course a continuation of previous work (e.g., Ormerod 2013a, b) on those two genera and their relatives.

Another source of inspiration was Ackerman's (2014) *Orchid Flora of the Greater Antilles*. This publication is the most comprehensive treatment of the orchids of that region, and will likely remain so for a long time to come. As such it will be a very influential work and one that will be readily followed by its users. A number of orchid names absent from Ackerman's account are here lectotypified and synonymised.

ASPIDOGYNE GARAY

In the broad sense (including *Ligeophila* Garay, *Platythelys* Garay, *Rhamphorhynchus* Garay, and *Stephanothelys* Garay) this is a genus of about 71 species distributed from the southeastern United States of America to Argentina. Among the neotropical Goodyerinae it may be recognised by the entire (vs. bifid) rostellum that ruptures or breaks off apically when the pollinarium is removed. Ackerman (2014) has treated the *nomen nudum Satyrium latifolium* L. [basis for name: JAMAICA. *Brown s.n.* (LINN 1055.6)] as a synonym of *Microchilus plantagineus* (L.) D. Dietr. based purely on its leaf width. However I have examined the actual specimen and find it is unequivocally *Aspidogyne querceticola* (Lindl.) Meneguzzo (see Ormerod 2013b for synonymy).

The new taxon described below was found among material collected for the Flora of Bahia project. Currently Brazil has about 24 species of *Aspidogyne* but only five of these belong to a small subset centered around *A. argentea* (Vellozo) Garay, to which the novelty is also a member. This group often has leaves with colored reticulation, sometimes with a pale to bright white median band, and flowers with one to three wine-red stripes on the sepals and petals

Aspidogyne jussariensis Ormerod, *sp. nov.* TYPE: BRAZIL. Bahia: Jussari. RPPN Serra do Teimoso, Jussari to Palmira road, *c.* 7.5 km from Jussari, branch on the left, entry to Fazenda do Teimoso, 21 August 2003, *P. Fiaschi, S.C. Sant'Ana & J.L. Paixao 1580* (Holotype: AMES). Fig. 1.

Affinis A. metallescens (Barb. Rodr.) Garay *sed lobis lateralibus labello evolutis (vs. absentis) et epichilo late unguiculatis, subpanduratis (vs. sessilis et rectangularis) differt.*

Rhizome creeping, terete, rooting at nodes, to 85 mm long, 1–2 mm thick; internodes 12–21 mm long. *Stem* erect, terete, 3–4 leaved in upper half, 32–72 mm long, *c.* 1.5 mm thick; internodes 9–21 mm long. *Leaves* obliquely ovate, acute to subacuminate, above strongly discolored with obscure green variegation [pale white reticulation was also observed when checked with a microscope], glaucous below, 21–48 mm long, 17–26 mm wide; petiole and sheath 4–13 mm long. *Inflorescence* terminal, pubescent, immature, 8–10 cm long; peduncle 60–80 mm long; sheathing bracts 6–7,

I wish to thank the herbarium and library staff at the Harvard University Herbaria for their help and hospitality during the preparation of this paper, especially Anthony Brach, Kanchi Gandhi, and Gustavo Romero-Gonzalez. Jonathon Gregson and Jacek Wajer kindly located and sent images of material held at the Natural History Museum, London (BM). Sven Koeltz is thanked for providing the publication date of the Malaxidinae revision published by Koeltz Scientific Books. Finally I am grateful to BM, F, K, MO, NY, SEL, and US for loaning specimens for this study.

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Harvard Papers in Botany, Vol. 21, No. 2, 2016, pp. 231–245.

ISSN: 1938-2944, DOI: 10.3100/hpib.v21iss2.2016.n8, Published online: 31 December 2016

pubescent, the lowermost one sometimes subfoliaceous, up to 9 mm long, 3 mm wide; rachis densely many flowered, 20 mm long; floral bracts lanceolate, acute, laxly pubescent, to 8 mm long, 2.5 mm wide. *Flowers* sparsely pubescent externally, pedicellate ovary pure green, sepals and petals white with a wine-red stripe along the midvein. *Pedicellate ovary* clavate, laxly pubescent, 8.5–9.0 mm long. *Dorsal sepal* oblong, obtuse, concave, forming with the petals a galea, 4.75 mm long, 1.85 mm wide. *Lateral sepals* obliquely oblong-lanceolate, obtuse, 5.6 mm long (along midvein), 6.6 mm long along basal margin, 2.1 mm wide. *Petals* obliquely ligulate-semirhombic, acute to subacute, 4.5–4.7 mm long, 1.35–1.50 mm wide. *Labellum* spurred, trilobed, joined to column and apex of ovary for 3 mm; spur fusiform, subacute, throat internally pubescent, 4.5 mm long, 0.95–1.00 wide laterally; hypochile elliptic–obovate, concave joined to column for 1.7 mm, at apex each side with ovate, obtuse sidelobes, 9 veined, 3 mm long, *c*. 1.7 mm wide in basal half, free part 1.3 mm long, 2.15 mm wide; epichile shortly and broadly clawed, subquadrate, subpandurate, apiculate, 1.6 mm long, 1.2 mm wide, claw *c*. 0.7 mm long. *Column* stoutly clavate, 2.5 mm long.

Distribution: Brazil (Bahia).

Etymology: Named after the town of Jussari and its eponymous district from where the type was collected.

This species is a member of the *A. argentea* (Vellozo) Garay complex. It is most similar to *A. metallescens* (Barb. Rodr.) Garay, sharing with that species dark green leaves that appear to lack colored reticulation, and flowers with a rectangular to squarish epichile. However *A. metallescens* differs from *A. jussariensis* in having a labellum hypochile that lacks free tips or sidelobes, the epichile is sessile (not clawed) and ends in a broad triangular apex (vs. truncate with rounded sides, between which is a small apiculus). Another similar species is *A. decorus* (Rchb.f.) Garay & Romero-Gonzalez [Syn.: *Physurus bicolor* Barb. Rodr.] since it has a labellum with free sidelobe tips and a clawed epichile. However the epichile of *A. decora* is transversely elliptic-suborbicular.

Bulbophyllum Thouars

A genus of about 2200 pantropical species, with most in southeast Asia and Malesia. In the New World about 62 species (Smidt et al. 2011) have been recorded. The orchid genus *Pachyrhachis* A. Rich. has been overlooked in all accounts of the Brazilian flora. Analysis of the generic and specific description provided by Achille Richard clearly shows the plant is a species of *Bulbophyllum*, to which genus it is here transferred.

Bulbophyllum pinelianum (A. Rich.) Ormerod, *comb. nov.*
Basionym: *Pachyrhachis pineliana* A. Rich., Herb. Gen. Amat. 3: 23, 1843. TYPE: BRAZIL. Rio de Janeiro: without locality, April 1840, cult. Medical Faculty Paris, ex *C. Pinel s.n.* (Holotype: P?, not located).

Distribution: Brazil.

Study of the protologue of this plant indicates that it is an earlier name for *B. granulosum* Barb. Rodr., however since the holotype has not yet been located it is perhaps somewhat premature to make a formal reduction of the latter.

Epidendrum L.

This genus is confined to the New World and comprises about 2000 species. In the 1700's nearly all epiphytic orchids were placed in *Epidendrum*. The name *E. obtusifolium* would seem to be unidentifiable because it is a composite of an *Epidendrum* plant and flowers of another, possibly non-orchidaceous entity. I here suggest that the vegetative element represents *E. nocturnum* Jacq. and that the floral element can be considered a construct.

Epidendrum nocturnum Jacq., Enum. Syst. Pl. Carib. 29. 1760. TYPE: MARTINIQUE. Without locality, *N. Jacquin s.n.* (Holotype: lost).

Heterotypic synonym: *Epidendrum obtusifolium* Willd., Sp. Pl. ed. 4, 1: 118, 1805 *syn. nov.*

Lectotype (here designated): t.180, f. 2 (vegetative element only, excluding buds and flowers) in Plumier, Pl. Amer.: 175, 1758, as "*Helleborine amplissimo flore vario*," based on a plant of unknown origin (possibly Haiti).

Distribution: United States of America (Florida); Caribbean Islands; Mesoamerica; South America (to Brazil and Bolivia).

Specimens examined: CUBA. Oriente: near base of Loma Menqura, 680 m, 1–3 February 1910, *J.A. Shafer 3788* (AMES). JAMAICA. Salt Hill, 1 September 1906, *N.L. Britton 28* (AMES); Portland, near Mill Bank, 200–300 m, 16–17 February 1920, *W.R. Maxon & E.P. Killip 200* (AMES).

The stout stem and short, elliptic, obtuse leaves depicted for *E. obtusifolium* occur in some specimens (three such examples are cited above) seen of *E. nocturnum*. Furthermore the short, fractiflex pseudoterminal inflorescence of *E. obtusifolium* is identical to that of *E. nocturnum*. The "flowers" of *E. obtusifolium* should be considered either a partly or wholly fanciful construct, as these do match any other known Caribbean plant.

Ackerman (2014) provides a list of the nomenclatural synonyms of *E. nocturnum* and cites Ames, Hubbard, and Schweinfurth (1936) as lectotypifying that name. However there is no lectotypification provided in the place cited.

Fernandezia Ruiz & Pavon

When treated in the traditional sense, this is a genus of six or seven species, distributed from Bolivia to Costa Rica. Recently however Chase and Whitten (2011), using molecular data, expanded *Fernandezia* to include *Pachyphyllum* Kunth and *Raycadenco* Dodson. They argued that *Fernandezia* and *Pachyphyllum* are interdigitated, and that shifts from larger, brightly colored (orange to red) flowers to smaller whitish to greenish flowers occurred a number of times. The molecular data supporting their statements was published by Neubig et al. (2012). I am not, however, prepared to accept

Raycadenco within a broad *Fernandezia*, and believe it is better treated as a sister genus to *Fernandezia,* as the authors themselves intimated. An alternative view was proposed by Kolanowska and Szlachetko (2014), who whilst accepting *Fernandezia, Pachyphyllum* and *Raycadenco* as separate genera, also recognised *Orchidotypus* Kraenzl. and a new genus *Valdiviesoa* Szlach. & Kolanowska (Type: *Pachyphyllum debedoutii* P. Ortiz).

I have however preferred to adopt an expanded *Fernandezia* (including *Orchidotypus, Pachyphyllum,* and *Valdiviesoa*), thus resulting in a genus of about 50 species distributed from Mexico to Bolivia. Recent studies suggest at least another 40 taxa require description, with many novelties found in Bolivia and Peru. The plants are generally small monopodial epiphytes with flowers that vary from comparatively large and brightly coloured in shades of red to orange, to white and greenish, tiny flowers. A review of the large flowered (sepals 6 mm or more long) species of *Fernandezia* in Colombia and Venezuela reveals that there are so far only two species, rather than the five reported by Kolanowska and Szlachetko (2013). Revision of the smaller flowered species that were previously included in *Pachyphyllum* is however a much more difficult task.

One final problem regards the typification of *Fernandezia*. It has been completely overlooked that when Ruiz and Pavon (1794) established the genus, they validly described a single species, *F. laxa*. This taxon was the only orchid species described by them in 1794, whilst all the other taxa were published in 1798. This taxon, *F. laxa*, is thus the nomenclatural type of *Fernandezia*. Therefore the choice by Dunsterville and Garay (1972) of *F. subbiflora* Ruiz & Pavon as lectotype of the genus is superfluous and must be rejected. *Fernandezia laxa* is a species of *Dichaea*, an illustration of the type can be found in Pupulin (2012). It therefore will be necessary to propose conservation of the type of *Fernandezia* otherwise the genus will likely be rejected if a choice has to be made against its junior synonym *Dichaea* Lindl. (an uncontroversial, stable name), furthermore the genus *Pachyphyllum* would have to be expanded to cover the previous broad concept of *Fernandezia*. For the time being I use *Fernandezia* in the wide sense of recent authors, pending its conservation.

Key to large flowered species of *Fernandezia* in Colombia and Venezuela

1a. Leaves thin, flat. Labellum with a concave base less than one third of total length; callus with a linear base diverging apically into two thin lamellate keels . . . . . *F. myrtillus*

1b. Leaves thick, fleshy, canaliculate to flat. Labellum with a concave base about half of total length; callus somewhat rectangular-subpandurate, of two thickly lamellate keels . . . . . *F. sanguinea*

Fernandezia myrtillus (Rchb.f.) Garay & Dunsterv., Venez. Orch. Illustr. 5: 126, 1972.

Basionym: *Nasonia myrtillus* Rchb.f., Bonplandia 3: 239, 1 Sep. 1855.

TYPE: COLOMBIA. Nariño: woods near Pasto, September 1845, *W. Jameson 442* (Holotype: W-R 19244, image seen; Isotypes: BM; G, 2 sheets; K, images seen). Fig. 2.

Homotypic synonym: *Centropetalum myrtillus* (Rchb.f.) Pfitz., Grund. Vergl. Morph. Orch.: 16, 1882.

Heterotypic synonyms: *Nasonia hartwegii* Rchb.f., Xenia Orch. 1: 97, 14 Dec. 1855 *syn. nov.*

TYPE: COLOMBIA. Cauca: between Huambia and Pitayo, *T. Hartweg 1416* (Holotype: W-R 19211, 19242, images seen; Isotypes: BM, E, G, K, 2 sheets, K-L, P, 2 sheets, images seen).

Centropetalum hartwegii (Rchb.f.) Kraenzl., in Engl., Pflanzenr. IV, 50, 83: 30, 1923.

Fernandezia hartwegii (Rchb.f.) Garay & Dunsterv., Venez. Orch. Illustr. 5: 126, 1972.

Fernandezia aurantiaca Senghas, J. Orchideenfr. 10, 3: 258, 2003 *syn. nov.*

TYPE: ECUADOR. Without locality or collector, cult. Kurpfalz Bot. Gard., *Orch.-985* (Holotype: HEID, not seen).

Fernandezia ortiziana Kolan. & Szlach., Ann. Bot. Fenn. 50: 68, 2013 *syn. nov.*

TYPE: COLOMBIA. Antioquia: Municipio Bello, Corregimiento San Felix, Alto de las Baldias, 3150 m, 2 October 2004, *Estudiantes Herbario MEDEL 459, lower left hand plant* (Holotype: MEDEL, not seen).

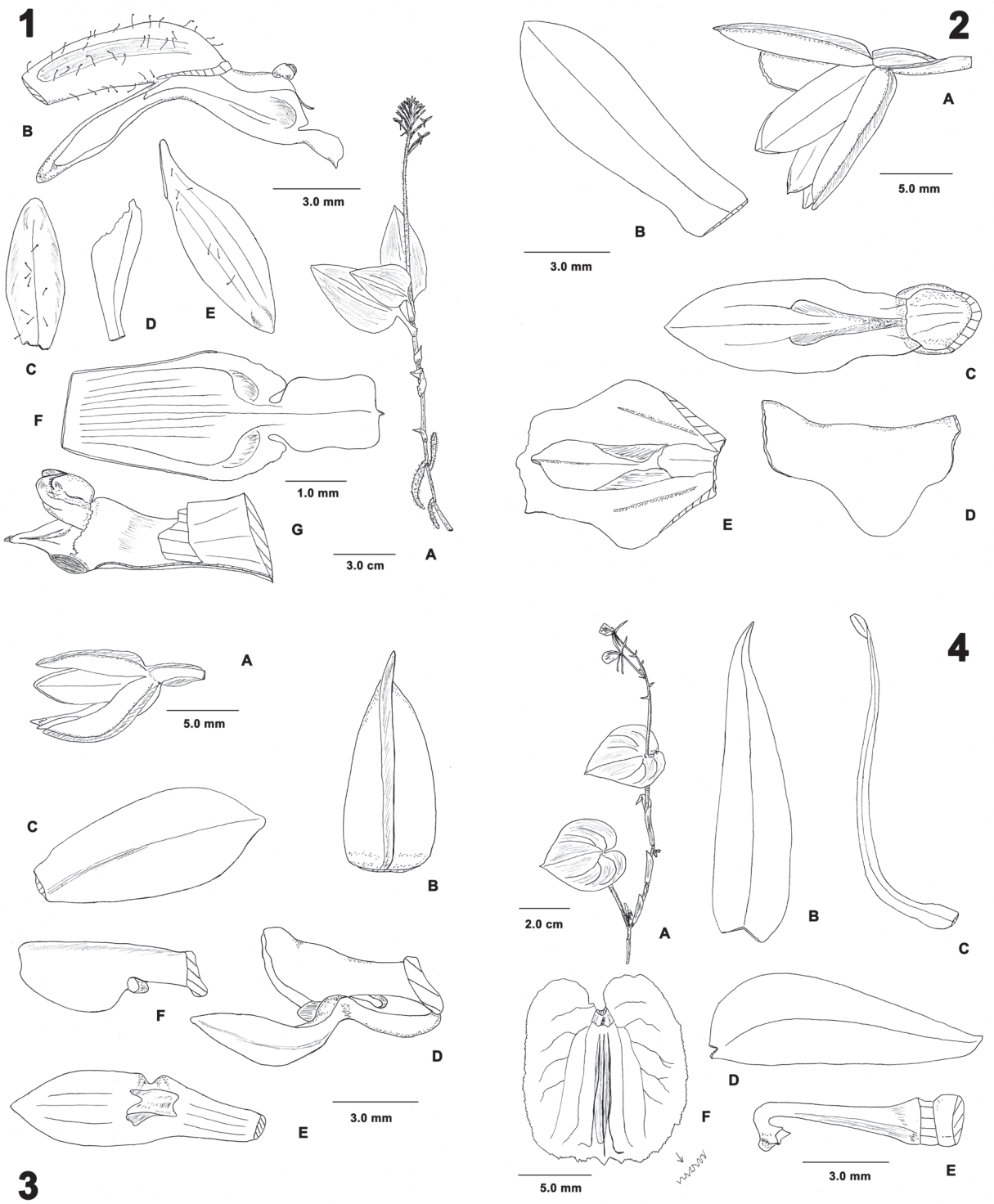
Usage synonyms: *Centropetalum sanguineum* auct. non (Lindl.) Kraenzl., Foldats, Fl. Venez. 5: 419, f. 906, 1970.

Fernandezia lanceolata auct. non (L.O. Williams) Garay & Dunsterv., Dunsterv. & Garay, Venez. Orch. Illustr. 5: 124, f., 1972; Escobar (Ed.), Nat. Colomb. Orch. 2: 187, no. 204, 1991.

Fernandezia sanguinea auct. non (Lindl.) Garay & Dunsterv., Fernandez, Orquid. Nat. Tachira: 102, 2003.

Distribution: Ecuador; Colombia; Venezuela.

Epiphytic *herb*. Stems erect to pendulous, simple to occasionally branching, leafy near apex to throughout, 4.5–11.0 cm long. *Leaves* oblong, oblanceolate to obovate, apiculate, thinly fleshy, green to silvery green, occasionally purple-suffused, 5–23 mm long, 2.0–6.5 mm wide. *Inflorescences* axillary, 2.5–7.0 mm long, one, rarely two-flowered; peduncular sheath to 5.5 mm long; floral bract 2.5–4.0 mm long. *Flowers* coral red, red, vivid red, rose-red, bright orangish-red, orangey-yellow, yellowish-red, base of lip orange, lip yellowish with purple tip, pollinia blue, fragrance like fruit of orange. *Pedicellate ovary* clavate, trialate, 6–8 mm long. *Dorsal sepal* oblong-ligulate, acute, midvein with a lamellate keel, 8–11 mm long, 2.75–3.00 mm wide. *Lateral sepals* obliquely oblong to ligulate-lanceolate, acute, midvein with a lamellate keel, 9.7–11.9 mm long, 2.15–2.90 mm wide. *Petals* oblong to oblong-lanceolate, acute to subacute, 7.5–10.7 mm long, 3.15–3.30 mm wide. *Labellum* oblong-lanceolate, acute, basal 2.2–3.5 mm saccate, 9.70–11.25 mm long, 3.0–3.4 mm wide; callus with a short linear base that diverges into two thin lamellae. *Column* broadest medially, 6.0–7.2 mm long, 2.0–2.7 mm wide laterally.



FIGURES 1–4. 1, *Aspidogyne jussariensis* Ormerod. A, plant; B, flower minus tepals; C, dorsal sepal; D, petal; E, lateral sepal; F, labellum; G, column. Drawn from holotype. 2, *Fernandezia myrtillus* (Rchb.f.) Garay & Dunsterville. A, flower; B, petal; C, labellum; D, column, profile; E, column, ventrally spread out (minus pollinarium). A from *Drew E-252* (AMES), B–C from *Fosberg 2022* (AMES), D from *Bristol 375* (AMES), E from *Schultes s.n.* (AMES). 3, *Fernandezia sanguinea* (Lindl.) Garay & Dunsterville. A, flower; B, dorsal sepal; C, petal; D, column and labellum; E, labellum; F, column, A–E from *Lehmann 8588* (AMES, holotype of *Centropetalum lanceolatum*), F from *Prieta P-273* (AMES). 4, *Liparis vasquezii* Ormerod. A, plant; B, dorsal sepal; C, petal; D, lateral sepal; E, column; F, labellum. Drawn from holotype.

Additional Specimens examined: ECUADOR. Carchi: El Mirador, El Playón de San Francisco to Julio Andrade, 3400 m, June 1991, *A. Hirtz & Quito Orch. Soc. 5568* (SEL). Azuay: S of Cumbe, farm road from new road to Giron, 3000–3100 m, 27 February 1982, *C. Luer & A. Pozo 7044* (SEL); near Cajas National Park, 25 km W of Cuenca, 3400 m, cult. *A. Pozo* in Cuenca, 20 November 1989, *C.H. Dodson, N. Williams, E. Hagsater & M. Whitten 17716* (SEL). Imbabura: Cordillera Oriental, Alegria, E of Volcan de Cayambe, 2865 m, 12 May 1944, *W.B. Drew E-252* (AMES); same data, 10 May 1944, *W.B. Drew E-250* (AMES). COLOMBIA. Narino: KM 11 along road from Incano, on W margin of Laguna Cocha, 2750 m, 23 July 1989, *C.H. Dodson & R. Escobar 18112* (SEL). Putumayo: Tabanel, above La Cocha, 3350 m, 31 October 1946, *M.B. & R. Foster 2022* (AMES); Valle de Sibundoy, 5 km NE of Sibundoy, 2760 m, 28 November 1962, *M.L. Bristol 375* (AMES, US); between La Cocha and Sibundoy, 2700 m, 30 July to 5 August 1978, *C. Luer, J. Luer, J. Kuhn, R. Escobar & D. Welisch 3113* (SEL); Pasto to Sibundoy, beyond Laguna de Pasto and over the pass, 2750 m, 24 January 1987, *C.H. & P.M. Dodson 17012 p.p.* (SEL, lhp). Valle: Cordillera Occidental, Los Farallones, NW slope, Quebrada da del Raton, Mina El Diamente, 2950–3000 m, 30 July 1946, *J. Cuatrecasas 21767* (AMES, F, US). Cauca: W slopes of Central Cordillera of Popayan, near Pitayo, 2 September 1881, *F.C. Lehmann 964* (BM); on the Penon de Pitayo, 3000 m, 20 October 1882, *F.C. Lehmann 2072* (BM, K); El Tambo, Munchique, July 1948, *S. Yepes Agredo 419* (F); above Munchique, W of Popayan, 2750 m, 26 July 1978, *C. Luer, J. Luer, J. Kuhn & R. Escobar 2994* (SEL); Paramo de las Barbillas, 3150 m, 13 November 1982, *C. Luer & R. Escobar 8372* (SEL); between Totoro and Inza, Paramo de Guanacas, 3150 m, 15 November 1982, *C. Luer & R. Escobar 8434* (SEL). Caldas: Cordillera Central, "Pinares," above Salento, 2600–2800 m, 2–10 August 1922, *F.W. Pennell 9274a* (AMES). Risaralda: Municipio de Santa Rosa de Cabal, royal road between Termales Santa Rosa and Hacienda la Sierra, Finca Berlin, 2970 m, 22 January 1986, *J. Wolf 657* (SEL). Antioquia: Quirama, Rio Negro, 2200 m, 13 July 1973, *R.E. Schultes s.n.* (AMES); Municipio Bello, vereda San Felix, 7.2 km from Medellin to San Pedro road, on road to communication towers, 3000 m, 8 May 1988, *J.L. Zarruchi & M.M. Correa 6339* (MO, SEL); Municipio Bello, Corregimiento San Felix, Cerro San Felix (communication towers), 3000–3100 m, 22 May 1991, *R. Fonnegra 3774* (MO, US); Altas de Barbacoa, *c.* 15 km W of Medellin, entering from San Felix, near TV repeater tower, 3150 m, 15 September 1984, *C. Dodson, R. Escobar & E. Valencia 15293* (MO); Municipio Belmira, finca El Paramo, 3000–3130 m, 21 April 1993, *R. Fonnegra & D. Tuberquia 4575* (MO, SEL); Municipio Belmira, Belmira to Vereda El Yerbal, KM's 6–8, Vereda El Yerbal to Alto de Sabanazos, 2500–3100 m, 24 April 1991, *F.J. Roldan, J. Betancur, S. Churchill, A. Arbelaez & D.L. Echeverry 1563* (MO); Santa Rio [Rosa?] and Belmira, 3000–3200 m, November 1891, *F.C. Lehmann 8586* (K); mountains between Belmira and Santa Rosa de Asos, 3000–3200 m, *F.C. Lehmann 8586* (K); Municipio El Boqueron, Alto de los Baldios, 3150 m, 9 April 1958, *J. Cuatrecasas, M. Llano & G. Gutierrez 24230* (US); Municipio Jardin, Alto de Ventanas, 15 km SW of Jardin, on the way to Riosucio, 2400–2800 m, 9 June 1987, *R. Callejas, O. Marulanda, F.J. Roldan & H. Correa 3889* (MO, NY, SEL); Alto de Ventanas, on road to Riosucio, 2800–2850 m, 25–26 May 1983, *R. Escobar 2694* (SEL); vereda Ventanas, Jardin to Ventanas to Riosucio road, *c.* 19.3 km SSE of Jardin, at border with Caldas, 2830 m, 4 May 1989, *J.L. Luteyn & O. Escobar 12749* (NY); S of Jardin in S part of department, 2750 m, 19 October 1988, *J.L. Zarucchi, F.J. Roldan & G. McPherson 12896* (MO): Municipio de Medellin, along road to Cerro de Padre Amaya, 10 km from Medellin to Santa Fe de Antioquia road, 2970 m, 15 September 1987, *J.L. Zarucchi & A.E. Brant 5322* (MO); on Cerro Padre Amaya, W of Medellin, 2900 m, 16 January 1979, *C. Luer, J. Luer & R. Escobar 3691* (SEL); Cerro Padre Amaya, 2800 m, 22 April 1983, *C. Luer, J. Luer, M. Webb, R. Escobar, A. Pridgeon & E. Hagsater 8770* (SEL); Cerro de Padre Amaya, 10.2 km from Medellin to Santa Fe de Antioquia highway, on road to summit, 2990 m, 18 March 1987, *J.L. Zarucchi & B. Madrigal 4805* (MO). Cundinamarca: Paramo de Guerrero, between Zipaquira and Pacho, 2600–3000 m, *F.C. Lehmann 8587* (K); Zipaquira, 2600–3000 m, *F.C. Lehmann 8587* (K); Rio Blanco Valley, 8 km E of Choaci, 2380 m, 18 May 1944, *M.L. Grant & F.R. Fosberg 9221* (US); 12 km WSW of Junin, on the Rio Blanco, a small tributary of the Rio Piedra de Sal, drainage of Rio Sueva, 19 February 1944, *F.R. Fosberg 21474* (US); Los Andes, E slopes of the Rio Blanco, 14 km WSW of Junin, 40 km NE of Bogota, 2900 m, 19 April 1944, *M.L. Grant 9058* (US); Municipio Guasca, Paramo de Guasca, E slope, 3000–3500 m, 11 October 1939, *H. Garcia-Barriga 8097* (US); Paramo de Guasca, toward Gacheta, 1921, *Brother Ariste-Joseph s.n.* (AMES, US); Paramo de Guasca, 21 December 1919, *Brother Ariste-Joseph A487* (AMES, US); same area, 2850–3340 m, 22 January 1942, *R.E. Schultes & R. Jaramillo M. 3177* (AMES); Paramo de Guasca, forest in Junquin, Quebrada Amarilla, 2840 m, 2 June 1940, *J. Cuatrecasas 9458* (F, US); Pysagura, 2900 m, 28 May 1942, *G. Huertas Gonzalez s.n.* (AMES); Represa de Sisga, 2745 m, 2 March 1953, *R.E. Schultes 18808* (AMES); Choconta, El Sisga, high part of La Represa, 2700–2900 m, 14 January 1962, *H. Garcia-Barriga 17376* (AMES, NY, US); Choconta, El Sisga, 2700–2800 m, 21 February 1962, *H. Garcia-Barriga 17421* (AMES); same area, 2600–2750 m, 16 April 1963, *H. Garcia-Barriga 18024* (AMES, NY, US); El Sisga, road to Choconta, 2 km to the N of del Fuente, 2800 m, 12 October 1972, *H. Garcia-Barriga 20357* (US); road between Choconta and "Sisga," E side, 2900–3000 m, *M. Ospina-Hernandez 169* (AMES); S of Bogota, above Gutierrez, 2700 m, 19 May 1984, *C. Luer, J. Luer & R. Escobar 10374* (MO); Municipio de Usaquen, Quebrada de Santa Barbara, 2900 m, 6 June 1948, *M. Schneider 738* (AMES); same area, 3000 m, 21 November 1943, *M. Schneider 738* (AMES). Santander: near Las Vegas, 2600–3000 m, 21–23 December 1926, *E.P. Killip & A.C. Smith 15889* (AMES). Santander del Sur: E of Bucaramanga, toward Berlin, 3250 m, 3–5 November 1981, *C. Luer & R. Escobar 6583* (SEL). Norte de Santander: N of

Toledo, Paramo de Mefue, 2440 m, 25 May 1982, *C. Luer, R. Escobar & D. Portillo 7963* (SEL); Alto de Mefue, N of Toledo, 2600 m, 12 May 1984, *C. Luer, J. Luer, E. Escobar & E. Valencia 10300* (MO). VENEZUELA. Tachira: head of Rio Quinimar, sloping side of El Banco, below the Cerro Las Copas (below the Paramo de Judio), 20 km S of San Vicente de la Revancha, 35 km S of Alquitrana, SE of Santa Ana, 2500–2700 m, 15 January 1968, *J.A. Steyermark, G.C.K. Dunsterville & E. Dunsterville 100963* (VEN, image seen); same area, 13 January 1968, *J.A. Steyermark, G.C.K. Dunsterville & E. Dunsterville 100837* (AMES, GH); same area, 11 January 1968, *J.A. Steyermark, G.C.K. Dunsterville & E. Dunsterville 100676* (AMES, GH); Distrito Junin, S slope of Cerro San Isidro, directly N of El Reposa, above Hacienda Vista, Quebrada Agua Caliente and tributaries, 2000 m, 13–14 November 1982, *G. Davidse & A.C. Gonzalez 22229* (MO, SEL). LOCALITY UNCERTAIN: Boqueron de Bogota, 2800 m, 21 October 1871, *E.F. Andre 742* (K); La Vejo, forest of Chorillo, "Incenta de Puvillan," 22 November 1888 (or 1880?), *E.F. Andre 802* (K).

This species is a common and widespread alpine orchid. In the southwestern part (N Ecuador and SW Colombia) of its range the leaves tend to be smaller and a little more obovate, but intermediates occur throughout its distribution, furthermore the flowers are identical in all these specimens. Flower color is reported to be orange to crimson, the column with orange wings, and the lip orange to crimson with purple apices to the keels. The column wings seem to clasp the sides of the callus (and thus appear to holding the lip up), and in some cases it would appear that the column wings are actually united to the sides and back of the callus.

When Garay and Dunsterville (1972) transferred *Centropetalum lanceolatum* to *Fernandezia* they unfortunately misapplied the name to material that represents *F. myrtillus*. The Ecuadorian *F. aurantiaca* is in no way different from *F. myrtillus,* a taxon Senghas overlooked. Another taxon, *F. ortiziana*, is the result of an unfortunate error where the authors have mistaken the spread out column for the labellum.

Fernandezia sanguinea (Lindl.) Garay & Dunsterv., Venez. Orch. Illustr. 5: 126, 1972. TYPE: COLOMBIA. Tolima: slopes of Volcan Tolima, 1830 m, February 1843, *J. Linden 1274* (Holotype: K–L, image seen). Fig. 3.

Basionym: *Nasonia sanguinea* Lindl., Orch. Linden.: 18, 1846.

Homotypic synonym: *Centropetalum sanguineum* (Lindl.) Kraenzl., in Engl., Pflanzenr. IV, 50, 83: 30, 1923.

Heterotypic synonyms: *Nasonia robusta* Schltr., Rep. Sp. Nov. Regni Veg., Beih. 8: 109, 1921.

TYPE: ECUADOR. Chimborazo: Mt. Chimborazo, 3000 m, September 1881, *A. Sodiro s.n.* (Holotype: B, destroyed).

Fernandezia robusta (Schltr.) Senghas, in Schltr., Die Orchideen ed. 3, I/B 31: 1926, 1995 *nom. illeg.* (non Batem. 1866).

Pachyphyllum favosifolium Kraenzl., in Engl., Pflanzenr. IV, 50, 83: 23, 1923 *syn. nov.*

TYPE: COLOMBIA. Antioquia: near Sonson, 3300 m, *W. Kalbreyer 1935* (Holotype: B, destroyed).

Fernandezia favosifolia (Kraenzl.) M.W. Chase, Phytotaxa 20: 30, 2011.

Centropetalum lanceolatum L.O. Williams, Lilloa 3: 480, 1937 *syn. nov.*

TYPE: COLOMBIA. Cauca: Andes of Popayan, Paramo de Guanacas, 3300–3500 m, *F. C. Lehmann 8588* (Holotype: AMES; Isotypes: K, 2 sheets; NY, image seen).

Fernandezia lanceolata (L.O. Williams) Garay & Dunsterv., Venez. Orch. Illustr. 5: 124, 1972.

Pachyphyllum steyermarkii Foldats, Acta Bot. Venez. 3, 1–4: 369, 1968.

TYPE: VENEZUELA. Tachira: Paramo de Tama, 2475–2550 m, 18–20 May 1967, *J.A. Steyermark, G.C.K. Dunsterville & E. Dunsterville 98345* (Holotype: VEN, image seen; Isotypes: AMES, 2 sheets).

Fernandezia tica Mora-Retana & J.B. Garcia, Brenesia 39–40: 164, 1993 *syn. nov.*

TYPE: COSTA RICA. Heredia: carretera a Vara Blanca, 2000 m, 27 October 1992, *J.T. Atwood & O. Rodriguez 4181* (Holotype: USJ, not seen).

Usage synonyms: *Fernandezia "costaricensis* (Ames & Schweinf.) Garay & Dunsterv.," R.L. Rodriguez Caballero, D.E. Mora, M.E. Barahona & N.H. Williams, Orquid. Costa Rica: 252–253, 1986.

Fernandezia sp.: Escobar (Ed.), Nat. Colomb. Orch. 2: 187, no. 203, 1991.

Fernandezia hartwegii auct non (Rchb.f.) Garay & Dunsterv., Escobar (Ed.), Nat. Colomb. Orch. 5: 780–781, no.'s 922–923, 1994.

Epiphytic *herb*. *Stems* simple to occasionally branching, terete, erect to pendulous, leafy throughout or in upper half to third, 7–52 cm long, branches to 20 cm long. *Leaves* ligulate to oblong-lanceolate, acute, fleshy, deep green above, sometimes purple suffused, dull green to purple-black below, 9–28 mm long, 3.0–13.5 m wide. *Inflorescence* axillary, *c*. 8 mm long, one to two-flowered; peduncular sheath infundibuliform, 4–5 mm long. *Flowers* rose, red, orange-red, purplish, pinkish-red, rarely yellow, callus yellow. *Pedicellate ovary* clavate, trialate, to 11 mm long. *Dorsal sepal* ovate to lanceolate, acute, base concave, midvein with a lamellate keel, 6.9–9.0 mm long, 2.5–3.1 mm wide. *Lateral sepals* obliquely lanceolate, acute, base concave, midvein with a lamellate keel, 6.0–10.9 mm long, 2.8–3.8 mm wide. *Petals* obliquely oblong-elliptic to oblong-oblanceolate, acute to subacute, 6.0–9.3 mm long, 2.9–4.3 mm wide. *Labellum* oblong, entire, acute, basal third concave-saccate, upper third to half with an ovate to lanceolate, acute "midlobe," in total 7.1–10.9 mm long, 1.8–3.4 mm wide; callus subquadrate-subpandurate with two thickly lamellate keels, placed medially on lip. *Column* broadly winged in upper half, 4.2–6.0 mm long, 1.5–2.2 mm wide laterally.

Distribution: Costa Rica; Ecuador; Colombia; Venezuela.

Additional specimens examined: ECUADOR. Azuay: "Oriente" border, Paramo del Castillo and area (crest of the E Cordillera, on trail between Sevilla de Oro and Mendez), 2745–3350 m, 18 August 1945, *W.H. Camp E-4796* (AMES, NY); "Oriente" border, E Cordillera, between Ona and the Rio Yacuambi, 2440–2895 m, 10–19

September 1945, *F. Prieto P-273* (AMES, NY). Imbabura: Alturas de Cayachupa, *c*. 5 km NW of Pinan village, 3200 m, 18 June 1980, *C.R. Sperling & R. Bleiweiss 5139* (NY). Zamora-Chinchipe, Cerro Colorado, S of Nambija, 2700 m, 17–20 February 2002, *A. Hirtz, D. Neill, T. Delings, C. Cole, M. Manzanares, A. Ergas & W. Quishpe 7965* (SEL) . COLOMBIA. Putumayo: Paramo de Tambillo, NE of the Valle de Sibundoy, 2700–2800 m, 13–14 December 1942, *R.E. Schultes & C.E. Smith 3118* (AMES); Pasto to Sibundoy, beyond Laguna de Pasto and over the pass, 2750 m, 24 January 1987, *C.H. & P.M. Dodson 17012 p.p.* (SEL, rhp). Cauca: central Andes of Popayan, Paramo de Guanacas, 3000–3500 m, November, *F.C. Lehmann 6756* (AMES, K); Paramo de Maras, 3000–3500 m, 29 October 1882, *F.C. Lehmann 2066* (BM, K); Cordillera Central, W slope, head of the Rio Palo, quebrada del Rio Lopez, Alto Duende, on paramo, 3300–3350 m, 1–2 December 1944, *J. Cuatrecasas 18889* (AMES); Cordillera Occidental, "La Gallera," Micay Valley, 2200–2500 m, 1 July 1922, *E.P. Killip 8001* (AMES, NY); Valle de las Papas, trail between Valencia and San Sebastian, 3200 m, 20 October 1958, *H.G. Barclay & P. Juajibioy 6086* (MO). Valle: Cordillera Central, W slope, Hoya del Rio Bugalagrande, Barragan, Quebrada de la Chorrera, 3000–3080 m, 22 April 1946, *J. Cuatrecasas 20986* (AMES); border of Valle & Choco, Rio Minrido (?), 3100 m, September 1941, *E. Dryander 2538* (US). Valle/Cauca (?): without locality, West Cordillera Observatio, 2700 m, August 1941, *E. Dryander 2514* (US). Huila: Caqueta, Cordillera Oriental, Gabinete, 2300–2450 m, 21 March 1940, *J. Cuatrecasas 8443* (US). Tolima: Vulcan Tolima, 1220 m, August 1917, *Mrs. Tracey 238* (K). Risaralda: Municipio Santa Rosa de Cabal, royal road between Termales de Santa Rosa and Hacienda La Sierra, finca Berlin, 3190 m, 15 May 1986, *J. Wolf 941* (K, MO, NY, SEL). Caldas: Cordillera Central, "Pinares," above Salento, 2600–2800 m, 2–10 August 1922, *F.W. Pennell 9274* (AMES). Antioquia: without locality, May 1873, *C. Patin s.n.* (K); Alto de Alegrias, 2600–3000 m, October 1884, *F.C. Lehmann 4195* (K); Municipio Belmira, Vereda El Paramo, El Paramo and area of the Alto de Santa Ines, 6 hrs by road NE of Belmira, 2900–3100 m, 8 August 1995, *R. Callejas, R. Fonnegra & F.J. Roldan 11597* (MO, SEL); Municipio Ituango, road between El Retiro and Cerro Paramillo, 3000–3100 m, 25 February 1993, *H. Cuadros 4953* (MO, SEL); Municipio de Urrao, Paramo de Frontino, Llano Grande and hill to N, 3320–3450 m, 2 March 1989, *J.M. MacDougal, F.J. Roldan & J. Betancur 4421* (MO). Cundinamarca: Cordillera Oriental, Montes de Guasca, in "Los Gaques," 2000 m, 24 April 1932, *J. Cuatrecasas 3033* (K); Choconta, El Sisga, high part of La Represa, 2700–2900 m, 14 January 1962, *H. Garcia-Barriga 17371* (AMES); El Sisga, road to Choconta, 2 km N of del Puente, 2800 m, 12 October 1972, *H. Garcia-Barriga 20356* (US, left hand plant). Boyaca: Duitama, carretera de Virolin, near KM 32, down on the river, 2900–3000 m, 2 September 1967, *L. Uribe Uribe 5953* (MO, US); between Duitama and Virolin, 3360 m, 1 June 1982, *C. Luer, R. Escobar & J. Portillo 8022* (SEL); Sierra Nevada del Cocuy, near Colugun (?), 2900 m, 16 August 1957, *P.J. Grubb, B.A.B. Curry & A. Fernandez-Perez 529* (US). Santander del Sur, roadside N of La Laguna toward Pamplona, 2850 m, 8 May 1984, *C. Luer, J. Luer, E. & E. Valencia & R. Escobar 10186* (MO); E of Bucaramanga toward Berlin, 2550 m, 7 May 1984, *C. Luer, J. Luer, E. & E. Valencia & R. Escobar 10205* (MO). Santander del Norte/Cesar: border, between Abrego and Las Jurisdicciones (Cerro de Oroque), 3440–3750 m, 22–23 May 1969, *H. Garcia-Barriga & R. Jaramillo M. 19844* (AMES); below Paramo de Jurisdicciones; between Ocana and Pamplona, 3130 m, 10–11 November 1981, *C. Luer, J. Luer, R. E scobar & D. Portillo 6654* (SEL). Cesar: Sierra Nevada de Santa Marta, San Lorenzo ridge, 2285 m, 10 March 1899, *H.H. Smith 2840* (NY). LOCALITY UNCERTAIN: Cocha…, "Incenta de Puvillan," *E.F. Andre 1010* (K [label damaged]).

In herbarium specimens (when compared to *F. myrtillus*) this species is readily identified by its fleshy leaves but this may not be a character instantly recognised from photographs or drawings. The variability observed in habit (stem 7 cm, leaves dense, to 15 mm long vs. stem 40 cm, leaves lax, to 28 mm long) of some of the specimens cited may be an artefact of exposure to high light levels, as there appears to be no differences in the flowers. The pollinarium is said to have a single stipe (vs. two stipes in *F. myrtillus*) but I only find it this way in immature flowers, and even then the upper third of the stipe has a medial line of division. It would seem as the flower ages that the stipe then begins to divide, but not wholly so. The flowers vary in color from orange to crimson, with orange column wings, and yellow to orange calli on the lip.

I agree with Kraenzlin (1923) in the reduction of *Nasonia robusta* to *Fernandezia sanguinea*. The description of *Pachyphyllum favosifolium* agrees completely with *F. sanguinea*, whilst *Centropetalum lanceolatum* represents the larger end of vegetative variation. The latter name has been misapplied to material of *F. myrtillus* (see above). Foldats (1968) cited *J.A. Steyermark et al. 100963* (VEN, image seen) in the protologue of *Pachyphyllum steyermarkii* but that specimen would seem to be a fruiting collection of *F. myrtillus*. I had wanted to treat *Pachyphyllum steyermarkii* as a separate taxon due to its black drying, deeply pitted, usually narrower leaves. However an examination of numerous specimens showed that intermediates occurred between typical *"steyermarkii"* and *Fernandezia sanguinea and,* furthermore, no differences could be found in the flowers.

Fernandezia tica Mora-Retana & Garcia-Castro from Costa Rica is in my opinion no different from *F. sanguinea*, it has slightly larger flowers than is typical for the latter (sepals *c*. 10 mm long vs. 6–8 mm long) but there are occasional collections of *F. sanguinea* with flowers this size [e.g., *MacDougall et al. 4421* (MO) from Antioquia]. It is therefore reduced to synonymy.

The collection *Garcia-Barriga & Jaramillo 19844* from the border of Santander del Norte and Cesar in Colombia may represent a natural hybrid between *F. myrtillus* and *F. sanguinea* since the callus on the labellum is more V-shaped (vs. subquadrate) and the column is less distinctly stalked, with the wings more like *F. myrtillus* in shape. The leaves are fleshy like in *F. sanguinea,* but perhaps more oblong and blunter like in *F. myrtillus*.

Small flowered *Fernandezia (Pachyphyllum)*.

Christenson (2008) provided a synopsis of this group under the name *Pachyphyllum* Kunth. He recognised 41 species distributed from Mexico to Bolivia. However one species (*P. favosifolium*) has since proved to be a synonym of *F. sanguinea* (see above). *Orchidotypus vareschii,* which has been considered a synonym of *F. hispidula* (Rchb.f.) M.W. Chase, is here considered to be a synonym of *F. schultesii*.

Fernandezia schultesii (L.O. Williams) Carnevali & Dorr, Smithsonian Contr. Bot. 100: 159, 2014.

Basionym: *Pachyphyllum schultesii* L.O. Williams, Caldasia 1, 3: 15, 1941.

TYPE: COLOMBIA. Cundinamarca: SE of Bogota, Paramo de Chipaque, 3200 m, 25 September 1941, *R.E. Schultes 1020* (Holotype: AMES).

Heterotypic synonym: (?) *Orchidotypus vareschii* Foldats, Acta Biol. Venez. 2, 4: 28, 1957.

TYPE: VENEZUELA. Tachira: Paramo el Batallon, 3200 m, *V. Vareschi 4527B* (Holotype: VEN, not seen).

Distribution: Ecuador; Colombia; Venezuela (?).

Specimen examined: ECUADOR. Azuay: Gualaceo to Limon road, KM 13, 3200–3300 m, 4 March 1985, *G. Harling & L. Andersson 22704 p.p.* (AMES).

Dunsterville and Garay (1965) included *Orchidotypus vareschii* in the synonymy of *Pachyphyllum hispidulum* (Rchb.f.) Garay & Dunsterville. However, *O. vareschii* lacks the conspicuously ciliate margins of the leaves and the sheaths of the latter, agreeing much better with *Fernandezia schultesii* in having short, obtuse (vs. lanceolate, acute) leaf sheath lobules. A detailed examination of the holotype of *O. vareschii* is however needed to fully confirm its place within the synonymy of *Fernandezia schultesii*, because there are a number of similar taxa in this group. Gordon Dillon's drawing of the type in the protologue of *Pachyphyllum schultesii* is somewhat misleading in that the lobulate nature of the leaf sheaths is not depicted. Another problem is that Dunsterville and Garay (1965) recorded *P. schultesii* from Venezuela but Dunsterville's drawing shows a plant with fleshier leaves that have truncate leaf sheaths, and flowers that have obtuse (vs. acute) sepals. I have seen collections of a similar entity from Colombia.

The record for Ecuador is new, it was found mixed in with material of *Fernandezia hispidula* (Rchb.f.) M.W. Chase *sensu lato*.

Ionopsis Kunth

A genus of two or three species distributed from Central America to Paraguay. The plants produce elongate panicles with attractive white flowers, often lined and tinted with violet, the lateral sepals form a short spur at the base, and the lip is prominent, broadly dilated and bilobed.

Ionopsis utricularioides (Sw.) Lindl., Coll. Bot.: t.39A, 1826.

TYPE: JAMAICA. Without locality, *O. Swartz s.n.* [Lectotype (designated by Ackerman 2014: 219): BM; Isolectotypes: G, S, W none seen].

Basionym: *Epidendrum utricularioides* Sw., Nov. Gen. Sp. Pl. Prodr.: 122, 1788.

Heterotypic synonyms: *Epidendrum calcaratum* Sesse & Mocino, Fl. Mexic. ed. 2: 201, 1894 *nom. illeg.* (non Vellozo 1831 *nom. inval.;* Vellozo 1881).

TYPE: PUERTO RICO. Toa Alta, *M. Sesse & J.M. Mocino s.n.* (Lectotype, here designated: BM 000023376, image seen).

Epidendrum sessei Hoehne, Arq. Bot. Est. Sao Paulo n.s. Form. Maior 2: 143, 1952.

Distribution: United States of America (Florida); Caribbean Islands; Central America; South America (to Paraguay).

There appears to be no type material of *Epidendrum calcaratum* in MA, so the sheet in BM is designated as lectotype. This sheet appears to be one of many MA specimens that were sold by José A. Pavón to Aylmer B. Lambert. Ames et al. (1936) seem to have been the first to conclude that *E. calcaratum* was a synonym of *Ionopsis utricularioides*.

I do not believe that *Epidendrum calcaratum* Vellozo 1831 is validly published, since in my opinion the illustration lacks an analysis that aids identification [McNeill et al. (2012), ICN Art. 38.7–9]. However Vellozo's description published in 1881 does validly establish the name *E. calcaratum,* a synonym of *Bifrenaria harrisoniae* (W.J. Hook.) Rchb.f.

Liparis L.C. Rich.

A pantropical and circumboreal genus of about 480 species when considered in the broad sense. In the New World including about 30 species. The first species proposed here is member of the recently described section *Retusae* (Ormerod, 2013), now a group of six known taxa. Whilst the second is a member of section *Ramosae* Ridl., now a group of fourteen species.

Liparis vasquezii Ormerod, *sp. nov.* TYPE: BOLIVIA. Cochabamba: Chapare Prov., road to Tablas, 2500 m, 9 February 1980, *C. Luer, J. Luer & R. Vasquez 5166* (Holotype: SEL). Fig. 4.

Species nova in sectio singularis, labello basi auriculatis differt.

Terrestrial *herb*. *Rhizome* creeping, terete, to 27 cm long, 0.15–0.20 cm thick; internodes *c*. 3 between pseudobulbs, 0.9–2.3 cm long. *Roots* terete, pubescent, sparsely singly appearing along the rhizome, 0.5–1.0 mm thick. *Pseudobulbs* 3.0–7.8 cm apart, enclosed by expanded base of leaf petiole, dimidiately cylindric-ovoid, 1 cm long, to 0.4 cm wide; subtended by a 2.1–2.5 cm long, whitish drying, papery sheath. *Leaf* single, basal, cordate, subacuminate, 7 veined, 3.1–4.7 cm long (including auricles), 2.5–3.3 cm wide; petiole

canaliculate, base expanded, 2.8–3.8 cm long. *Inflorescence* terminal, 6.7–10.1 cm long; peduncle usually enclosed by channel of leaf petiole, 4.5–5.3 cm long; rachis sublaxly 7–12 flowered, 2.2–4.8 cm long; floral bracts lanceolate, acute, to 4.8 mm long. *Flowers* with light green sepals and petals, lip light purple. *Pedicellate ovary* slenderly clavate, triangular in section, *c*. 11.5 mm long. *Dorsal sepal* oblong-lanceolate, acute, *c*. 9.75 mm long medially, 2.75 mm wide. *Lateral sepals* obliquely lanceolate, subacute, *c*. 8.75 mm long, 2.95 mm wide. *Petals* linear, subacute, 11.8 mm long, 1 mm wide. *Labellum* subquadrate, auriculate basally, margins minutely irregularly dentate-erose, medially with a smooth linear-oblanceolate strip, apex with a subacute apiculus, 9.1 mm long medially (12.1 mm long including auricles), to 10.9 mm wide; callus basal, transverse, shallowly retuse. *Column* slender, semiterete, apex incurved, 5 mm long unstretched (6 mm long stretched out).

Distribution: Bolivia.

Habitat: Cloud forest, 2500 m.

Eponymy: Named after the late Roberto Vasquez, expert illustrator, contributor to the orchid flora of Bolivia, and who participated in collecting the type.

This species is easily distinguished from all others in section *Retusae* by the broadly auriculate base of the lip. The plant misidentified as *L. retusa* by Vasquez and Dodson (1982) may be a sister species of *L. vasquezii,* since it too has an auriculate labellum. It seems to differ in having larger flowers with a more elliptic lip and more complicate basal callus.

Liparis yanachagae Ormerod, *sp. nov.* TYPE: PERU. Pasco: Oxapampa, Distrito Huancabamba, Parque Nacional Yanachaga-Chemillen, Sector Tunqui, 1800 m, 11 February 2008, *R. Vasquez M. et al. 33359* (Holotype: SEL). Fig. 5.

Affinis L. rusbyi Rolfe *sed labello et callus quadrilobulatis (vs. bilobulatis), linea media incrassatis et sulcatis (vs. humilis et esulcatis) differt.*

Terrestrial(?) *herb*. *Rhizome* creeping, terete, 15.5 –25.7 cm long, 0.2–0.3 cm thick; internodes 2.4–4.0 cm long; sheaths lax, loose-fitting, tubular, to 2.3 cm long. *Roots* emitted singly, pubescent. *Stems* none. *Leaves* in pairs, blade ovate-suborbicular, acute, black-drying, 3.6–5.5 cm long, 2.6–4.2 cm wide; petiole and sheath 3.7–4.5 cm long. *Inflorescence* terminal, 17–21 cm long; peduncle unsheathed, 10–14 cm long; rachis sublaxly flowered, 3–11 cm long; floral bracts lanceolate, acute, 6–10 mm long, 1.6–2.0 mm wide. *Flowers* with a lilac lip. *Pedicellate ovary* hexalate, 16–17 mm long. *Dorsal sepal* linear-ligulate, apex weakly cucullate, subacute, 1-veined, 11.5 mm long, 1.8 mm wide. *Lateral sepals* obliquely oblong-ligulate, subacute, 1-veined, 9.7 mm long, 2.1 mm wide. *Petals* linear, subacute, 1-veined, 10 mm long, 1 mm wide. *Labellum* obovate, apex quadrilobulate, margins minutely erose above basal third, 10. 5 mm long medially (11.5 mm long to tips of lobes), 10.3 mm wide; basal callus erect, rounded, quadrilobulate; medial callus acuiform, fleshy, sulcate in basal half, apex acute, 7 mm long. *Column* arcuate, basal half thickened, *c*. 3.5 mm long (incl. anther cap).

Distribution: Peru.

Habitat: Primary forest on the edge of a quebrada (stream), 1800 m.

Etymology: Named after the Yanachaga-Chemillen National Park.

This taxon is the seventh member of section *Ramosae* to be found in Peru, five of which are endemic taxa. It is closest to *L. rusbyi* Rolfe, sharing with that species a similar flower size, overall labellum shape, and in part form of the basal callus. It however differs from *L. rusbyi* in having a quadrilobulate (vs. bilobulate) apex to the labellum, a quadrilobulate (vs. bilobulate) basal callus, and thickened, acuiform, sulcate medial callus. In all other *Liparis* species of section *Ramosae* this median callus is usually represented by a low, glossy linear strip that is often not evident in herbarium material.

Malaxis Sol. ex Sw.

As circumscribed by Margonska et al. (2012), this is a genus of about 90 species restricted to the Americas. Margonska et al. (2012) divided the genus into two sections, viz. section *Malaxis,* and section *Umbellulatae*. The latter is however pre-empted by *Microstylis* (Nuttal) Eaton section *Chrysanthera*, which is here transferred to *Malaxis*. Some nomenclatural issues related to the Caribbean flora may be of interest to students of that area. *Malaxis cazalensis* Marg. [Margonska et al 2012: 335 (March 2012, S. Koeltz pers. comm)] should be added to the synonymy of *M. dodii* Acevedo-Rodriguez & Ackerman (1 Jan. 2012), both names based on the homonym *M. megalantha* D.Dod. However the name *M. juventudensis* Marg. (Margonska et al. 2012: 338) should be accepted as the correct name for the homonym *M. insularis* (H. Dietr. & M.A. Diaz) Nir. Another problem is the conflicting typifications of the name *M. umbelliflora* Sw. in Ackerman (2014, citing *O. Swartz* collections) and Margonska et al. (2012, citing *D.C. Solander* collections), an issue that will take detailed investigations to resolve.

Two other nomenclatural issues in Margonska et al. (2012) also concern neglected priority. Thus *M. luceroana* G. Gonzalez 1992 has priority over *M. abieticola* Salazar & Soto Arenas 2001, and *M. novogaliciana* R. Gonzalez & McVaugh 1985 has priority over *M. brachystachys* (Rchb.f.) Kuntze 1891 *nom. illeg*. [non (Lindl.) Rchb.f. 1861].

Malaxis section ***Chrysanthera*** (Link, Klotzsch & Otto) Ormerod, *comb. nov.*

Basionym: *Microstylis* section *Chrysanthera* Link, Klotzsch & Otto, Icon. Pl. Rar. 1: 11, 1841.

Type species: *Microstylis histionantha* Link, Klotzsch & Otto.

Homotypic synonyms: *Microstylis* section *Umbellulatae* Ridl., J. Linn. Soc., Bot. 24: 315, 1888.

Malaxis section *Umbellulatae* (Ridl.) F. Barros, Bol. Bot. Sao Paulo 15: 33, 1996.

Maxillaria Ruiz & Pavon

A genus said to have about 600 species in the classical sense. It has been divided into several genera based on molecular data, but recently Chase et al. (2015) found after the sampling of more species and using more coding regions that a broad *Maxillaria* was a more natural concept. One of the genera reintegrated into *Maxillaria* was *Brasiliorchis* Singer et al. It was proposed by Singer et al. (2007) to accommodate a group of 13 Brazilian, Paraguayan, and Argentinean species previously known as *Maxillaria* section *Bolbidium* (Lindl.) E.A. Christenson (Syn.: section *Repentes* Pfitz.). For the most part the plants can be recognised by their sulcate to ridged, bifoliate pseudobulbs, and long-lasting, campanulate, rewardless flowers. Though it should be noted that the pseudobulbs of *M. barbozae* Loefgren are smooth and not ridged, and dry with a roughish surface. The overlooked generic name *Bolbidium* (Lindl.) Lindl. however is the earliest one for this group, and thus Singer et al. (2011) proposed that *Brasiliorchis* be conserved over *Bolbidium*. The proposal is likely to be successful (K. Gandhi pers. comm.) but it is only of relevance if one accepts these plants at the generic level, it would also mean that the sectional name *Repentes* would have to be reinstated for use in *Maxillaria*. The earliest name belonging to the current concept of *Brasiliorchis* is *Bletia humilis*, described in 1829. According to Chiron and Bolsanello (2014) *Bletia humilis* is a synonym of *Brasiliorchis gracilis* (Lodd.) Singer et al. (*Maxillaria gracilis* Lodd. 1832), this is however a position I am not prepared to adopt just yet due to the difficulty in circumscribing species concepts in *Brasiliorchis*.

Maxillaria humilis (Link & Otto) Ormerod, *comb. nov.*
Basionym: *Bletia humilis* Link & Otto, Icon. Pl. Rar. (Link & Otto): 53, t.27, 1829. TYPE: MEXICO. Without locality data, *F. Deppe s.n.* [likely BRAZIL: ex *H.K. Beyrich s.n.*] (Holotype: B, destroyed).

Distribution: Brazil.

The type of this species was likely one of H.K. Beyrich's live Brazilian plants that were cultivated in the Botanical Garden of Berlin, since species of section *Repentes* do not occur in Mexico, and Deppe did not collect in Brazil. According to the protologue *Bletia humilis* has leaves 10–15 cm long, 1.2–1.6 cm wide, the inflorescence 5.0–7.5 cm long, flowers with yellow sepals, a yellow lip with purple stripes on the sidelobes, three purple spots near the apex of each sidelobe, and a purple column. The speals are 2.5 cm long, 0.8 cm wide, petals 0.6 cm wide, the lip 1.8 cm long, the midlobe 0.8 cm long and wide, and the column 1.2 cm long.

Microchilus Presl

A genus of about 142 species found from Mexico to Argentina. Ackerman's (2014) treatment of *Microchilus* for the Greater Antilles includes a circumscription of *M. plantagineus* (L.) D. Dietr. that I strongly dispute. All three heterotypic taxa listed in synonymy by Ackerman belong to distinct species. As noted under above under *Aspidogyne*, the name *Satyrium latifolium* L. is a synonym of *Aspidogyne querceticola* (Lindl.) Meneguzzo. The other two entities, *Microchilus laticalcar* and *M. pimentelii* Ormerod are not hard to recognise, indeed they can be detected in the dry state by simply looking for their distinctively broader epichiles which can be been seen with the naked eye or a low-powered hand lens. Since *M. pimentelii* is already furnished with a published drawing (Ormerod, 2007) that shows its distinctive characters, I provide only a sketch and some notes on *M. laticalcar* to elucidate its features. Also described is a new taxon from Peru.

Key to Antillean *Microchilus*.

1a. Sepals less than 4 mm long . . . 2
1b. Sepals more than 5 mm long . . . 3
2a. Leaves ovate; inflorescence densely flowered; lip lobules obliquely obovate; spur less than 1.5 mm long . . . 4
2b. Leaves lanceolate; inflorescence laxly flowered; lip lobules ligulate; spur 1.9–2.1 mm long . . . *M. familiaris*
3a. Lip epichile transversely oblong-ligulate, 2.6–4.0 mm wide . . . 5
3b. Lip epichile broadly triangular, less than 2.4 mm wide . . . *M. plantagineus*
4a. Lip hypochile semitubular, not bicarinate . . . *M. hirtellus*
4b. Lip hypochile thickly bicarinate . . . *M. glacensis*
5a. Lip hypochile semitubular, not bicarinate; epichile 4 mm wide . . . *M. pimentelii*
5b. Lip hypochile thickly bicarinate; epichile 2.6 mm wide . . . *M. laticalcar*

Microchilus laticalcar (D. Dod) Ormerod, Lindleyana 17, 4: 217, 2003. TYPE: DOMINICAN REPUBLIC. Cordillera Septentrional, Santiago, Loma Diego de Ocampo, 1150 m, 10 August 1981, fl. in cult. April 1984, *D. Dod 1353* (Holotype: JBSD; Isotypes: AMES [not found], MO, NY, SEL, US, none seen). Fig. 6.

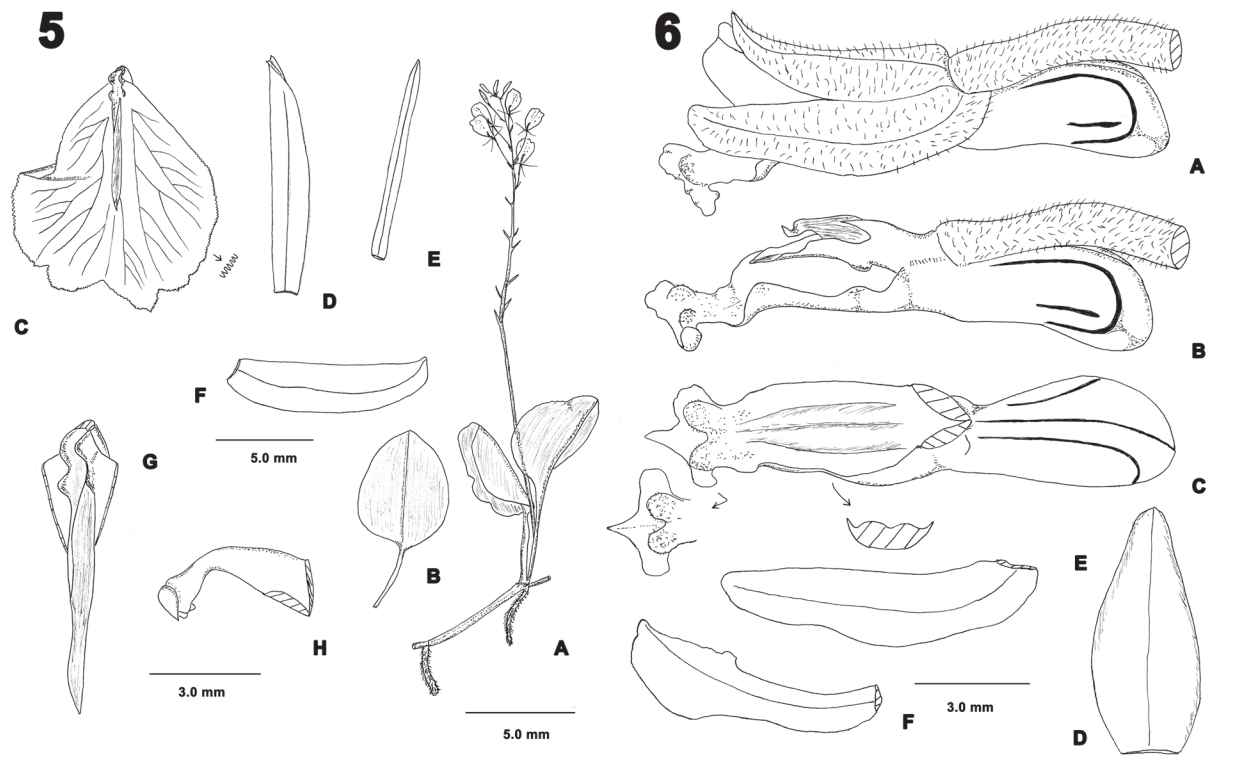
Basionym: *Erythrodes laticalcar* D. Dod, Moscosoa 5: 231, 1989.

Usage synonym: *Erythrodes paleacea* auct. non (Schltr.) Ames, Nir, Orch. Antill.: 146, f. 42c, 2000.

Distribution: Dominican Republic.

Specimen examined: DOMINICAN REPUBLIC. Liali, 100–500 m, 8–20 February 1923, *W.L. Abbott 2646* (AMES, US [photo AMES]).

The protologue of *Erythrodes laticalcar* supplies an unhelpful figure of the flower in profile, and in frontal view,



FIGURES 5–6. 5, *Liparis yanachagae* Ormerod. A, plant; B, leaf; C, labellum; D, dorsal sepal; E, petal; F, lateral sepal; G, labellum callus; H, column. Drawn from holotype. 6. *Microchilus laticalcar* (D. Dod) Ormerod. A, flower; B, flower minus tepals; C, labellum and spur; D, dorsal sepal; E, lateral sepal; F, petal. Drawn from *Abbott 2646* (AMES).

without showing details of the labellum. Furthermore the specific epithet *"laticalcar"* may lead to the impression that the broad spur is a diagnostic character when it is not, however Dod's description is careful and accurate. Thus I think the unhelpful figure and misleading epithet in the protologue has led to some confusion about *M. laticalcar* and its relationship to *M. plantagineus*.

Microchilus laticalcar is readily distinguished from *M. plantagineus* by its transverse, 2.6 mm wide lip epichile, and thickly bicarinate lip hypochile. From *M. pimentelii* it is again distinguished by the thickly bicarinate lip hypochile, and less wider (2.6 vs. 4.0 mm) epichile.

Microchilus tunquianus Ormerod, *sp. nov.* TYPE: PERU. Cuzco. La Convencion: Distrito Santa Ana, Tunqui Mayo, 1870 m, 2 November 2007, *R. Vasquez, C. Davidson, E. Suclli, J. Farfan & A. Pena 33141* (Holotype: SEL; Isotype: MO, not seen). Fig. 7.

Affinis M. atalayae Ormerod *sed petalis floribus oblongis (vs. ligulato-spatulatis), hypochilo labello oblongo-subpanduratis (vs. ovato-lanceolatis) et calcar brevioribus (2.7 vs. 4 mm) differt*.

Terrestrial(?) *herb* to 1.2 m tall (fide collectors). *Rhizome* not seen. *Roots* terete, pubescent. *Stem* terete, rooting from lower nodes, laxly 7 leaved, 35 cm long, 0.4–1.0 cm thick; internodes 2.7–4.2 cm long. *Leaves* obliquely oblong to oblong-elliptic, subacuminate, 13.0–22.3 cm long, 4.40–6.25 cm wide; petiole and sheath 3.5–5.5 cm long. *Inflorescence* terminal, pubescent, 44.8 cm long; peduncle laxly to sublaxly 10 sheathed, 28.7 cm long; sheathing bracts 1.5–3.5 cm long; rachis subdensely many-flowered, 36.1 cm long; floral bracts ovate-lanceolate, acute, to 9 mm long, 2 mm wide. *Flowers* white, externally pubescent. *Pedicellate ovary* fusiform, pubescent, 7 mm long; capsules reddish. *Dorsal sepal* oblong-lanceolate, obtuse, 4.6 mm long, 2.1 mm wide. *Lateral sepals* obliquely oblong, obtuse, 5.2–5.5 mm long, 1.70–1.75 mm wide. *Petals* oblong, subacute, 2 veined, midvein branched, 4.8–4.9 mm long, 1.6–1.7 mm wide. *Labellum* spurred, joined to column for 1 mm; spur narrowly oblongoid, obtuse, 2.7 mm long; hypochile oblong-subpandurate, 3.7 mm long, 2 mm wide basally, 1.4 mm wide subapically; epichile transversely oblong, papillose-pubescent, 1 mm long, 2.7 mm wide, lobules ovate, obtuse, 0.9 mm long, 0.8 mm wide. *Column* slender, 2.9 mm long (to tips of pollinarium).

Distribution: Peru.

Habitat: Secondary forest, on the edge of a stream, 1870 m.

Etymology: Named after Tunqui Mayo, the type locality.

This species resembles its Peruvian congener *M. atalayae* Ormerod in being a large stout plant with numerous, relatively small flowers. However *M. tunquianus* differs in having oblong, biveined (vs. ligulate-spatulate, one veined) petals, an oblong-subpandurate (vs. ovate-lanceolate) labellum hypochile and shorter (2.7 vs. 4 mm) spur.

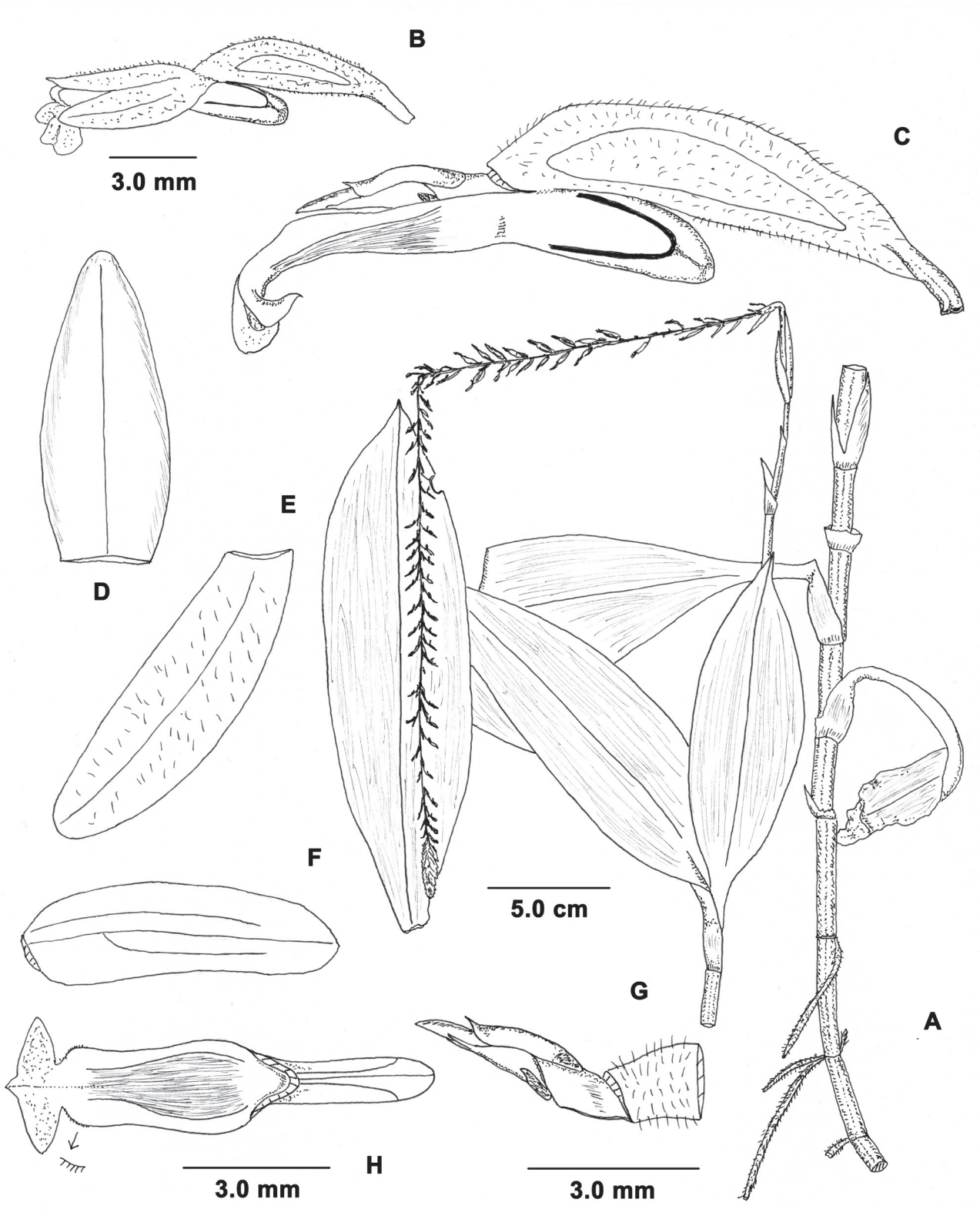


FIGURE 7. *Microchilus tunquianus* Ormerod. A, plant; B, flower; C, flower minus tepals; D, dorsal sepal; E, lateral sepal; F, petal; G, column; H, labellum and spur. Drawn from holotype.

Odontorrhynchus Correa

A genus of Spiranthinae with perhaps three or four species. The plants occur in temperate climates of South America from Chile to Peru. After study of several Chilean specimens I have reached the conclusion that there is so far only one species found in that country rather than four different taxa. Further studies may also find that the Peruvian *O. alticola* Garay is a synonym of the Bolivian *O. chlorops* (Rchb.f.) Garay, thus leaving only three species in the genus.

Odontorrhynchus chilensis (A. Rich.) Garay, Bot. Mus. Leafl. Harv. Uni. 28, 4: 341, 1982. TYPE: CHILE. Chiloe: Cucao, *C. Gay 118* (Holotype: P, image seen).

Basionym: *Spiranthes chilensis* A. Rich., in Gay, Fl. Chil. 5, 4: 475, 1852.

Homotypic synonym: *Gyrostachys chilensis* (A. Rich.) Kuntze, Rev. Gen. Pl. 2: 664, 1891.

Heterotypic synonyms: *Odontorrhynchus variabilis* Garay, Bot. Mus. Leafl. Harv. Uni. 28, 4: 287, 1982 *syn. nov.*

TYPE: CHILE. Chiloe: Cucao, 50 m, March 1924, *E. Werdermann 303* (Holotype: AMES; Isotypes: BM, HBG, not seen).

Odontorrhynchus domeykoanus Szlach., Fragm. Fl. Geobot. 41, 2: 853, 1996 *syn. nov.*

TYPE: CHILE. Valparaiso: between Camino de la Polvora and Playa Andia, 28 April 1904, *Scheding s.n.* (Holotype: HBG, image seen).

Odontorrhynchus erosus Szlach., Fragm. Fl. Geobot. 41, 2: 854, 1996 *syn. nov.*

TYPE: CHILE. Cordillera de San Fernando, *ex Herb. Santiago 287* (Holotype: HBG, image seen).

Distribution: Chile.

Specimens examined: CHILE. Arauco: above Arauco, 50–100 m, 6 March 1925, *F.W. Pennell 12955* (AMES). Chiloe: Dept. Llanquihue, side road between Hotel Ensenada and Volcan Osorno, 100 m, 20 March 1939, *J.L. Morrison 17545* (AMES); Petrohue, slope of Volcan Osorno, 200–250 m, 13–15 February 1925, *F.W. Pennell 12641* (AMES). Malleco: W of Angol, 300–400 m, 27–28 February 1925, *F.W. Pennell 12834* (AMES). Ovalle: Parque Nacional de Fray Jorge, between el Cardoncito and Labranza, 550 m, 10 March 1947, *C. Munoz P. 4032* (AMES). Santa Cruz: Pichilem Cahuel, 10 m, 23 January 1929, *G. Montero O. 773* (AMES). Valdivia: Cautin, Termuco, Cerro Nielol, 200 m, 20 March 1937, *G. Montero O. 3094* (AMES); Termuco, La Barra ledo Sur, 3 m, 14 February 1937, *G. Montero O. 3022* (AMES); Corral, Cordillera Pelada, 200 m, 21 March 1930, *S. Looser 1284* (AMES); Quitaluto, 21 March 1937, *H. Gunchen 15264* (AMES). Flowers from the following nine Chilean collections were also seen: *Bridges 607, Eschscholtz s.n., Hort. Kew s.n., Lechler s.n., 827, 1467, 1467A, Leibold 3011, McCrae s.n.*

After examining several collections of this species it is evident to me that it is a fairly variable plant. There is a little variability in the habit, some plants are more slender with laxer inflorescences (e.g., *Pennell 12834* and *Montero 773*), but these are connected to the stouter plants with dense spikes by intermediates. In one plant (*Montero 773*) the labellum epichile varied from broadly ovate, obtuse to transversely oblong. This variation in epichile shape may be linked to developmental (young flower vs. older flower) stage. I have also observed it in material of the Bolivian *O. chlorops*. Thus Garay's figure (1982) from the type of *Spiranthes chilensis* would represent a flower in which the labellum epichile hasn't fully developed, and this likely influenced him to propose *O. variabilis* which has a larger epichile. Another variable factor is flower size, I found the sepals and petals were from 5.5 to 8 mm long, without any disjunction.

The type form of *Odontorrhynchus chilensis* is supposed to be the smaller flowered plants, with which *O. domeykoanus* agrees very well. The protologue of the latter does not mention pubescent ridges on the lip, but pubescence frequently appears invisible under light microscopes when directly viewed from above. Another character used to discriminate species within *O. chilensis* is hypochile shape. This I find often varies depending on how much one can flatten the hypochile to make a drawing. Thus in *O. domeykoanus* the lip has flattened down quite well, but in the larger flowered samples (like *O. erosus*) this is a little more difficult. The latter cannot be distinguished from *O. chilensis* based on a "strongly arcuate and undulate hypochile" because all specimens have a somewhat arcuate lip in the natural position, which can become undulate only when one tries to flatten it.

Pleurothallis Sw.

In the traditional sense this is a genus of about 2000 species, but it now has been divided into several segregate genera (see e.g., Luer 2004). The single species discussed here had been described in the unrelated genus *Gomesa* R. Br. in 1826, and then later transferred to *Rodriguezia* Ruiz & Pavon. Neither of these genera occur in the Greater Antilles, and since no later author recognised the identity of the plant, it was listed among the excluded species of the Antillean flora by Ackerman (2014).

Pleurothallis quadrifida (Lex.) Lindl., Bot. Reg. 21: sub t. 1797, 1836. TYPE: MEXICO. Michoacan: Vallisoleto (= Morelia), towards Jesus del Monte, *P. La Llave & J. Lexarza s.n.* (Holotype: lost).

Basionym: *Dendrobium quadrifidum* Lex., Nov. Veg. Descr., Orch. Opusc. 2: 40, 1825.

Homotypic synonyms: *Humboldtia quadrifida* (Lex.) Kuntze, Rev. Gen. Pl. 2: 668, 1891.

Stelis quadrifida (Lex.) Solano & Soto Arenas, Icon. Orch. 5–6: 11, 2002.

Specklinia quadrifida (Lex.) Luer, Monogr. Syst. Bot. Miss. Bot. Gard. 95: 263, 2004.

Loddigesia quadrifida (Lex.) Luer, Monogr. Syst. Bot. Miss. Bot. Gard. 105: 251, 2006.

Lalexia quadrifida (Lex.) Luer, Harvard Pap. Bot. 16, 2: 358, 2011.

Heterotypic synonyms: *Gomesa stricta* Spreng., Syst. Veg. ed. 16, 3: 710, 1826 *syn. nov.*

TYPE: JAMAICA. Without locality, 1821, *C. Bertero s.n.* (Holotype: B, destroyed).

Rodriguezia stricta (Spreng.) Steud., Nom. Bot. ed. 2, 2: 463, 1841.

Distribution: Caribbean; Mesoamerica; Colombia; Venezuela.

The combination *Pleurothallis quadrifida* is often attributed to Lindley (1842), but he made it six years earlier in 1836. Cogniaux (1909) listed a Jamaican collection of Bertero as *P. longissima* Lindl. (a later synonym of *P. quadrifida*). This I believe was likely the unannotated type of *Gomesa stricta,* since the sparse description of the latter fits *P. quadrifida* very well.

Polystachya W.J. Hook.

This pantropical genus of epiphytes was recently monographed by Mytnik-Ejsmont (2011). In the broad sense *Polystachya* contains about 235 species, most of which are in Africa, with about 13 in the neotropics. The notes below concern typification and synonymy of the two earliest known neotropical species of *Polystachya,* viz. *P. concreta* and *P. foliosa*.

Polystachya concreta (Jacq.) Garay & H.R. Sweet, Orquideologia 9: 206, 1974. TYPE: MARTINIQUE. Without locality, *N.L. Jacquin s.n.* (Holotype: lost). Neotype (Mytnik-Ejsmont & Baranow 2010: 60): Martinique. Without locality, 2 August 1936, *Privault 136* [Neotype: P, image seen, as "*Polystachya flavescens* (Blume) J.J. Sm."].

Basionym: *Epidendrum concretum* Jacq., Enum. Syst. Pl.: 30, 1760.

Heterotypic synonyms: *Polystachya extinctoria* Rchb.f., Ann. Bot. Syst. 6: 638, 1863.

TYPE: JAMAICA. Without locality or collector (Holotype: not found). Neotype (here designated): JAMAICA, Fairfield, *H.R. Wullschlaegel 1055* (W, image seen).

Dendrorkis extinctoria (Rchb.f.) Kuntze, Rev. Gen. Pl. 2: 658, 1891.

Distribution: Pantropical.

Reichenbach f. cited no collector in the protologue of *P. extinctoria*, only cryptically mentioning that the type was a Jamaican specimen that had been misdetermined as *Cranichis luteola* Sw. No material has been located with this annotation. I have therefore chosen as neotype a Jamaican collection made by H.R. Wullschlaegel in 1847–1849, that predates the protologue and also has present the character (an *extinctoriform mentum*) that gives the species its name.

Polystachya foliosa (W.J. Hook.) Rchb.f., Ann. Bot. Syst. 6: 640, 1863. TYPE: GUYANA. Without locality, *C.S. Parker s.n.* (Holotype: lost). Lectotype (Sauleda & Adams 1979: 274): t. 17, in Ann. Mag. Nat. Hist. 2, 1839.

Basionym: *Stelis foliosa* W.J. Hook., Ann. Mag. Nat. Hist. 2: 330, 1839.

Homotypic synonym: *Dendrorkis foliosa* (W.J. Hook.) Kuntze, Rev. Gen. Pl. 2: 659, 1891.

Heterotypic synonym: *Epidendrum minimum* Aubl., Hist. Pl. Guiane 2: 825, 1775 *syn. nov.*

TYPE: t. 148, f.3 of *Viscum delphinii flore minimum* Sloane, Voy. Isl. Madeira, Barb., Nieves, St. Christoph. & Jamaica: 251, 1707. Epitype (here designated): Jamaica. Road to Guanaboa and Red Hills, *H. Sloane s.n.* (BM 000589993 = Herb. Sloane Vol. 7: 86, Sloane ID 522, image seen).

Distribution: Caribbean; Mesoamerica; South America (to Paraguay).

Epidendrum minimum is the earliest name for this species but the epithet is unavailable in the genus, having been used in 1895 for the African *Polystachya minima* Rendle. I have designated as epitype the specimen Slonae used to illustrate his *Viscum delphinii flore minimum*.

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