

NOTES ON SOME MALESIAN ORCHIDACEAE II

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Abstract. Continuing studies of Malesian Orchidaceae find that it is necessary to subsume *Platystyliparis* into *Alatiliparis* requiring nine combinations, propose a small flowered but showy new *Dendrobium*, expand the circumscription of *Oberonioides*, requiring five combinations, move *Calanthe subhamata* to *Styloglossum*, and propose a new *Tropidia*.

Keywords: Malesia, new names, *Alatiliparis*, *Dendrobium*, *Oberonioides*, *Styloglossum*, *Tropidia*

This paper is a continuation of studies into Malesian Orchids (Ormerod et al. 2019; Ormerod and Juswara 2019). As noted before, the basic Malesian area extends from Malaysian peninsula to the Solomon Islands, north to the Philippines. The whole area is dominated by large tropical islands (e.g. Borneo, Sumatra, Java, New Guinea) interspersed with numerous smaller islands that are (or were) covered by various types of rainforest, though some of the Lesser Sunda Islands (e.g. Lombok through to Timor) are somewhat drier and often have Australasian elements present.

Here we mostly deal with some former members of the genus *Liparis* L.C. Rich., which in the broad sense would contain about 490-500 species. There is also a showy new *Dendrobium*, unfortunately its flowers are ephemeral. The second last plant dealt with is a natural hybrid found growing in the Bogor Botanic Gardens, possibly it arose because the parent species were planted in the same general area. The last species belongs to the rather unloved genus *Tropidia*, it is the first endemic element of that genus to be described from Sulawesi.

Alatiliparis Marg. & Szlach., Ann. Bot. Fenn. 38, 2: 78. 2001.
Type species: *Alatiliparis flicornes* Marg. & Szlach.

Heterotypic synonyms: *Malaxis* Swartz section *Platystylis* Blume, Bijdr.: 389. 1825.

Platystylis (Blume) Lindl., Gen. Sp. Orch. Pl.: 18. 1830 *nom. illeg.* (*non* Sweet 1828).

Liparis L.C. Rich. section *Platystylis* (Blume) Ridl., J. Linn. Soc., Bot. 22: 258. 1886.

Cestichis Lindl. ex Pfitz. section *Platystylis* (Blume) Pfitz., in Engl. & Prantl., Naturl. Pflanzenfam. 2, 6: 131. 1889.

Platystyliparis Marg., Richardiana 7, 1: 35. 2007.

Type species: *Malaxis decurrens* Blume

Ypsilorchis Z.J. Liu, S.C. Chen & L.J. Chen, J. Syst. Evol. 46, 4: 623. 2008.

Type species: *Liparis fissipetala* Finet

This genus of intriguing little epiphytes consists of about 20 species distributed from India and China through Malaysia and Indonesia to Timor Leste. Molecular studies by G.D. Tang et al. (2015) were the first to confirm that the group (as *Platystyliparis*) was phylogenetically distinct from *Cestichis*, and that the monospecific Chinese genus *Ypsilorchis* was nested in the former. The genus *Alatiliparis* is the oldest available name for the group and was based on two Sumatran species with slightly more complex column wings and labellum calli that do not differ in any way in habit from the plants assigned to *Platystyliparis*. They are here considered to be members of the same genus based on their aggregated morphological similarities such as small plants, 2-5 leaved pseudobulbs, tender leaves, laxly flowered, often flexuous and winged rachises, often four-winged column, and fleshy, complicated labellum callus. Nine combinations are needed for Malesian species.

Alatiliparis aptenodytes (J.J. Sm.) Ormerod & Juswara, *comb. nov.*

Basionym: *Liparis aptenodytes* J.J. Sm., Bull. Jard. Bot. Buitenz. s.3, 10: 53. 1928.

TYPE: INDONESIA. Sumatra, Gunung Kerintji, 1500 m, 7 March 1920, *H.A.B. Bunnemeijer 8540* (Syntype: BO; Isosyntype: L, image seen); Gunung Kerintji, 1500 m, 7 March 1920, *H.A.B. Bunnemeijer 8535* (Syntype: BO; Isosyntype: L, image seen); Gunung Kerintji, 1600 m, 11 March 1920, *H.A.B. Bunnemeijer 8601* (Syntype: BO, not found).

Homotypic synonyms: *Platystyliparis aptenodytes* (J.J. Sm.) Marg., Richardiana 7, 1: 38. 2007.

Stichorkis aptenodytes (J.J. Sm.) Marg., Szlach. & Kulak, Acta Soc. Bot. Polon. 77, 1: 37. 2008.

Distribution: Indonesia (Sumatra).

Alatiliparis auriculifera (J.J. Sm.) Ormerod & Juswara, *comb. nov.*

Basionym: *Liparis auriculifera* J.J. Sm., Bull. Jard. Bot. Buitenz. s.3, 10: 51. 1928.

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TYPE: INDONESIA. Sumatra, Gunung Kerintji, 1500 m, 4 March 1920, *H.A.B. Bunnemeijer 8377* (Syntype: BO; Isosyntype: L, image seen); Gunung Kerintji, 1700 m, 15 March 1920, *H.A.B. Bunnemeijer 8834* (Syntype: BO, not found); Gunung Kerintji, 1500 m, 22 March 1920, *H.A.B. Bunnemeijer 9074* (Syntype: BO).

Homotypic synonym: *Platystyliparis auriculifera* (J.J. Sm.) Marg., *Richardiana* 7, 1: 39. 2007.

Distribution: Indonesia (Sumatra).

Alatiliparis aurita (Ridl.) Ormerod & Juswara, *comb. nov.*
Basionym: *Liparis aurita* Ridl., *Natur. Wand. East. Arch.*: 518. 1885.

TYPE: TIMOR LESTE. Bibicucu, 6-22 April 1883, *H.O. Forbes 3714* (Holotype: BM, image seen; Isotypes: GH; L, image seen; LISU, not seen).

Homotypic synonyms: *Leptorkis aurita* (Ridl.) Kuntze, *Rev. Gen. Pl.* 2: 671. 1891.

Platystyliparis aurita (Ridl.) Marg., *Richardiana* 7, 1: 39. 2007.

Distribution: Timor Leste; Thailand?

Alatiliparis bilobulata (J.J. Sm.) Ormerod & Juswara, *comb. nov.*

Basionym: *Liparis bilobulata* J.J. Sm., *Orch. Java*: 279. 1905.

TYPE: INDONESIA. Java, Mt. Gede, near Tjibodas, *J.J. Smith s.n.* (Holotype: BO, not found).

Homotypic synonym: *Platystyliparis bilobulata* (J.J. Sm.) Marg., *Richardiana* 7, 1: 39. 2007.

Distribution: Indonesia (Java).

Alatiliparis cameronica (P.T. Ong & P. O'Byrne) Ormerod & Juswara, *comb. nov.*

Basionym: *Liparis cameronica* P.T. Ong & P. O'Byrne, *Malay. Orch. Rev.* 47: 72. 2013.

TYPE: MALAYSIA. Pahang, Cameron Highlands, 17 July 2012, *P.T. Ong et al. FRI 75364* (Holotype: KEP, not seen).

Distribution: Malaysia (Pahang).

Alatiliparis decurrens (Blume) Ormerod & Juswara, *comb. nov.*

Basionym: *Malaxis decurrens* Blume, *Bijdr.*: 390. 1825.

TYPE: INDONESIA. Java, Mt. Salak, *C.L. Blume 623* (Holotype: L, 2 sheets, images seen; Isotype: BM, not seen; P, image seen).

Homotypic synonyms: *Platystylis decurrens* (Blume) Lindl., *Gen. Sp. Orch. Pl.*: 18. 1830.

Liparis decurrens (Blume) Rchb.f. ex Ridl., *J. Linn. Soc., Bot.* 22: 291. 1886.

Cestichis decurrens (Blume) Pfitz., in Engl. & Prantl., *Naturl. Pflanzenfam.* 2, 6: 131. 1889.

Leptorkis decurrens (Blume) Kuntze, *Rev. Gen. Pl.* 2: 671. 1891.

Stichorkis decurrens (Blume) Pfitz., in Engl. & Prantl., *Naturl. Pflanzenfam., Nachtr.* 1: 103. 1897.

Platystyliparis decurrens (Blume) Marg., *Richardiana* 7, 1: 38. 2007.

Distribution: Indonesia (Java).

Alatiliparis hirundo (Holtt.) Ormerod & Juswara, *comb. nov.*

Basionym: *Liparis hirundo* Holtt., *Gard. Bull. Singap.* 11: 281. 1947.

TYPE: MALAYSIA. Pahang, Cameron Highlands, November 1939 to January 1940, *A.H. Batten-Pooll s.n.* (Holotype: K).

Homotypic synonym: *Platystyliparis hirundo* (Holtt.) Marg., *Richardiana* 7, 1: 39. 2007.

Distribution: Malaysia (Pahang).

Alatiliparis leucophaea (Schltr.) Ormerod & Juswara, *comb. nov.*

Basionym: *Liparis leucophaea* Schltr., *Bot. Jahrb. Syst.* 45, *Beibl.* 104: 15. 1911.

TYPE: INDONESIA. Sumatra, Bukit Djarat, 1300 m, 1 February 1907, *R. Schlechter 15922* (Holotype: B, destroyed; Isotypes: BO; K, P, images seen).

Homotypic synonym: *Platystyliparis leucophaea* (Schltr.) Marg., *Richardiana* 7, 1: 39. 2007.

Distribution: Indonesia (Sumatra).

Alatiliparis spiralipetala (J.J. Sm.) Ormerod & Juswara, *comb. nov.*

Basionym: *Liparis spiralipetala* J.J. Sm., *Bull. Jard. Bot. Buitenz.* s.3, 9: 145. 1927.

TYPE: INDONESIA. Sumatra, Palembang, Gunung Dempo, 1700 m, 17 August 1916, *E. Jacobson Exped., Ajoeb 495* (Holotype: BO).

Distribution: Indonesia (Sumatra).

Andre Schuiteman (pers. comm.) found the type species of *Alatiliparis*, *A. filicornes*, to be conspecific with *Liparis spiralipetala*.

Dendrobium Swartz, *Nova Acta Regiae Soc. Sci. Upsal.* ser.2, 6: 82. 1799.

Type species: *Dendrobium moniliforme* (L.) Swartz *typ. cons.*

A genus of 1600-1800 species distributed from Sri Lanka and India to Tahiti. The species described below belongs to section *Grastidium* Blume, the largest group in the genus with about 223 species, of which 158 are now known from New Guinea. The section is characterised by its caulescent habit (plants to 3 metres long), biflorous inflorescences arising from two pairs of basal sheaths, and ephemeral flowers.

Dendrobium ornatum Ormerod & Juswara, *sp. nov.*

TYPE: PAPUA NEW GUINEA. Morobe Prov., Wantoat, 1065-1830 m, 22 February 1940, *M.S. Clemens III167* (Holotype: AMES; Isotype: MICH, not seen). Fig. 1.

Related to *D. igneum* J.J. Sm. but the flowers with shorter pedicellate ovaries (12.0-13.0 vs. 16.3-21.0 mm), shorter sepals (8.75-8.80 vs. 13.50-17.00 mm), shorter column foot (4.0 vs. 6.6-7.0 mm), and the labellum with a broadly clawed (vs. unclawed) epichile terminated by a transversely elliptic-suborbicular (vs. epichile cuneate in overall shape) lobule.

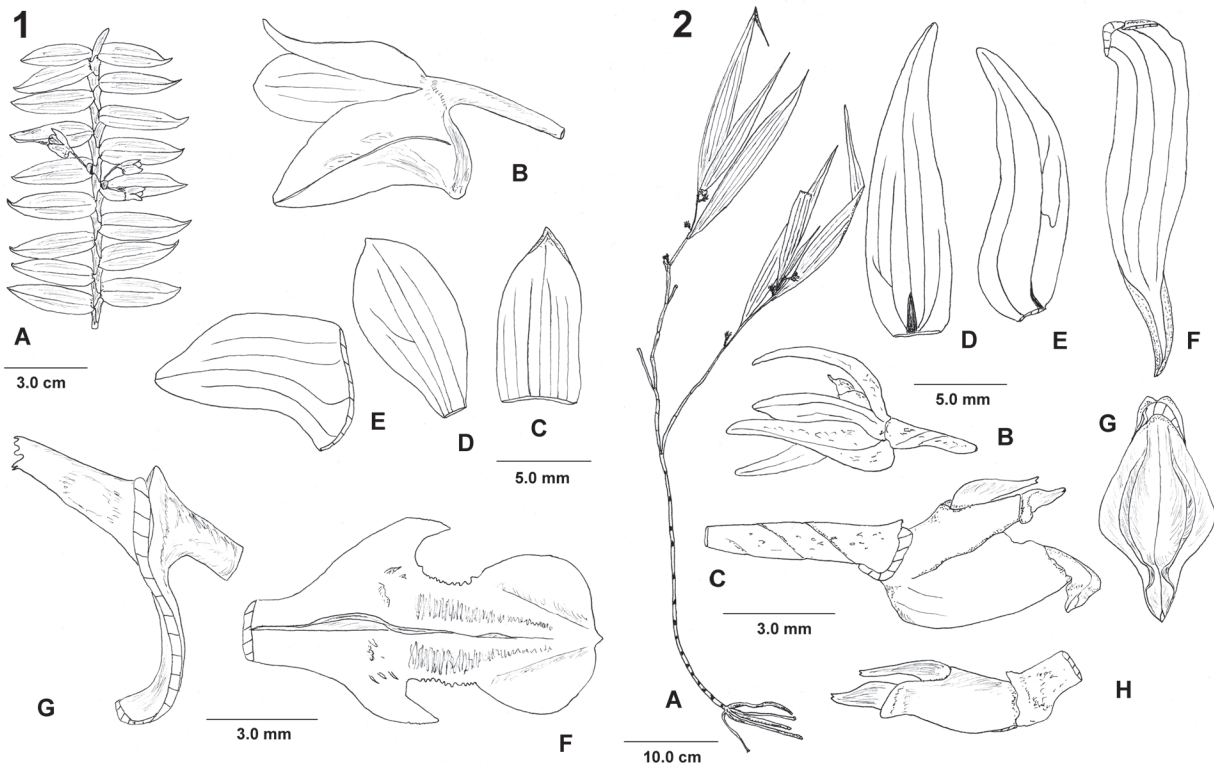


FIGURE 1. *Dendrobium ornatum* Ormerod & Juswara. **A**, stem (upper part); **B**, flower; **C**, dorsal sepal; **D**, petal; **E**, lateral sepal; **F**, labellum; **G**, column and foot. Drawn from holotype.

FIGURE 2. *Tropidia kjellbergii* Ormerod & Juswara. **A**, plant; **B**, flower; **C**, flower minus tepals; **D**, dorsal sepal; **E**, petal; **F**, lateral sepal; **G**, labellum; **H**, column. **A** drawn from isotype (L), rest from holotype.

Presumably epiphytic herb. *Roots* and *rhizome* not seen. *Stems* slender, subdensely many-leaved, compressed, preserved parts to 30 cm long, 0.4 cm wide across the leaf sheaths, 0.12 cm thick near the base. *Leaves* oblong to oblong-lanceolate, apex unequally obtusely to subacutely bilobed, 31.00-32.00 x 8.00-9.75 mm; leaf sheaths tubular-infundibuliform, compressed, apex opposite leaf lamina shallowly to deeply U-shaped, exposed part of sheaths 6-8 mm long. *Inflorescences* biflorous, almost sessile. *Flowers* sulphur to orange, a pretty soft yellow. *Pedicel* with *ovary* terete-subclavate, 12-13 mm long. *Dorsal sepal* ovate-elliptic, subacute, 7-veined, 8.8 x 4.0 mm. *Lateral sepals* obliquely ovate-elliptic, obtuse, 5-veined, 8.75 x 6.20 mm, forming with the column foot a 4.0-4.5 mm long obtuse mentum. *Petals* obovate-elliptic, subacute, 3-4 veined, 9.80 x 4.75 mm. *Labellum* trilobed, 8.7 x 5.0 mm; *hypochile* 4 mm long medially, 5 mm wide, lateral lobes obliquely falcate-lanceolate, acute to subacute, outer upper margin minutely denticulate, at base inside with one or two transverse lamellae and a few subulate processes, outside edge c. 2.5 mm long, inside edge c. 1.2 mm long; *epichile* in total 4.7 x 4.0 mm, claw transversely rugulose each side of central keel, margins dentate, c. 1.8 x 2.6 mm, terminal lobe transversely elliptic-suborbicular, obtuse, 3 x 4 mm; median keel lamellate, highest between the sidelobes but thereafter barely apparent. *Column* slightly oblique, semiterete, 3.2 mm long; *column foot* 4 mm long.

Distribution: Papua New Guinea.

Etymology: From the Latin *ornatus*, handsome, in reference to the attractive flowers.

This species is related to *D. igneum*, sharing with it compressed stems and leaf sheaths, and showy yellow flowers. *Dendrobium ornatum* differs from *D. igneum* in having smaller flowers, that have a broadly clawed lip midlobe that lacks an apical retrorse barb.

Dendrobium igneum is probably not found in general culture despite the number of cultivated plants that bear its name. Recently Thorerle et al. (2020) described *D. aurifex* Thorerle, Schuit. & Turkel from Papua New Guinea to cover some of these cultivated specimens. *Dendrobium aurifex* has some similarities with *D. ornatum* but differs in having terete stems, larger flowers (sepals 20-22 mm long), and an ovate, unclawed lip midlobe. Thorerle et al. (2020) also provided the first true photograph we have seen of *D. igneum*, showing its distinctive cuneate lip midlobe terminated by a retrorse barb.

Oberonioides Szlach., *Fragm. Fl. Geobot., Suppl.* 3: 134. 1995.

Type species: *Malaxis oberoniiflora* Seidenf.

Homotypic synonym: *Malaxis* Swartz section *Oberoniiflora* Seidenf., *Dan. Bot. Ark.* 33, 1: 43. 1978.

Type species: *Malaxis oberoniiflora* Seidenf.

This genus was originally construed to encompass two

terrestrial species with small pseudobulbs that are terminated by a single cordate, conduplicate leaf, with an inflorescence bearing several tiny (sepals less than 2 mm long) flowers, the trilobed labellum with a basal linear lobule each side. Molecular analyses by G.D. Tang et al. (2015) showed that *Liparis maingayi* and *L. purpureoviridis* were sister to *Oberonioides*. Both groups (the five Malesian “*Liparis*” and the two SE Asian “type” entities) share the same habit and small flowers. However there is considerable variation in floral characters among the Malesian species, which as a whole have a longer column than the two original species. Some of the Malesian species lack a basal callus, some have an unlobed lip with fimbriate margins, others have an apically bilobed lip.

Oberonioides furcata (J.D. Hook.) Ormerod & Juswara, *comb. nov.*

Basionym: *Microstylis furcata* J.D. Hook., *Icon. Plant.* 19: t.1827A. 1889.

TYPE: MALAYSIA. Perak, without locality, *B. Scortechini* 370 (Holotype: K, image seen; Isotype: SING, image seen). Homotypic synonyms: *Malaxis furcata* (J.D. Hook.) Kuntze, *Rev. Gen. Pl.* 2: 673. 1891.

Liparis furcata (J.D. Hook.) Ridl., *J. Linn. Soc., Bot.* 32: 226. 1896.

Distribution: Malaysia (Peninsula).

Oberonioides maingayi (J.D. Hook.) Ormerod & Juswara, *comb. nov.*

Basionym: *Microstylis maingayi* J.D. Hook., *Icon. Plant.* 19: t.1826. 1889.

TYPE: MALAYSIA. Penang Island, *A.C. Maingay s.n.* (= *Kew Distr. 1602*) (Holotype: K, image seen).

Homotypic synonyms: *Malaxis maingayi* (J.D. Hook.) Kuntze, *Rev. Gen. Pl.* 2: 673. 1891.

Liparis maingayi (J.D. Hook.) Ridl., *J. Linn. Soc., Bot.* 32: 226. 1896.

Heterotypic synonym: *Microstylis maingayi* J.D. Hook. var. *kunstleri* J.D. Hook., *Fl. Brit. Ind.* 5: 689. 1890.

TYPE: MALAYSIA. Perak, Larut Hills, 1065 m, *R. King's coll. [H. Kunstler]* 2427 (Holotype: K, not seen).

Distribution: Malaysia (Peninsula).

Oberonioides parvula (J.D. Hook.) Ormerod, *comb. nov.*

Basionym: *Microstylis parvula* J.D. Hook., *Icon. Plant.* 19: t.1827B. 1889.

TYPE: MALAYSIA. Perak, Larut, 915-1220 m, August 1884, *R. King's coll. 6457* (Holotype: K, image seen).

Homotypic synonyms: *Malaxis parvula* (J.D. Hook.) Kuntze, *Rev. Gen. Pl.* 2: 673. 1891.

Liparis parvula (J.D. Hook.) Ridl., *J. Linn. Soc., Bot.* 32: 226. 1896.

Distribution: Malaysia (Peninsula).

Oberonioides pilifera (J.J. Sm.) Ormerod & Juswara, *comb. nov.*

Basionym: *Liparis pilifera* J.J. Sm., *Bull. Jard. Bot. Buitenz.* s.3, 12: 114. 1932.

TYPE: INDONESIA. Sumatra, Deli and Serdang, Dolok Sebak, 1600 m, 23 January 1923, *J.A. Lorzing* 8327 (Syntype: BO, not found); same area, Petani Valley, 1300 m, 27 January 1923, *J.A. Lorzing* 9440 (Syntype: BO, not found; Isosyntype: L, image seen); Loeboek Sikaping, Gunung Talakmau, 2000 m, 29 May 1917, *H.A.B. Bunnemeijer* 916 (Syntype: BO, not found).

Distribution: Indonesia (Sumatra).

Oberonioides purpureoviridis (Burkill ex Ridl.) Ormerod & Juswara, *comb. nov.*

Basionym: *Liparis purpureoviridis* Burkill ex Ridl., *Fl. Malay Pen.* 4: 21. 1924.

TYPE: MALAYSIA. Pahang, Fraser's Hill, 1220-1330 m, 16-20 September 1922, *I.H. Burkill & R.E. Holttum* 8422 (Lectotype, here designated: K, image seen).

Distribution: Malaysia (Peninsula, Sarawak); Indonesia (Sumatra).

This taxon is the only *Oberonioides* species to be recorded from Borneo. It has the largest flowers in the genus (sepals 12 mm long). Wood & Cribb (1994) inadvertently designated *Burkill & Holttum 8422* in SING as lectotype of *Liparis purpureoviridis* but this collection is not found in that herbarium, so this lectotypification is not valid and is here superseded by choosing the specimen in Kew. In SING another collection (*R.E. Holttum 11345*) is listed as holotype of *Liparis purpureoviridis*, but this specimen does not have details that match those cited in the protologue by Ridley (1924), it is therefore not type material.

Styloglossum Breda, *Gen. Sp. Orch. Asclep.* [fasc. 2]: [t.2]. 1829.

Type species: *Styloglossum nervosum* Breda

A genus of 50 primarily terrestrial species distributed from India to Samoa. They were previously included in *Calanthe* R. Br. but may be distinguished from that genus by having glabrous flowers, and generally caducous floral bracts. One more transfer is required to the genus, this plant being a rare natural hybrid from Java.

Styloglossum subhamatum (J.J. Sm.) Ormerod & Juswara, *comb. nov.*

Basionym: *Calanthe subhamata* J.J. Sm., *Bull. Jard. Bot. Buitenz.* s.2, 9: 31. 1913.

TYPE: INDONESIA. Java, Buitenzorg Botanic Garden, *cult. Hort. Bogor. s.n.* (Holotype: BO, not found).

Distribution: Indonesia (Java).

This plant is a natural hybrid between *S. pulchrum* (Blume) Yukawa & Cribb and *S. speciosum* (Blume) Yukawa & Cribb. Though Smith supplied no description in the protologue, he referred to his previous description of this hybrid in 1905 in the notes for *Calanthe speciosa* (Blume) Lindl.

Tropidia Lindl., *Edwards's Bot. Reg.* 19: sub t.1618. 1833. Type species: *Tropidia curculigoides* Lindl.

This is a genus of about 30 species distributed from Sri Lanka and India to Samoa, with one or two taxa in the New

World (Ormerod 2018). The plants often resemble small palm seedlings, and have dull white to greenish flowers, often beset with a scurfy pubescence.

Tropidia kjellbergii Ormerod & Juswara, *sp. nov.*

TYPE: INDONESIA. Sulawesi, Todjamboe, 700 m, 15 December 1929, G. Kjellberg 2933 (Holotype: AMES; Isotypes: BO, L; S, not seen). Fig. 2.

Related to *T. squamata* Blume but the labellum inside with strongly lamellate (vs. low ridges) keels which meet on the epichile and diverge again (vs. keels or low ridges parallel on the epichile).

Terrestrial *herb*. *Roots* thickly wiry, rigid, terete, to 4 mm thick. *Stems* erect, caespitose, laxly few branched, each branch apically 3-4 leaved, to 60 cm tall, 0.4 cm thick, branches to 25 cm long. *Leaves* ligulate-lanceolate to lanceolate, apex subcaudate-subacuminate, gramineous, 3-5 veined, 17.5-24.0 x 2.0-2.6 cm. *Inflorescences* axillary, 16-21 mm long; peduncle covered by two 5-6 mm long sheaths, 8 mm long; rachis sequentially 6 or more flowered, to 13 mm long; floral bracts lanceolate, acute, 5-6 mm long. *Flower* color not known, outside laxly furfuraceous. *Pedicel with ovary* clavate, furfuraceous, 4 mm long. *Dorsal sepal* oblong-lanceolate, subacute, 4-5 veined, 7.5 x 2.3 mm. *Lateral sepals* asymmetric, obliquely oblong-lanceolate,

subacute, 3-4 veined, basally joined for 1.2 mm, 8.9-9.0 x 2.0-2.5 mm. *Petals* obliquely oblong-lanceolate, subacute, 2 veined, 6.9 x 2.0 mm. *Labellum* cymbiform-rhombic, subacute, 6 x 4 mm; hypochile cymbiform-rhombic, inside each side with a lamellate keel, these meet and diverge on the epichile, 5.8 x 4.0 mm; epichile ovate, subacute, recurved, 1.2 x 1.2 mm. *Column* stout, twisted, 4.1 mm long.

Distribution: Indonesia (Sulawesi).

Etymology: Named after Swedish botanist G.K. Kjellberg (1885-1943), collector of the type.

Tropidia kjellbergii is most similar to *T. squamata* Blume in habit (laxly 2-3 branched stems, each branch with a few leaves in the upper half), but the former differs in having lamellate (vs. low ridges, or very low lamellae) in the labellum hypochile that converge on the base of the epichile and then diverge (vs. parallel ridges on the epichile). *Tropidia curculigoides* Lindl. has 8-11 leaved stems, but the labellum is subpandurate with lamellate keels that are parallel on the epichile (vs. rhombic with diverging keels).

Tropidia mindorensis Ames has 13-14 leaved stems, and the labellum has lamellate keels that meet and diverge on the epichile. However the labellum hypochile is subpandurate (vs. rhombic), and the epichile is elliptic and concave (vs. ovate, subacute).

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