NOTES ON THE IDENTITIES OF THREE MALESIAN *DENDROBIUM* (ORCHIDACEAE: DENDROBIINAE)

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Abstract. Three Malesian species of *Dendrobium* are discussed regarding their typification and identity. Thus *D. curvum* is found to be based on a mixture and after lectotypification is proposed as the earlier name for *D. rappardii*; the previously obscure *D. dactyliferum* is found to be an earlier name for *D. pandaneti*; and *D. triflorum* is found to be a commonly misapplied name, which after typification is proposed as a synonym of *D. geminatum*.

Keywords: Malesia, *Dendrobium,* synonymy, typification

The genus *Dendrobium* Swartz is now recognized as the sole member of Subtribe Dendrobiinae. It is believed to have about 1600–1800 species, distributed from Sri Lanka to Tahiti. The plants are usually to be found as epiphytes, but a few species are exclusively terrestrial (e.g., *D. metrium* Kraenzl.). There is great diversity in the habit of the plants, ranging from those with tiny pea-shaped pseudobulbs, 5-m-long canes, to pendulous chandeliers of terete leaves.

During research on Indonesian *Dendrobium*, some problems were encountered while trying to locate type material of three species. The proposed resolutions are dealt with below.

Dendrobium curvum Ridl., J. Fed. Mal. St. Mus. 8, 4: 91. 1917.

TYPE: INDONESIA. Sumatra, W side of Barisan Range, Barong Bharu, Tapan, 1220 m, 10 June 1914, *H.C.Robinson & C.B.Kloss 179* (Lectotype here designated: BM 000038209, image seen).

Homotypic synonym: *Eurycaulis curvus* (Ridl.) M.A. Clem., Telopea 10, 1: 286. 2003.

Heterotypic synonyms: *Dendrobium rappardii* J.J. Sm., Blumea 5: 308. 1943 *syn. nov.*

TYPE: INDONESIA. Sumatra, Bengkulu, Air Sablat Lebong, 650 m, 8 September 1938, *F.W.Rappard 172* (Holotype: L 0059462, image seen).

Eurycaulis rappardii (J.J. Sm.) M.A. Clem., Telopea 10, 1: 287. 2003.

Distribution: Indonesia (Sumatra).

Ridley (1917) cited two collections when establishing *Dendrobium curvum,* one from Sumatra and another found by John Hewitt in Quop, Sarawak, Malaysia. Neither collection could be located in BM or Kew, where the collections that are the basis for Ridley's 1917 paper are generally stored. However, Ridley occasionally did not update annotations on specimens he studied when he had a late change of mind about the status of a plant he studied (e.g., *Dendrobium korinchense* Ridl. found under the manuscript name "*Eria striatella*," and *Eria sordida* Ridl. found under the manuscript name "*Eria ovatibracteata*"). A check of all Sumatran *Dendrobium* at BM finally revealed one of the sought-after collections, which had been named as *D. crabro* Ridl. by Ridley and later determined correctly by Jeff Wood of Kew as *D. rappardii*. This specimen completely matches the protologue of *D. curvum* in leaf size, 5-cm-long inflorescence peduncle, laxly flowered 5-cm-long rachis, and large flowers with a broad curved mentum. Thus, we propose the Sumatran specimen (*Robinson & Kloss 179*) as lectotype, with the result that the later *D. rappardii* must be treated as a synonym of *D. curvum*.

The other collection (*J.Hewitt s.n.*) mentioned by Ridley from Sarawak we found at K (again not annotated with the name *D. curvum* but with a manuscript name "*D. uncinulatum*"), where it had been found by Jeff Wood to be an isotype of *D. multiflorum* Ridl. 1908 *nom. illeg.* (non Par. & Rchb.f. 1874), a taxon since renamed *D. sarawakense* Ames. This entity, like *D. crabro* mentioned above, is endemic to Borneo (Wood, 2014). All three taxa have in common a prominent curved mentum and belong to section *Pedilonum* Blume.

Dendrobium dactyliferum Rchb.f., Gard. Chron. n.s. 21: 638. 1884.

TYPE: WITHOUT KNOWN ORIGIN. *I.F.Foerstermann s.n.* (Holotype: W-R 21025, image seen).

Heterotypic synonyms: *Dendrobium pandaneti* Ridl., J. Linn. Soc., Bot. 32: 257. 1896 *syn. nov.*

TYPE: SINGAPORE. Bukit Mandai, 1893, *H.N.Ridley 5029* (Lectotype [Seidenf. 1985: 173 as type]: BM, image seen; Isolectotype: SING); MALAYSIA. Johor: Pulau Kukub, 25 January 1890, *W.Nanson s.n.* (Syntype: SING); Johor Strait, Tanjong Kopang, 1894, *H.N.Ridley s.n.* (Syntype: SING).

Distichorchis pandaneti (Ridl.) M.A. Clem., Telopea 10, 1: 282. 2003.

Distribution: Thailand, Malaysia, Singapore, Indonesia (Lingga Archipelago, Sumatra, Java, Kalimantan).

This species is well known and aptly named *Dendrobium pandaneti,* since it has a long, creeping rhizome adapted to

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growing on *Pandanus* and palms, usually in lowland forests. However, while checking the description (and subsequently images) of the obscure *D. dactyliferum*, it became apparent that this entity is the older name for *D. pandaneti,* thus leading to the proposed synonymy above. The species is a member of section *Distichophyllae* J.D. Hook., a group well represented in Sumatra and Borneo.

Dendrobium geminatum (Blume) Lindl., Gen. Sp. Orch. Pl.: 77. 1830.

TYPE: INDONESIA. Java: Mt. Gede and Mt. Salak, *C.L.Blume 2028* (Lectotype here designated: L 0059933, image seen; possible Isolectotype: W-R 34323, image seen).

Basionym: *Desmotrichum geminatum* Blume, Bijdr.: 332. 1825.

Homotypic synonyms: *Callista geminata* (Blume) Kuntze, Rev. Gen. Pl. 2: 654. 1891.

Sarcopodium geminatum (Blume) Rolfe, Orch. Review 18: 238. 1910.

Katherinea geminata (Blume) A.D. Hawkes, Lloydia 19: 96. 1956.

Epigeneium geminatum (Blume) Summerh., Kew Bull. 12, 2: 262. 1957.

Heterotypic synonyms: *Desmotrichum triflorum* Blume, Bijdr.: 331. 1825 *syn. nov.*

TYPE: INDONESIA. Java: Mt. Salak, *C.L.Blume 1897* (Lectotype here designated: L 0059934, image seen; possible Isolectotype: P 00368880, image seen).

Dendrobium triflorum (Blume) Lindl., Gen. Sp. Orch. Pl.: 77. 1830.

Callista triflora (Blume) Kuntze, Rev. Gen. Pl. 2: 655. 1891.

Sarcopodium triflorum (Blume) Rolfe, Orch. Review 18: 239. 1910.

Epigeneium triflorum (Blume) Summerh., Kew Bull. 12, 2: 262. 1957.

Distribution: Malaysia; Indonesia (Sumatra, Java).

Dendrobium geminatum is distinctive among the Javanese species of section *Sarcopodium* Benth. in flowering on immature growths and bearing geminate pseudoterminal inflorescences. Comber (1990) recognized three species of *Epigeneium* Gagn. (= *Dendrobium* section *Sarcopodium*) in Java, namely, *E. geminatum*, *E. triflorum* (with *Desmotrichum elongatum* Blume reduced to a variety), and *E. cymbidioides* (Blume) Summerh. However, this treatment does not stand scrutiny because there may be up to 10 species in Java but only 4 available names at specific level. Another complicating factor is that type material of *Desmotrichum elongatum* has not been located, and application of the name is currently uncertain. Furthermore, the names *D. cymbidioides* (Blume) Lindl. and *D. triflorum* are evidently misapplied in the herbarium and literature.

In an attempt to resolve the problems with the Javanese species of section *Sarcopodium,* an effort was made to locate the types of the relevant names. At first there seemed to be no type material of *Desmotrichum triflorum* until it was noticed that one of the supposed syntypes (*Blume 1897*) of *Desmotrichum geminatum* bore original labels of the former annotated by Blume. The enigmatic, brief diagnosis of *D. triflorum* is congruent with this material, mentioning that the pseudobulbs are ovate, compressed, but that the older ones are tetragonous (i.e., implying the plant flowers from the younger bulbs), and the leaves oval-lanceolate. The leaves of all other section *Sarcopodium* species described by Blume are ligulate to ligulate-oblong, but only exposed plants of *Dendrobium geminatum* have short, ovate-lanceolate leaves. We speculate that Blume later realized that *Desmotrichum geminatum* and *D. triflorum* were conspecific, and thus merged the material of the two, fortunately keeping the original labels.

In treating *Dendrobium geminatum* and *D. triflorum* as conspecific, we choose the name *D. geminatum* since its use is stable and uncontroversial. The material misnamed *D. triflorum* requires revision, as do all Javanese specimens of section *Sarcopodium*.

Literature Cited

Comber, J. B. 1990. *Orchids of Java*. Royal Botanic Gardens, Kew.

Ridley, H. N. 1917. Orchideae. Pages 87–114 in *Results of an Expedition to Korinchi Peak, Sumatra*. *J. Fed. Mal. St. Mus.* 8, 4.

Wood, J. J. 2014. *Dendrobium of Borneo*. Natural History Publications (Borneo) and Royal Botanic Gardens, Kew.