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THE IDENTITY OF *DISCHIDIA MICHOLITZII* (*APOCYNACEAE*, *ASCLEPIADOIDEAE*)

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Dischidia micholitzii N.E.Br. (*Apocynaceae*, *Asclepiadoideae*), described from a cultivated plant and erroneously assumed to be from Burma, is native to the Tenimbar and Babar island groups of Maluku, Indonesia. It is closely related to *Dischidia ovata* Benth. from New Guinea and Australia.

Keywords. *Apocynaceae*, *Asclepiadaceae*, *Asclepiadoideae*, Babar Islands, biogeography, Burma, *Dischidia*, Indonesia, Maluku, Tenimbar Islands.

INTRODUCTION

Dischidia micholitzii N.E.Br. was described from a cultivated plant donated to the Royal Botanic Gardens, Kew by the firm of F. Sander & Son in 1913 (Brown, 1913). Brown assumed that *Dischidia micholitzii* was native to Burma because W. Micholitz, the collector, had travelled there extensively on behalf of the firm. Brown later re-published the description along with a detailed lithograph of the plant (Fig. 1) and an expanded exsiccatae listing three additional specimens (*Meebold* 6732, *Lace* 6261, *Micholitz* s.n.) from Manipur, India and Burma (Brown, 1915). These are actually specimens of *Micholitzia obcordata* N.E.Br. (D. J. Goyder, pers. comm.). *Micholitzia obcordata* (currently classified as *Hoya yuennanensis* Hand.-Mazz. [Wanntorp & Forster, 2007]) is a succulent, epiphytic shrub from Indochina also named in honour of Micholitz by Brown. *Dischidia micholitzii* is currently included in the checklist for Burma (Kress *et al.*, 2003) but excluded from the flora of India for lack of specimens (Jagtap & Singh, 1999).

Ongoing studies of *Dischidia* have led to the discovery of three specimens (previously unidentified to species) from the Babar and Tenimbar island groups in the Indonesian province of Maluku that match the type of *D. micholitzii*. These specimens were collected by J. G. F. Riedel and communicated to Kew by A. B. Meyer in 1883 and 1884. Micholitz had visited the Tenimbar Islands in 1891 (Van Steenis-Kruseman, 1950 [reprint 1985]). Thus, the plant had been in cultivation for over 20 years when donated to Kew in 1913.

The occurrence of *Dischidia micholitzii* in Maluku makes sense from a biogeographic perspective since it is very similar to *D. ovata* Benth., a species from New Guinea and northern Australia (Forster & Liddle, 1996). Both species have large (for the genus) 5.5–7 mm long, longitudinally striped flowers. Their gynostegia are

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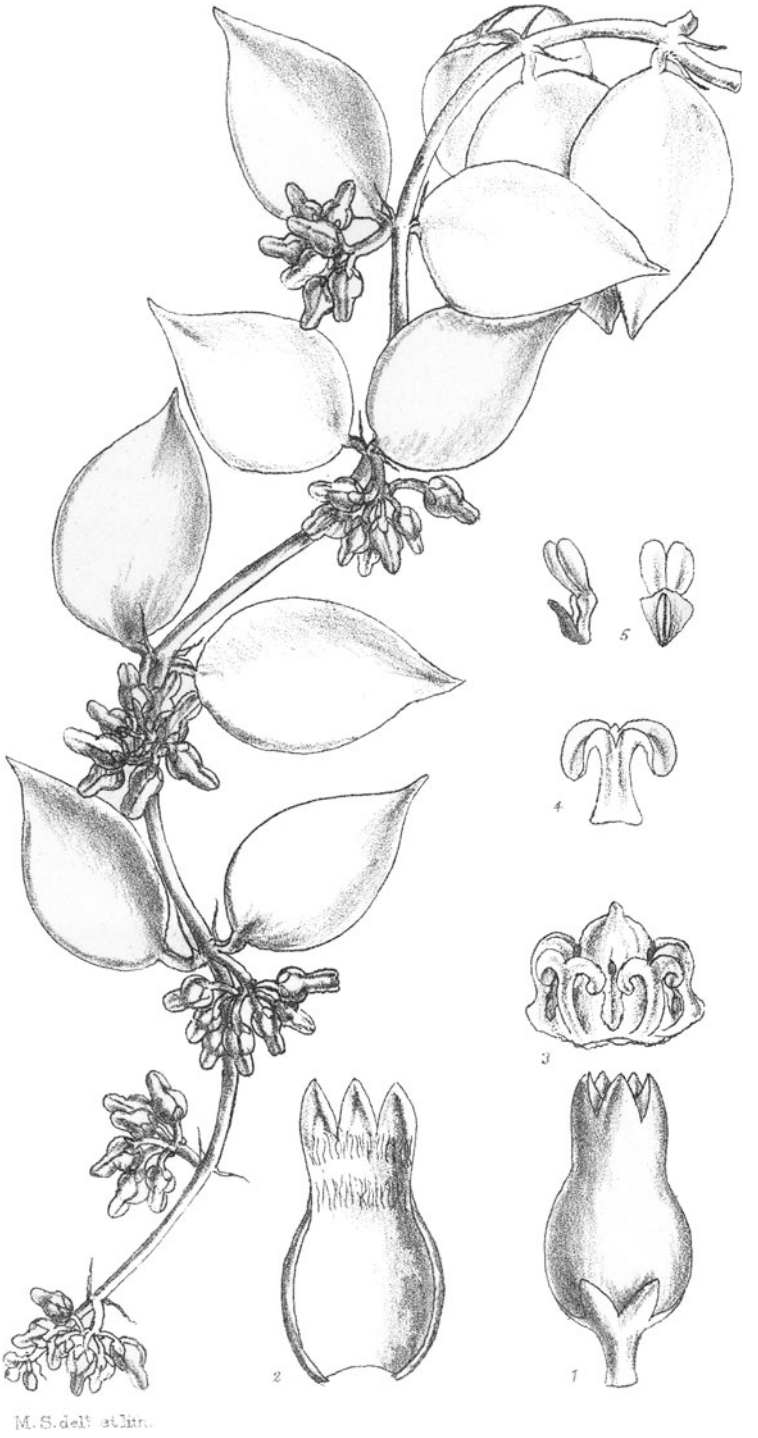
identical: subsessile with robust anther margins forming wide mouths between adjacent anthers and stalked, anchor-shaped staminal corona lobes (Fig. 1). Their pollinaria are also very similar with compressed, oblong pollinia attached to a robust translator, the two caudicles unwinged, much thickened on both margins and fused to each other along the distal edges of their inner margins (Fig. 2B). The two species differ in the distribution of pubescence inside the corolla tube (*Dischidia ovata* has a single ring of hairs at the throat while *D. micholitzii* has two rings of hairs, one at the throat and the other c.1 mm below; Fig. 1), and in the variegation of the leaves (*D. ovata* has white venation on the adaxial sides of its leaves while *D. micholitzii* has uniformly green leaves). Leaf shape in *Dischidia ovata* is quite variable, ranging from orbicular to ovate to cordate to elliptic, but the elliptic to elliptic-ovate leaves with acuminate apices of *D. micholitzii* fall outside the range of variation of *D. ovata* (Figs 1, 2A).

Dischidia micholitzii should be excluded from the flora of Indochina and considered an endemic of Maluku, Indonesia. An updated description and exsiccatae are given below. Vegetative, inflorescence and fruit dimensions are given for dry specimens; floral dimensions are for hydrated flowers.

Dischidia micholitzii N.E.Br., Bull. Misc. Inform. Kew 1913: 357 (1913); N.E.Br., Hooker's Icon. Pl. 31: t. 3018 (1915). – Type: ex Hort. Kew, 14 v 1913, *N.E. Brown* s.n. from unlocalized collection by Micholitz (holo K!). **Figs 1, 2.**

Succulent, herbaceous, twining vines. *Roots* adventitious, paired below each node, unpaired along internodes. *Latex* unknown. *Epicuticular wax* thick, exfoliating (likely artefact of preservation), without stomatal chimneys. *Stems* 0.9–1.9 mm diameter, glabrous (sparsely puberulent with minute, adpressed trichomes *fide* N. E. Brown), reddish purple *fide* N. E. Brown, internodes 2.2–6.3 mm. *Vegetative colleters* 2 flanking each petiole, 1–2 on base of adaxial side of leaf lamina, senescent. *Leaves* opposite, succulent; petiole 3–8 × 0.9–1.1 mm, glabrous to sparsely puberulent; lamina 2–5.7 × 1.3–2.6 cm, elliptic to ovate, acuminate, acumen 0.3–1.2 cm long, base cuneate (to rounded), glabrous to very sparsely puberulent on adaxial margins, purplish green *fide* N. E. Brown; venation pinnipalmate with 3(–4) veins from base and 2–3 additional secondary veins, brochidodromous, not evident in thicker leaves. *Inflorescence* extra-axillary, peduncles 3.5–22 × 0.6–1 mm diameter, glabrous, persistent through many flowering cycles, compound-umbelliform, with 2 condensed axes (evident only in older inflorescences) each with up to 4 flowers and buds, lower portions of axes covered with transversely elliptical scars where flowers have fallen. *Inflorescence bracts* c.0.3 × 0.3 mm, triangular to ovate, chartaceous, glabrous to

FIG. 1. *Dischidia micholitzii* N.E.Br. Reproduction of lithograph from Brown (1915): 1, flower; 2, part of a corolla, laid open; 3, corona and staminal column [gynostegium]; 4, a lobe of the corona; 5, pollinia (*N.E. Brown* s.n.).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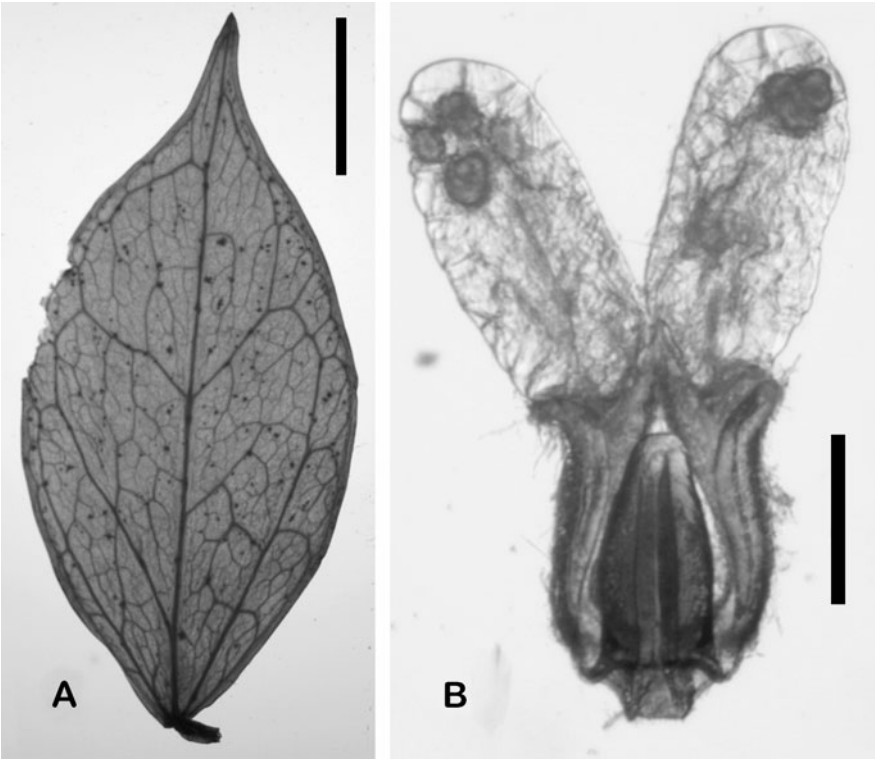

FIG. 2. *Dischidia micholitzii* N.E.Br. A. Uncleared leaf with pinnipalmate venation under transillumination. Venation is obscured in thicker leaves. Scale bar = 1 cm. B. Pollinarium with unwinged caudicles, thickened on both margins and fused together on the distal edges of the inner margins. Scale bar = 0.2 mm (A, *Riedel* s.n., Timor Laut; B, *Riedel* s.n., Maru).

ciliate, persistent after flowers senesce, but wearing off from lower parts of the axes. *Flowers*: *pedicels* 3–3.5 × 0.5–0.6 mm diameter, glabrous; *calyx* lobes 0.4–0.8 × 0.4–0.8 mm, triangular to ovate, apex obtuse, margins erose, glabrous, with 1 ovate colleter inside each sinus; *corolla* 5.5–6.5 × 2.5–3.5 mm diameter, urceolate, succulent, abaxially glabrous, adaxially with two rings of antrorse, straight, white trichomes, one at throat, second 0.9 mm below, longitudinally purple-striped *fide* N. E. Brown; lobes 1.2–1.5 × 0.8 mm, triangular, acute, erect at anthesis *fide* N. E. Brown, green *fide* N. E. Brown, valvate in bud; *corolline corona* absent; *gynostegium* 1.2–1.6 × 1.1–1.2 mm diameter, subsessile, conic, glabrous; *anthers* triangular with triangular, white, hyaline apical appendages covering the style-head apex, margins of adjacent anthers forming a wide mouth at the base; *staminal corona lobes* 1 mm tall, erect, stalked, anchor-shaped, sub-hyaline, white *fide* N. E. Brown; arms recurved, introrse, channelled adaxially, apices obtuse to truncate; *pollinarium* with pollinia acropetal to the corpusculum *in situ*, 0.8 mm long; *corpusculum* 0.3 × 0.1 mm, elliptic, apex truncate, *caudicles* 0.4 × 0.15 mm, unwinged, thickened on both

margins, inner margins fused distally; *pollinium* 0.4 × 0.2 mm, compressed, oblong; *carpels* obclavate, 1.5 × 0.7 mm, glabrous; *style-head* radially five angled, obnapiform, apex 0.3 × 0.1 mm diameter, cylindrical. *Fruit* (immature) a solitary follicle, 4.3 × 0.3 cm diameter, falcate, glabrous, parallel to the pedicel, calyx persistent, pedicel 4.2 × 0.4 mm.

Specimens examined. INDONESIA. Maluku: Babar, comm. A. B. Meyer viii 1883, *Riedel* s.n. (K); Tenimbar group, Maru, comm. A. B. Meyer viii 1883, *Riedel* s.n. (K); Timor Laut, comm. A. B. Meyer vi 1884, *Riedel* s.n. (K).

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