Flora of Singapore precursors, 9: The identities of two unplaced taxa based on types from Singapore

I.M. Turner^{1, 2}, M. Rodda², K.M. Wong² & D.J. Middleton²

¹Singapore Botanical Liaison Officer, Royal Botanic Gardens Kew, Richmond, Surrey TW9 3AE, U.K. i.turner@kew.org ²Singapore Botanic Gardens, National Parks Board, 1 Cluny Road, 259569, Singapore.

ABSTRACT. Work on the Gentianales for the Flora of Singapore has clarified the identities of two names based on types collected in Singapore that have long been considered of uncertain application. *Dischidia wallichii* Wight is shown to be a synonym of *Micrechites serpyllifolius* (Blume) Kosterm. (Apocynaceae) and *Saprosma ridleyi* King & Gamble is a synonym of *Psychotria maingayi* Hook.f. (Rubiaceae). A lectotype is designated for *Dischidia wallichii*.

Keywords. Apocynaceae, *Dischidia wallichii, Micrechites serpyllifolius, Psychotria maingayi,* Rubiaceae, *Saprosma ridleyi, synonymy*

Introduction

The Gentianales have recently been the focus of intensive research in preparation for the accounts of the included families for the Flora of Singapore (Rodda & Ang, 2012; Rodda et al., 2015, 2016; Middleton et al., 2018; Rodda & Lai, 2018; Seah & Wong, 2018; Turner, 2018; Turner & Kumar, 2018; Wong & Mahyuni, 2018; Wong et al, in press; Wong & Lua, 2018). This involved a closer look at two taxa described from specimens collected in Singapore that have long eluded satisfactory conclusions as to their identities, *Dischidia wallichii* Wight (Apocynaceae) and *Saprosma ridleyi* King & Gamble (Rubiaceae). Through a collaboration among the authors of this paper, who have wide expertise across these families, we can now place these two names in synonymy of other taxa. All type material has been seen by the authors unless otherwise indicated.

1. *Micrechites serpyllifolius* (Blume) Kosterm., Reinwardtia 5: 246 (1960). – *Ficus serpyllifolia* Blume, Bijdr. Fl. Ned. Ind.: 443 (1825), as '*serpillifolia*'. – TYPE: Java, *C.L. Blume s.n.* (L [L0004534], first step designated by Forster, Austral. Syst. Bot. 5: 539 (1992), second step designated by Middleton, Blumea 39: 95 (1994)); possible isolectotypes BO, L, P).

Dischidia wallichii Wight, Contr. Bot. India 43 (1834), **syn. nov**. – TYPE: Singapore, 1822, *N. Wallich s.n.* [EIC 8183, Ascl. 64] (lectotype K-W [K001129170], designated here; isolectotypes E (ex herb. Arnott) [E00179595], K (ex herb. R. Wight Prop.) [K000196298]).

Dischidia wallichii was published by Robert Wight (1834) based on a gathering made by Nathaniel Wallich in Singapore in 1822. The specimen from Wight's personal herbarium, now held in the Kew collections, was recently found in the unnamed material of Rubiaceae following a determination by Tanya Livshultz (then at A) who had excluded it from Dischidia. The specimen is clearly of a plant with long creeping stems and small, rounded, opposite leaves, but lacks flowers or fruits. This fits the protologue description where it is stated that flowers are unknown. It is similar to some species of *Psychotria* L. from Singapore when collected as juvenile material, notably Psychotria ovoidea Wall. ex Hook.f., but the match was not satisfactory. A note by Henry Ridley on the specimen in the Wallich Herbarium (K-W) suggested Ficus but *Ficus* species only very rarely have opposite leaves. Instead, it is a close match to *Ficus serpyllifolius* Blume which is the basionym of *Micrechites serpyllifolius* (Blume) Kosterm., a species in the Apocynaceae that has been recorded from Singapore (Middleton, 1994). Fortunately, as Blume's name is older than Wight's there is no need for a change of name. Wight (1834) also cited, with doubt, Rumphius' Herbarium Amboinense 5: t. 176, f. 2 under Dischidia wallichii. This illustration is the type of Dischidia rumphii Miq. and is certainly not Micrechites serpyllifolius which is not known from the Moluccas.

2. *Psychotria maingayi* Hook.f., Fl. Brit. India 3: 166 (1880). – TYPE: Singapore, September 1867, *A.C. Maingay 2689* (lectotype K [K000777158], designated by Turner & Kumar, Phytotaxa 361: 189 (2018)).

Saprosma ridleyi King & Gamble, J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist. 73: 100 (1904), **syn. nov**. – TYPE: Singapore, Ang Mo Kio, 1894, *H.N. Ridley 6474* (holotype CAL [CAL0000016584]; probable isotype SING [*H.N. Ridley 6473*, SING0012145]).

King & Gamble (1904) described *Saprosma ridleyi* from only a single specimen sent to the Royal Botanic Gardens in Calcutta (*Ridley 6474*), originally collected by Henry Ridley in Singapore. In his *Flora of the Malay Peninsula*, Ridley (1923) included a description of the species but noted: 'I do not know this plant. The number quoted for my collection for this by King belongs to a *Diplospora*.' Indeed, *Ridley 6474* from the Singapore Herbarium [SING0030046], is a specimen of *Diplospora malaccensis* Hook.f. collected by Ridley in 1894 from 'Roadside close to Reservoir'. However, this specimen does not fit the description given by King and Gamble. A photograph of the holotype in the Central National Herbarium (CAL) in India (Figure 1) shows a specimen with an original label written out by Ridley as number 6474 collected in Ang Mo Kio in 1894. The specimen, with terminal rather than axillary inflorescences,



Fig. 1. Holotype of *Saprosma ridleyi* King & Gamble, published here by kind permission of the Director, Botanical Survey of India.

is not *Diplospora malaccensis*, but *Psychotria maingayi* Hook.f. The relatively large calyx lobes readily distinguish it from other climbing species of *Psychotria* found in Singapore. There is a specimen of *Psychotria maingayi* in the Singapore Herbarium that was collected by Ridley in the Ang Mo Kio woods in 1894 and is numbered *6473* [SING0012145]. It seems likely, therefore, that Ridley mixed these collection numbers when sorting material and the *Ridley 6473* sheet in SING is probably a duplicate of the *Ridley 6474* sheet in CAL.

Fortunately, the recognition of *Saprosma ridleyi* as being correctly placed in *Psychotria* has no nomenclatural repercussions as *Psychotria maingayi* is an older name.

ACKNOWLEDGEMENTS. We are very grateful to Dr V.S. Kumar and Dr P.V. Prasanna (CAL) for facilitating access to the photograph of the *Saprosma ridleyi* type, to Dr E. Haston (E) and Dr T. Livshultz (PH) for locating and sending images of the E duplicate of the *Dischidia wallichii* type, and to Dr Jana Leong-Škorničková (SING) for her editorial work on this paper.

References

- King, G. & Gamble. J.S. (1904). Materials for a Flora of the Malay Peninsula. J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist. 73: 47–135.
- Middleton, D.J. (1994). A taxonomic revision of *Ichnocarpus* (Apocynaceae). *Blumea* 39: 73–94.
- Middleton, D.J., Lua, H.K. & Leong, P.K.F. (2018). *Micrechites lancifolia* (Apocynaceae: Apocynoideae), a new record for Singapore. *Gard. Bull. Singapore* 70: 13–17.
- Ridley, H.N. (1923). The Flora of the Malay Peninsula, vol. 2. Ashford: L.Reeve & Co.
- Rodda M. & Ang W.F. (2012). Hoya caudata Hook.f. (Apocynaceae), a new record for Singapore, and keys to the Hoya species of Singapore. Nature in Singapore 5: 123–128.
- Rodda, M. & Lai, J. (2018). The rediscovery of *Hoya obtusifolia* (Apocynaceae, Asclepiadoideae) in Singapore. *Nature in Singapore* 11: 45–51.
- Rodda, M., Lee, D. & Mishak, S. (2015). *Dischidia acutifolia* (Apocynaceae, Asclepiadoideae) a new record for the Singapore flora. *Gard. Bull. Singapore* 67: 29–33.
- Rodda, M., Simonsson Juhonewe, N. & Middleton, D.J. (2016). The taxonomic status of the presumed extinct Singaporean *Hoya wallichii* (Apocynaceae: Asclepiadoideae). *Gard. Bull. Singapore* 68: 175–187.
- Seah, W.W. & Wong, K.M. (2018). Flora of Singapore precursors, 1. *Gynochthodes praetermissa* (Rubiaceae: Morindeae), a new West Malesian species, with notes on related taxa. *Gard. Bull. Singapore* 70(2): 267–273.
- Turner, I. (2018). Flora of Singapore precursors, 5: Some resolution of a long-standing problem in *Psychotria* (Rubiaceae) of Singapore. *Gard. Bull. Singapore* 70(2): 283–288.
- Turner, I.M. & Kumar, V.S. (2018). Flora of Singapore precursors, 4. A summary of scandent Psychotria (Rubiaceae) in Singapore and Peninsular Malaysia. Phytotaxa 361: 183–197.
- Wight, R. (1834). Contributions to the botany of India. London: Parbury, Allen, & Co.
- Wong, K.M. & Lua, H.K. (2018). Flora of Singapore precursors, 3. A new species of *Canthium* (Rubiaceae: Vanguerieae) previously confused with *C. horridum. Gard. Bull. Singapore* 70(2): 275–282.

- Wong, K.M. & Mahyuni, R. (2018). Flora of Singapore precursors, 2. A new species and two new combinations in *Psydrax* (Rubiaceae: Vanguerieae) for West Malesia. *Reinwardtia* 17(1): 77–84.
- Wong, K.M., Mahyuni, R., Ng, X.Y. & Neo, L. (in press). Flora of Singapore precursors, 8. Systematy of the new Southeast Asian genera *Canthiumera* and *Dibridsonia* (Rubiaceae: Vanguerieae), with notes on plant architecture and reproductive ecology. *Reinwardtia*.