Flora of Singapore precursors, 12. Notes on various Rubiaceae genera

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ABSTRACT: In preparation for the account of the Rubiaceae for the Flora of Singapore various notes are presented concerning the genera Discospermum Dalzell, Lasianthus Jack, Mussaenda L. and Psychotria L. Nomenclatural comments on the generic synonyms Landia Comm. ex Juss. (= Mussaenda) and Uragoga Baill. (= Psychotria) are made. Lectotypes are designated at the first or second step for 42 names, and one neotype is designated. Recent collections of Lasianthus griffithii Wight and Psychotria morindiflora Wall. ex Hook.f. from Singapore are highlighted.

Keywords. Discospermum, Landia, Lasianthus, lectotype, Mussaenda, Psychotria, Uragoga

Introduction

In revising various genera of the Rubiaceae for the Flora of Singapore a number of points of taxonomic and nomenclatural note required attention. These are dealt with here.

Diplospora DC. versus Discospermum Dalzell

Hooker (1880) reduced the genus Discopermum to a section of Diplospora. This synonymisation of the genera was generally accepted until Ali & Robbrecht (1991) resurrected Discospermum. Arriola et al. (2018) have recently confirmed, using molecular techniques, that Diplospora and Discospermum do represent separate lineages in the coffee tribe. The only species of the Coffeeae native to Singapore has been referred to as Diplospora malaccensis Hook.f. in nearly all publications on the flora. Ali & Robbrecht (1991) excluded this species from the Coffeeae, arguing that the orientation of the embryo radicle and details of the seed coat anatomy indicated membership of the tribe Hypobathreae. However, Diplospora malaccensis shows many similarities with Discospermum, particularly Discospermum beccarianum (King & Gamble) S.J.Ali & Robbr. The latter was demonstrated to be a close ally of the type species of Discospermum, D. sphaerocarpum Dalzell, by Arriola et al. (2018).
I conclude that for the forthcoming Flora of Singapore *Diplospora malaccensis* is best placed in the genus *Discospermum*. There is already an appropriate combination available. It is necessary to select a lectotype, which is done below.


**Lasianthus**

The revision of *Lasianthus* in Malesia by Zhu et al. (2012) has largely been followed in preparing the account of the genus for the Flora of Singapore. As this leads to changes in the names of several species found in Singapore, it is useful to provide a listing here with synonymy and typification. A number of new lectotypes are designated here and in a few cases notes given on taxonomic decisions and current status in Singapore.


1a. *Lasianthus attenuatus* var. *attenuatus*  


April 1874, *H.F. Hance 18438* [leg. C. Ford], (lectotype K [K000763833], designated by Zhu, Acta Phytotax. Sin. 32: 57 (1994); isoolectotypes BM [BM000945610], K [K000763831, K000763834]).


*Lasianthus densifolius* Miq. var. *latifolius* King, J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist. 73: 122 (1904), as ‘*latifolia*’. – TYPE: [Peninsular Malaysia], Johore, Panchur, Johore River, 14 October 1900, *H.N. Ridley 10948* (lectotype SING [SING0059263], designated here; isoolectotype K [K001129550]).


In describing Nonatelia hispida, Wallich referred to specimens he had received from Silhet [Sylhet] in 1815. Given the date, these are likely to have come from M.R. Smith. Zhu effectively lectotypified the name to one of the specimens distributed by Wallich under the number 8442. One of these in the East India Company Herbarium (K-W) has an original label stating that the specimen was collected by F. De Silva in Sylhet in August 1820. It seems likely that Wallich would have seen the De Silva gatherings before the publication of the protologue in 1824, so Zhu effectively typified to an uncited specimen. If the 1815 material were to come to light, there would be grounds for making a cited specimen the lectotype (ICN (Turland et al., 2018) Art. 9.12). However, I have not traced any such material, so maintain Zhu’s typification here.


This has been long known as Lasianthus densifolius. Zhu made this name a synonym of Lasianthus attenuatus by lectotypification and redescribed this taxon as L. attenuatus var. minor. There are many points of similarity between these two taxa and they seem to overlap in form occasionally though the difference in size of the calyx lobes appears to be consistent. As I have not had the chance to examine flowering material, I maintain Zhu’s system of infraspecific taxa here.


This species has generally been referred to as *Lasianthus tomentosus* in works on the flora of Singapore.


*Lasianthus constrictus* var. *latifolius* Craib, Fl. Siam. 2: 209 (1934). – TYPE: Thailand, Pattani, Kao Kala Kiri, 1 April 1928, *A.F. G. Kerr 14940* (lectotype K [K000777034], designated here; isolecotypes BK [BK257385], BM [BM000945603], E [E00327855], K [K000777033]).


18809 (lectotype K [K00777030, K000777029 – i.e. a single specimen over two sheets], designated here; isolectotypes BK [BK257396], BM [BM001191350]).


Wong (1989) mistakenly reduced *Lasianthus venulosus* Ridl. to a synonym of *L. glaber* Ridl. This has led to an erroneous record of *L. glaber* in Singapore. *Lasianthus glaber* has much bigger stipules than *L. ellipticus* and Zhu et al. (2012) put it in section Stipularae.


Tan et al. (2008) assessed this species as presumed nationally extinct in Singapore. However, there have been a couple of recent collections of *Lasianthus griffithii* from Nee Soon (*W.F. Ang et al.* s.n., 25 Mar 2011, SINU; *L.M.J. Chen et al.* SING2017-671, 28 Nov 2017, SING). A recent visit confirmed that at least one individual is still present (Fig. 1).

The Singapore specimens of *Lasianthus griffithii* are notable for being almost entirely glabrous. A collection made by Ridley at Mt Austin in Johore is similar. Otherwise the specimens conform to *Lasianthus griffithii* and I therefore see no reason to make any formal taxonomic distinction for the glabrous plants.

Fig. 1. *Lasianthus griffithii* Wight growing at Nee Soon. **A.** Habit. **B.** Large stipule. **C.** Inflorescence. **D.** Infructescence. All from SING 2017-671. (Photos: L.M.J. Chen).


Lasianthus cyanocarpus var. novaguineensis Valeton, Nova Guinea 8: 498 (1911). – TYPE: SW New Guinea, Noord-Fluss, umgegend des Geluks-Hügels, Versteeg 1406 (lectotype L [L0310256], designated here; isolectotype U [U0227184]).


Lasianthus cyanocarpus var. bracteatus Pit. in Lecomte, Fl. Indo-Chine 3: 382 (1924). – TYPE: Vietnam, Cochinchine, Gi Tinh, 1862-1866, Thorel 1464 (lectotype P [P03980340], designated here; isolectotype P [P03980342]).


Merrill (1952) referred to two sheets in BM as the type of Triosteum hirsutum Roxb. but there is no indication on them that they are to be treated as a single specimen, though they do appear to be true duplicates. The specimen with the annotation of Roxburgh’s name in Roxburgh’s hand is here chosen as lectotype by a second-step designation.
The name *Lasianthus cyanocarpus* has frequently been misapplied to *L. hirsutus*.


Lasianthus maingayi var. hirtus Ridl., Fl. Malay Penins. 2: 160 (1923), as ‘hirta’. – TYPE: [Peninsular Malaysia], Negri Sembilan, Bukit Tangga, December 1920, H.N. Ridley s.n. (lectotype K [K000763939], designated here; isolectotype SING [SING0059761]).


Zhu (Zhu et al., 2012) reduced Lasianthus scabridus to a variety of L. griffithii. The affinity of the two taxa is clear, but Lasianthus scabridus is very consistent morphologically and quite readily distinguished from L. griffithii by a number of characters. Lasianthus scabridus has leaves scabrid above, lateral nerves to 12 pairs, petiole generally extending beyond the inflorescence with scattered long hairs visible to the naked eye whereas L. griffithii has leaves smooth above, lateral nerves 14 or more pairs, petiole largely hidden by the inflorescence, without long hairs visible to the naked eye. I therefore prefer to maintain recognition at species rank for this taxon.


Lasianthus stipularis var. novaguineensis Valeton, Nova Guinea 8: 498 (1911). – TYPE: New Guinea, [Indonesia], fluv. Noordrivier, G.M. Versteeg 1228 (lectotype L [L0305625, L0305626, L0305627 – i.e. a single specimen over three sheets], designated here; isolectotypes K [K000777085, K000777084], U [U0247139]).


**Mussaenda**

The generic name *Landia* was published by Adrien de Jussieu based on material collected on Mauritius by Commerson. Poiret later published two species names, *Mussaenda landia* Poir. and *M. arcuata* Poir., from the Commerson collections. The generic name *Landia* Comm. ex Juss. seems not to have been typified although the choice of type is between *Mussaenda landia* and *M. arcuata* (viz. ICN Art. 10.2). The former is the type of *Bremeria* Razafim. & Alejandro, a genus from the Indian Ocean (Madagascar and Mascarenes) that was recently separated from *Mussaenda* (Alejandro et al., 2005). The latter belongs in *Mussaenda* sensu stricto (Alejandro et al., 2005). Alejandro et al. (2005) cited *Landia* as a synonym of *Mussaenda* s.s. This makes the selection of *Mussaenda arcuata* as the neotype for *Landia* a nomenclaturally stabilising step, and is done below, though as *Landia* is a later homonym, this is of purely academic significance. De Candolle described *Mussaenda* section *Landia* including reference to Commerson’s herbarium name, but not Jussieu’s publication. He included both *Mussaenda landia* and *M. arcuata* in the section, as well as three other species. It seems convenient to select *Mussaenda arcuata* as the lectotype of de Candolle’s section also so that the generic and sectional names are homotypic. It also allows the possibility of using the sectional name in an infrageneric classification of *Mussaenda* s.s.


Singapore only has two native species of *Mussaenda*. The names and synonymies are given below as some lectotypifications are required.


Original material of Acranthera griffithii would be expected in K, but I have failed to locate any. I therefore select the good-quality sheet in L as lectotype here. The locality of East Himalaya indicated on the Kew distribution ticket seems likely to be an error.
Psychotria

The generic name *Uragoga* Baill. is widely cited as a synonym of *Psychotria* L., with its place of publication generally being given as page 323 in volume 12 of Henri Baillon’s journal *Adansonia*. This is in a paper entitled ‘Memoire sur les Uragoga’. Baillon published *Adansonia* in parts of 32 pages with 12 parts completing a volume. The early volumes had parts published in consecutive months, but the output became more erratic in later volumes. For volume 12, publication dates are printed on the first page of each 32-page part. The memoire on *Uragoga* appeared in part 11 published in August 1879. However, while this paper provided an overview of Baillon’s generic concept of *Uragoga*, he had already described some 41 species, very largely from New Caledonia, in the genus *Uragoga* in preceding parts of *Adansonia* volume 12. This is nomenclaturally problematic because if the generic name *Uragoga* was not validated until part 11, the binonials in *Uragoga* published before the validation of the generic name would be invalid. It would then be necessary to search for later validations of these species names which could lead to changes in author citations or even to names in current use.

However, there does seem to be a possibility of avoiding this problem. In the discussionary notes placed after the description of the first species of *Uragoga* published by Baillon (p. 223), the following Latin sentence appears: Stirps inde, uti americanae asiaticaeque nonnullae, arctius *Psychotria*um cum *Cephaelis* (i.e. *Uragoga* L.) connectit.

This can be translated as: Thence this plant [i.e. *Uragoga pancheri* Baill.], just like certain American and Asiatic ones, joins *Psychotria* more closely with *Cephaelis* (i.e. *Uragoga* L.).

The interpretation that Baillon was here proposing *Uragoga* (a name used but not validated by Linnaeus) as the name of an inclusive genus is supported by the Memoire sur les Uragoga where he recognised 42 sections in the genus, many of which were based on established generic names including *Cephaelis* and *Psychotria*. It seems likely that his view on the taxonomy of this group of the Rubiaceae was already confirmed in November 1878 when *Uragoga pancheri* was published. *Uragoga* Baill. is therefore validated on p. 223 by citation of *Psychotria* L. and *Cephaelis* Sw. as synonyms, but the name *Uragoga* is illegitimate, as the synonyms are legitimate names, and to be automatically typified by the type of the oldest legitimate synonym, which is *Psychotria*.

Establishing that *Uragoga* Baill. is an illegitimate and superfluous renaming of *Psychotria* dating from 1878 means that the 41 species names and various sectional names published by Baillon in *Uragoga* before August 1879 are legitimate (ICN Art. 55) and the currently used names for these taxa do not need to change in any way.


A few notes on various *Psychotria* species native to Singapore are included here.


Turner & Kumar (2018) confirmed that this species should be considered native to Singapore but they cited no specimens collected after 1908. I recently found two more recent collections from Nee Soon in the herbarium of the Lee Kong Chian Natural History Museum (*H.T.W. Tan 2/7.5.82-1*, 7 May 1982, SINU; *P.P.Y. Lim et al.* NRS 770; 6 May 1992, SINU). This surely raises the possibility that this climbing *Psychotria* species is still extant in Singapore.

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**References**


