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Flora of Singapore precursors, 19: Nomenclatural notes on *Artabotrys* (Annonaceae) and *Magnolia* (Magnoliaceae)

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Key words

Annonaceae
Artabotrys
lectotypification
Magnoliaceae
nomenclature
Singapore

Abstract During the preparation of the accounts of *Artabotrys* (Annonaceae) and *Magnolia* (Magnoliaceae) for the Flora of Singapore, the types of all relevant names were evaluated. New lectotypes are designated for *A. suaveolens* and *M. maingayi* and a second-step lectotypification is performed for *M. elegans*. The citation of a lectotype locality is corrected for *A. costatus* and the citation of an isolectotype is improved for *A. maingayi*. We also clarify the previous use of the term 'type' to designate specimens that are in fact lectotypes for several names in *Magnolia*.

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INTRODUCTION

As a first step towards a revision of *Artabotrys* R.Br. (Annonaceae) and *Magnolia* L. (Magnoliaceae) for the Flora of Singapore, the types of the names of all taxa occurring in Singapore were assessed. *Artabotrys* is represented in Singapore by six species, including three listed in this paper, as well as another three that have no typification or nomenclatural issues and are thus not discussed here. These latter species include *A. crassifolius* Hook.f. & Thomson, *A. scortechinii* King and *A. wrayi* King. *Magnolia* is represented in Singapore by four species, all of which are discussed here. A number of names have already been fully or partially typified in previous accounts (*Artabotrys*: Sinclair 1955, Turner 2009, 2016, 2018; *Magnolia*: Dandy 1928, Nootboom 1987, 2012). Turner (2018) and Nootboom (2012) represent the most recent publications that include typification statements for all species of *Artabotrys* and *Magnolia* in Singapore, respectively. However, several typifications and other nomenclatural aspects are in need of corrections. Many of the typifications in Nootboom (1987) use the term 'type' to designate specimens that are in fact lectotypes, although the phrase 'designated here' is absent. These are nevertheless considered effective lectotypifications as the International Code of Nomenclature for algae, fungi, and plants (Turland et al. 2018; hereafter the ICN) states that a misused term denoting types may be corrected (Art. 9.10) and the typification statement does not require the phrase 'designated here' prior to 1 January 2001 (Art. 7.11). In contrast, the typification statements in Nootboom (2012), which likewise lack the phrase 'designated here', cannot be accepted as effective typifications. The present work aims to revise the existing typifications of relevant names in both taxa (including their synonyms), make the necessary corrections,

and provide formal typifications for names not yet typified. This serves as a precursor to the floristic account, which will include detailed descriptions and illustrations.

MATERIAL AND METHODS

The protologues of all relevant names were analysed for their type information. We examined herbarium specimens in FI-B and SING, as well as digital images of specimens from JSTOR Global Plants (<https://plants.jstor.org/>) and other online virtual herbaria viz. BM (<https://data.nhm.ac.uk/dataset/collection-specimens>), K (<https://apps.kew.org/herbcat/navigator.do>) and L (<https://biportal.naturalis.nl>). We have also requested specific digital images of types from BO and CAL because their digital images are not yet available online. The collections assessed in this work are housed in the following herbaria: BM, BO, CAL, FI-B, K, L, MEL, SING, U, and UC (acronyms according to Thiers 2020). An exhaustive bibliographic search was performed to determine if the names have already been completely or partially typified by subsequent authors. Relevant publications for *Artabotrys* (Sinclair 1955, Turner 2009, 2011, 2012, 2016, 2018) and *Magnoliaceae* (Dandy 1928, Keng 1978, Nootboom 1987, 1988, 2012) were reviewed. We ensured that the specimens designated here as lectotypes agree with the original descriptions and are the best-preserved specimens of each type collection.

TIPIFICATION AND NOMENCLATURAL NOTES

Annonaceae, *Artabotrys*

Artabotrys costatus King — Fig. 1

Artabotrys costatus King (1892) 37. — Lectotype (designated by Turner 2009): *King's Collector (Kunstler)* 4291 (lecto K000381022; isolecto BM001014844, BO 1337669, CAL0000004275, CAL0000004307, L0185488, SING0096249, SING0108007, SING0108008), [Peninsular Malaysia,] Perak, Kinta [District], Gopeng, June 1883.

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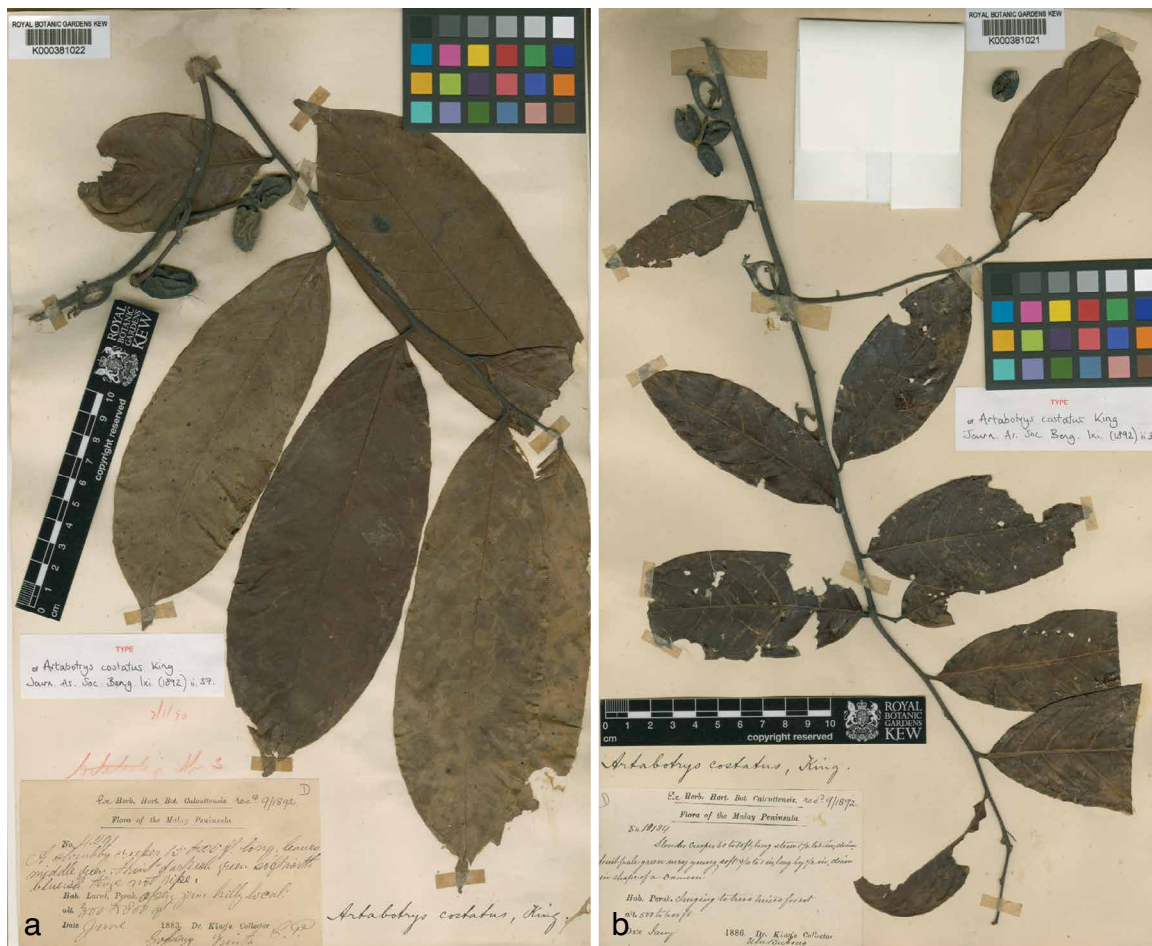


Fig. 1 a. Lectotype of *Artabotrys costatus* King, King's Collector (Kunstler) 4291 (K000381022); b. remaining syntype of *Artabotrys costatus* King, King's Collector (Kunstler) 10184 (K000381021).

Note — Although King cited two collections in the protologue (King's Collector 4291 and King's Collector 10184), he mentioned only a single locality 'Perak; on Ulu Bubong'. Turner (2009) carried out an effective lectotypification and cited the lectotype locality as 'Ulu Bubong'. However, it is clearly written on the labels that the lectotype selected by Turner, King's Collector 4291 (Fig. 1a), was collected in 'Gopeng, Kinta' whereas the remaining syntype, King's Collector 10184 (Fig. 1b), was collected in Ulu Bubong. The lectotype locality stated as 'Ulu Bubong' in Turner (2009, 2011, 2012, 2018) is erroneous and here corrected to 'Kinta [District], Gopeng'.

Artabotrys maingayi Hook.f. & Thomson — Fig. 2

Artabotrys maingayi Hook.f. & Thomson (1872) 55. — Lectotype (first step designation by Sinclair 1955, second step designation by Turner 2018): *Maingay 2617* (Kew distribution no. 34) (lecto K000381024, K000381029, a single specimen over two sheets; probable islecto L0185527, explicitly including only the right twig and monocarp in packet), [Peninsular Malaysia,] Malacca, 1867–1868. See notes 1–3.

Artabotrys havilandii Ridl. (1912) 382. — Lectotype (designated by Turner 2009): *Haviland 1629* (lecto K000691275; islecto SAR n.v.), [Malaysia,] Sarawak, near Kuching, 9 Sept. 1892. See note 4.

Notes — 1. Hooker & Thomson (1872) merely cited 'Malacca, *Maingay*' in the protologue of *A. maingayi*. Sinclair (1955) cited '*Maingay 34* (C., Kew)' as type material, but the number '34' actually refers to the Kew distribution number rather than Maingay's collection number. Regardless, Sinclair's type statement constitutes a first-step lectotypification of the name. Turner (2009) cited '*Maingay 2617* [Kew distrib. no. 34]' as the holotype of *A. maingayi*, but it is impossible to ascertain that

this specimen is the only specimen used by the authors. Turner (2011, 2012) likewise regarded '*Maingay 2617*' as the holotype of *A. maingayi*. Eventually, Turner (2018) designated *Maingay 2617* (Kew distribution no. 34) as the second-step lectotype (Fig. 2a, b), explicitly stating that it is a single specimen over two sheets (K000381024, K000381029). Both sheets bear the same collection label and one of the sheets (K000381029) bears the annotation '2617 continued' (Fig. 2b). This is thus consistent with Art. 8.3 of the ICN (Turland et al. 2018), which states that "a specimen may be mounted as more than one preparation, as long as the parts are clearly labelled as being part of that same specimen, or bear a single, original label in common".

2. There is some confusion between the type specimens of *A. maingayi* and *A. pleurocarpus* Maingay ex Hook.f. & Thomson, the latter differing from *A. maingayi* by its cuneate (vs decurrent) leaf base, larger number of flowers per inflorescence, sparsely (vs densely) hairy petals and long-stipitate (vs short-stipitate) monocarps. *Artabotrys pleurocarpus* occurs in Peninsular Malaysia and Peninsular Thailand but not in Singapore (Chen & Eiadthong 2020). Both sheets of the lectotype of *A. maingayi* were originally identified as '*Artabotrys pleurocarpus*' but subsequently re-labelled as '*A. maingayi* Hf & T'. Turner (2018) cited BM001014846 as the islectotype of *A. maingayi*. This is erroneous, because BM001014846 represents a separate gathering (*Maingay 3261*) and is actually the islectotype of *A. pleurocarpus*. This confusion probably arose as the original material of *A. maingayi* and *A. pleurocarpus* were annotated with the same Kew distribution number (Kew distribution no. 34). Furthermore, BM001014846 bears pencil markings of both names (*A. maingayi* and *A. pleurocarpus*), with a type label wrongly indicating it as the isotype of *A. maingayi*. However, the



Fig. 2 a. First sheet of the lectotype of *Artabotrys maingayi* Hook.f. & Thomson, *Maingay* 2617 (Kew distribution no. 34) (K000381024); b. second sheet of the lectotype of *Artabotrys maingayi* Hook.f. & Thomson, *Maingay* 2617 (Kew distribution no. 34) (K000381029); c. probable isolectotype of *Artabotrys maingayi* Hook.f. & Thomson, *Maingay* 2617 (Kew distribution no. 34) (L0185527), explicitly including only the parts outlined in red; d. Lectotype of *Artabotrys havilandii* Ridl. (= *Artabotrys maingayi* Hook.f. & Thomson), *Haviland* 1629 (K000691275).

morphology of the specimen and the annotation '3261' clearly indicate that it is actually the isolectotype of *A. pleurocarpus*.

3. A mixed gathering from L (Fig. 2c) may contain an isolectotype of *A. maingayi*. This specimen bears a label that indicates Maingay's name, the Kew distribution no. 34 and the names of both species (*A. maingayi* and *A. pleurocarpus*). It also has an annotation slip (not glued to the sheet) that states '2617', 'Malacca' and '1867', corresponding to the collection number, type locality and year of collection, respectively. The specimen comprises three twigs, two detached leaves and a monocarp enclosed in a packet: the twig bearing a single flower on the right and the monocarp in the packet (outlined in red boxes in Fig. 2c) constitute a probable isolectotype of *A. maingayi*, the twig bearing many flowers on the left and the two detached leaves (with cuneate leaf base) are clearly *A. pleurocarpus*, and the twig at the bottom cannot be identified as it lacks leaves and flowers.

4. Multiple gatherings of Haviland and Beccari were cited in the protologue of *A. havilandii*. Some of them (e.g., *Beccari* 381, *Beccari* 713, *Haviland* 1629) correspond to Ridley's description but two of them (*Beccari* 554 and *Haviland* 3340) represent another species, *Artabotrys roseus* Boerl. Turner (2009) selected *Haviland* 1629 from K (Fig. 2d) as the lectotype of *A. havilandii* and reduced *A. havilandii* to a synonym of *A. maingayi* as the types of the two names are conspecific and *A. maingayi* represents the earliest legitimate name. It should be noted that *Haviland & Hose* 1629A from K (K000691273) and *Haviland & Hose* 1629E from L (L0180468) are not types of *A. havilandii*. The former was collected on 13 November 1894 and the latter was collected on 26 October 1894, both of which are later than the date of collection of *Haviland* 1629 (9 September 1892).

Artabotrys suaveolens (Blume) Blume — Fig. 3

Artabotrys suaveolens (Blume) Blume (1830) 62, t. 30, 31D. — *Unona suaveolens* Blume (1825) 17. — Lectotype (designated here): *Blume* 885 (lecto L0180644), [Indonesia,] Java, Gunung Seribu.

Note — The protologue of *Unona suaveolens* does not mention types but states "*in sylvis montium Salak, Seribu etc.*" (i.e., in the forest of Mount Salak, Mount Seribu, etc.). Turner (2009, 2011, 2012, 2018) merely repeated the localities in the type statement without citing any specimen. Turner (2009, 2018) also added that the type specimen has not been seen or traced. At L, where Blume's types are largely kept, there is a specimen bearing Blume's annotations: '*Unona suaveolens* Bl.', 'G. Seribu' and '885'. This specimen, *Blume* 885 (Fig. 3), has several intact flowers and matches Blume's description; therefore, it is here selected as lectotype. It cannot be regarded as a holotype, because Blume could have used additional specimens collected from Mount Salak and Gunung Seribu as well as duplicates of *Blume* 885 for his description, although our attempts to trace these specimens were in vain. For a full list of synonyms applicable outside of Singapore and Peninsular Malaysia, see Turner (2018).

Magnoliaceae, *Magnolia*

Magnolia elegans (Blume) H.Keng — Fig. 4

Magnolia elegans (Blume) H.Keng (1978) 129, pl. 1. — *Aromadendron elegans* Blume (1825) 10. — *Talauma elegans* (Blume) Miq. (1868) 70. — Lectotype (first step designation by Nootboom 1987, second step designated here): *Blume* 215 (lecto L0038349; isolecto BO n.v., L0038348), [Indonesia,] Java. See note 1.

Aromadendron glaucum Korth. (1850) 98. — *Talauma glauca* (Korth.) Miq. (1868) 70. — *Magnolia glauca* (Korth.) Pierre (1880) sub t. 2, nom. illeg., non (L.) L. (1759). — *Talauma elegans* (Blume) Miq. var. *glauca* (Korth.) P.Parm. (1896) 277. — *Aromadendron elegans* Blume var. *glauca* (Korth.)

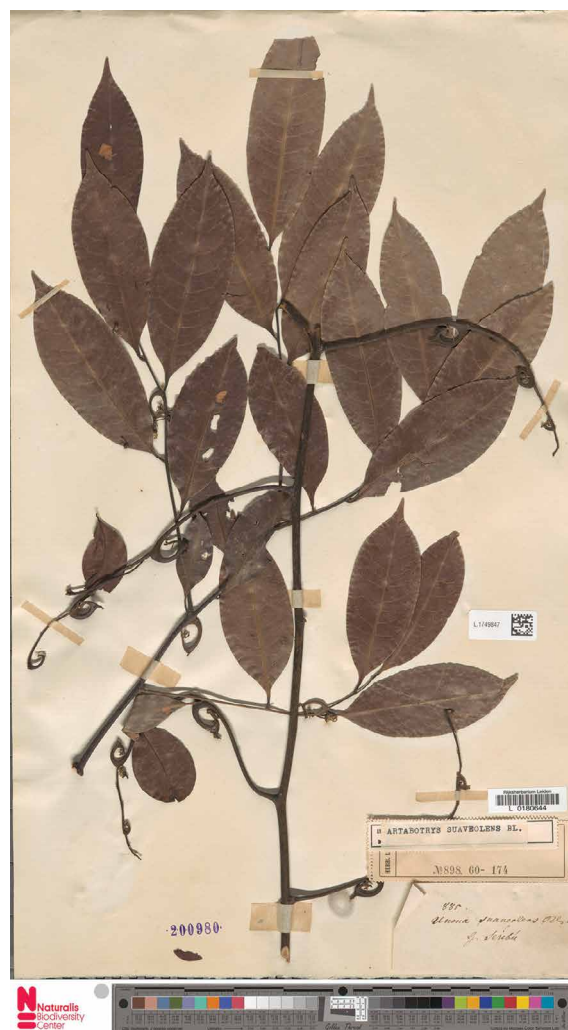


Fig. 3 Lectotype of *Unona suaveolens* Blume (= *Artabotrys suaveolens* (Blume) Blume), *Blume* 885 (L0180644).

Dandy (1928) 183. — Lectotype (first step designation by Dandy 1928, second step by Nootboom 1987): *Korthals* s.n. (lecto L0038347; isolecto BM000574750), [Indonesia,] Sumatra, Kassan. See note 2.

Manglietia oortii Korth. (1850) 97. — Lectotype (designated by Nootboom 1987): *Korthals* s.n. (lecto L0038346), [Indonesia,] Sumatra. See note 3.

Notes — 1. The protologue of *Aromadendron elegans* does not mention any specimen, but states "*in sylvis circa viam Lebak Provinciae Bantam, necnon in montosis Salak et Gede*" (i.e., in the forest near Lebak Road, Bantam Province, and in the mountain regions of Salak and Gede). All the localities mentioned in the protologue are in West Java, Indonesia. Nootboom (1987) made a first step lectotypification by citing 'Type: *Blume* 215 (L; iso BO), Java'. There are, however, two sheets of *Blume* 215 in L that are not cross-labelled and hence represent duplicates. According to Art. 9.17 of the ICN (Turland et al. 2018), a designation of a lectotype that is later found to refer to more than one specimen of a single gathering must be accepted, but may be further narrowed to a single one of these specimens by a subsequent lectotypification. Therefore, we here designated L0038349 (Fig. 4a) as the second-step lectotype. Nootboom (2012) regarded L0038349 as a holotype; however, the mention of multiple localities in the protologue indicates that multiple specimens were seen by Blume. In addition, Nootboom (2012) cannot be considered to have selected a second-step lectotype as his type statement lacks the phrase 'designated here'.

2. *Korthals* (1850) merely cited a locality (Kassan, Sumatra) without mentioning any specimen in the protologue of *Aromadendron glaucum*. The first effective typification of *Aromaden-*

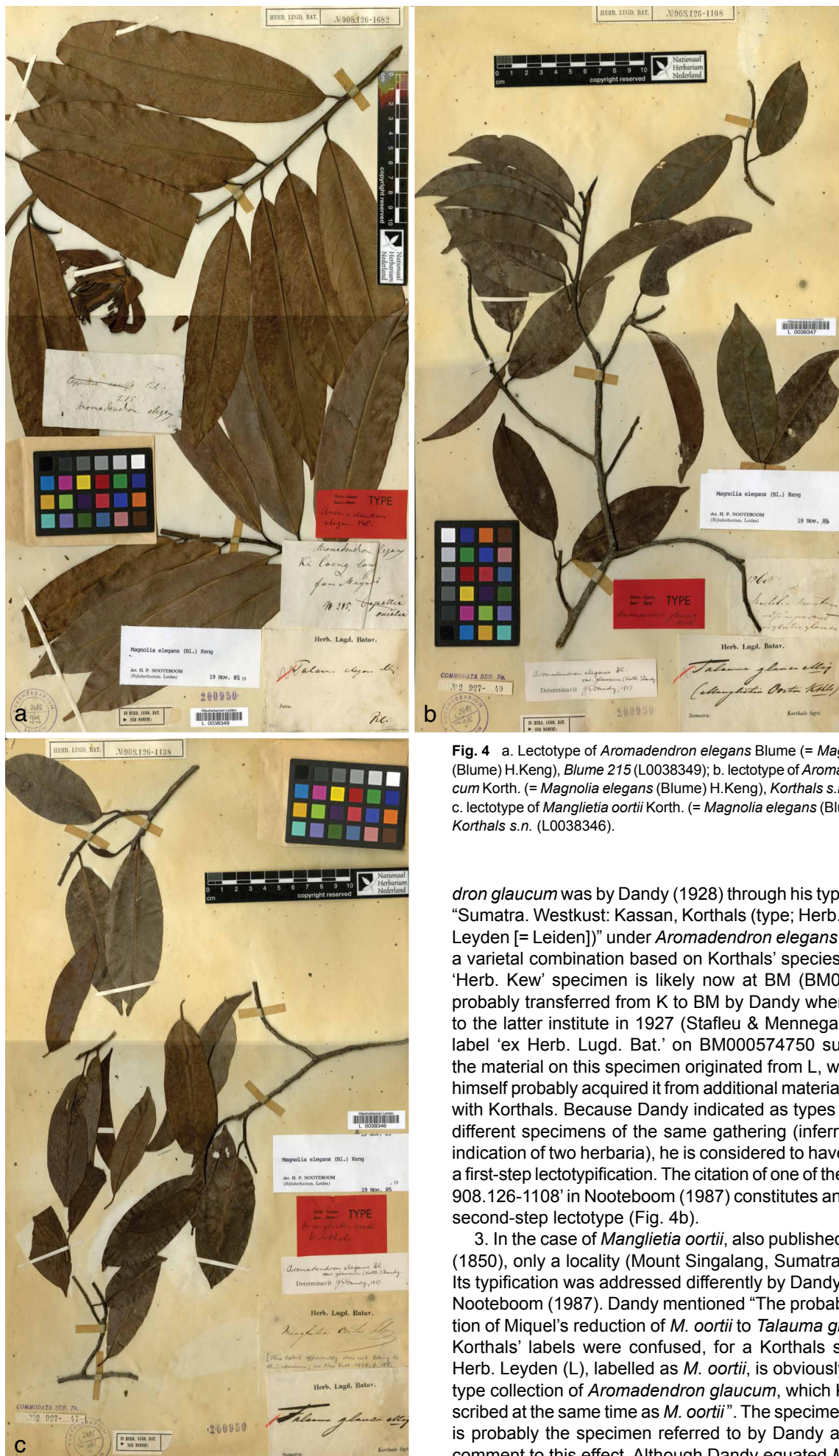
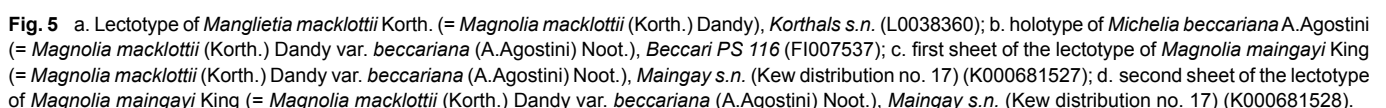


Fig. 4 a. Lectotype of *Aromadendron elegans* Blume (= *Magnolia elegans* (Blume) H.Keng), Blume 215 (L0038349); b. lectotype of *Aromadendron glaucum* Korth. (= *Magnolia elegans* (Blume) H.Keng), Korthals s.n. (L0038347); c. lectotype of *Manglietia oortii* Korth. (= *Magnolia elegans* (Blume) H.Keng), Korthals s.n. (L0038346).

dron glaucum was by Dandy (1928) through his type statement "Sumatra. Westkust: Kassan, Korthals (type; Herb. Kew, Herb. Leyden [= Leiden])" under *Aromadendron elegans* var. *glaucum*, a varietal combination based on Korthals' species name. The 'Herb. Kew' specimen is likely now at BM (BM000574750), probably transferred from K to BM by Dandy when he moved to the latter institute in 1927 (Stafleu & Mennega 1998). The label 'ex Herb. Lugd. Bat.' on BM000574750 suggests that the material on this specimen originated from L, where Dandy himself probably acquired it from additional material associated with Korthals. Because Dandy indicated as types at least two different specimens of the same gathering (inferred from the indication of two herbaria), he is considered to have performed a first-step lectotypification. The citation of one of these 'L, sheet 908.126-1108' in Nootboom (1987) constitutes an acceptable second-step lectotype (Fig. 4b).

3. In the case of *Manglietia oortii*, also published in Korthals (1850), only a locality (Mount Singalang, Sumatra) was cited. Its typification was addressed differently by Dandy (1928) and Nootboom (1987). Dandy mentioned "The probable explanation of Miquel's reduction of *M. oortii* to *Talauma glauca* is that Korthals' labels were confused, for a Korthals specimen in Herb. Leyden (L), labelled as *M. oortii*, is obviously part of the type collection of *Aromadendron glaucum*, which Korthals described at the same time as *M. oortii*". The specimen L0038346 is probably the specimen referred to by Dandy as it bears a comment to this effect. Although Dandy equated *M. oortii* with



M. glauca var. *sumatrana* (Miq.) Dandy, he did not formally typify the former name as he has not seen its type. According to Nootboom, Korthals also wrote the name *M. oortii* on another sheet that was later re-identified as *Manglietia macklottii* Korth. by Korthals himself. This specimen also bears a label with the locality 'Singalang', corresponding to Korthals' protologue of *M. oortii*. However, Nootboom considers this specimen to be the type of *Manglietia macklottii*, which was also collected from Singalang, Sumatra (see discussion below under *Magnolia macklottii*). Nootboom lectotypified *M. oortii* using the specimen L0038346 (Fig. 4c) that Dandy had rejected as being mislabelled, although Nootboom noted "a slight difference between the flowers [of this specimen] and their description by Korthals, which is very obscure anyhow". Since there is no major morphological conflict between Nootboom's lectotype and Korthals' protologue, Nootboom's choice of lectotype has to be followed, according to Art. 9.19 of the ICN (Turland et al. 2018).

Magnolia macklottii (Korth.) Dandy

Magnolia macklottii (Korth.) Dandy (1927) 263. — *Manglietia macklottii* Korth. (1850) 97. — *Aromadendron macklottii* (Korth.) Sima & S.G.Lu (2012) 67. — Lectotype (designated by Nootboom 1987): Korthals s.n. (lecto L0038360; isolecto BO 1291543, U0043856), [Indonesia,] Sumatra, Singalang. See note 1.

var. *beccariana* (A.Agostini) Noot. — Fig. 5

Magnolia macklottii (Korth.) Dandy var. *beccariana* (A.Agostini) Noot. (1987) 348. — *Michelia beccariana* A.Agostini (1926) 184. — *Aromadendron macklottii* (Korth.) Sima & S.G.Lu var. *beccarianum* (A.Agostini) Sima & S.G.Lu (2012) 67. — Type: *Beccari PS 116* (holo FI007537; iso BM000574751, K000681574, L0038359, MEL2115999, MEL2116000), [Indonesia,] Sumatra, Mount Singalang, June–July 1878. See note 2.

Magnolia aequinoctialis Dandy (1928) 185. — Type: *Houtvester Sumatra's Oostkust 25* (holo BO 1291529; iso L0038358), [Indonesia,] Sumatra, Karolanden.

Magnolia maingayi King (1889) 369. — *Aromadendron maingayi* (King) Sima & S.G.Lu (2009) 37. — Lectotype (designated here): *Maingay s.n.* (Kew distribution no. 17) (lecto K000681527, K000681528, a single specimen over two sheets; isolecto CAL0000004114, CAL0000004115, L0038362), [Malaysia,] Penang. See note 3.

Notes — 1. In the protologue of *Manglietia macklottii*, Korthals merely cited a locality (Mount Singalang) without mentioning any specimen. Nootboom (1987) lectotypified this name with L0038360 (Fig. 5a) by providing the type statement "Type: Korthals (L, sheet nr. 908.126-1018; iso BO), Sumatra, Mt Singalan)". Nootboom (2012) erroneously regarded L0038360 as a holotype. Korthals initially labelled L0038360 as *Manglietia oortii* but later changed it to *Manglietia macklottii*. Although *Manglietia oortii* was also collected from Singalang and also described by Korthals in the same publication (see under *Magnolia elegans* note 3), the floral and leaf morphology of L0038360 correspond more closely to Korthals' description of *Manglietia macklottii*. In particular, the description '*foliis concoloribus*' and '*petalis exterioribus calycinis*' in the protologue of *Manglietia macklottii* is consistent with L0038360; the description '*foliis subtus glaucis*' in the protologue of *Manglietia oortii* is inconsistent with L0038360.

2. When discussing *Magnolia macklottii* var. *beccariana*, Nootboom (1987) cited the basionym as '*Michelia beccariana* Agostini' immediately following the proposed combination on page 348. Nootboom (1987) provided a full reference of the basionym 'Agostini, Atti Com. Accad. Fisiocrit. Siena IX, 7 (1926) sep. 23' on page 347, where *Michelia beccariana* is cited as a synonym of *Magnolia macklottii*. Although Nootboom's citation is erroneous (the series and volume number are erroneous, and the day and month of publication are provided in place of the

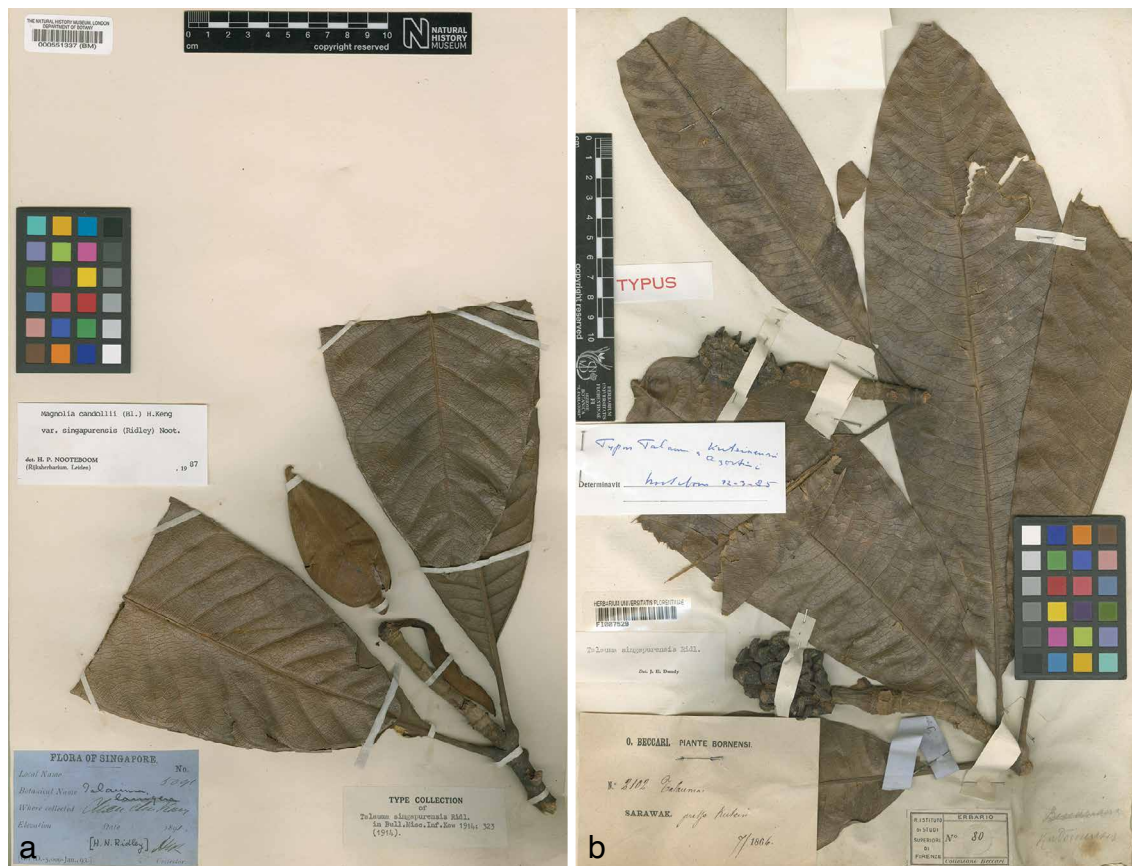


Fig. 6 a. Lectotype of *Talauma singapurensis* Ridl. (= *Magnolia singapurensis* (Ridl.) H.Keng, Ridley 5091 (BM000551337)); b. holotype of *Talauma kutcinensis* A.Agostini (= *Magnolia singapurensis* (Ridl.) H.Keng, Beccari PB 2102 (FI007529)).

page number), these errors do not prevent valid publication of the new combination according to Art. 41.6 of the ICN (Turland et al. 2018). Agostini (1926) cited a single gathering 'Becc. P.S. n.° 116' from 'monte Singalan' in the protologue of *Michelia beccariana*. In the brief introduction to her paper, it was mentioned that she consulted the Webb's Herbarium in FI, which is in the same room as Beccari's Herbarium (FI-B). We located only a single specimen of *Beccari PS 116* in FI-B (Fig. 5b), which represents the holotype of *Michelia beccariana*. Nootboom (2012) correctly stated that the holotype is deposited in FI.

3. Although King cited a single gathering 'Maingay No. 17' in the protologue of *Magnolia maingayi*, several duplicates in various herbaria exist. These are considered as syntypes and it is unclear what material was used by King when preparing his description. It should also be noted that the no. 17 refers to the Kew distribution number rather than Maingay's collection number. By indicating 'Type: Maingay 17 (?; iso L)', Nootboom (1987) is quite explicitly excluding the L specimen from the possibility of it being the holotype. This seems to make sense as Maingay's types are largely kept in K. Moreover, the L specimen consists of only a few detached leaves, a few seeds and fragments of petals, whereas the K specimen (mounted over two sheets) has intact twigs with leaves, flowers and fruits, consistent with King's description. Therefore, the K specimen (Fig. 5c, d) is here selected as lectotype. Nootboom (2012) incorrectly indicated that the holotype is deposited in CAL.

Magnolia singapurensis (Ridl.) H.Keng — Fig. 6

Magnolia singapurensis (Ridl.) H.Keng (1978) 129. — *Talauma singapurensis* Ridl. (1914) 323. — *Magnolia candollei* (Blume) H.Keng var. *singapurensis* (Ridl.) Noot. (1987) 376, nom. illeg. (see note 2) — *Magnolia liliifera* (L.) Baill. var. *singapurensis* (Ridl.) Govaerts in Frodin & Govaerts (1996) 71. — *Liranthelium liliifera* (L.) Sima & S.G.Lu var. *singapurensis* (Ridl.) Sima

& S.G.Lu (2012) 61. — Lectotype (designated by Dandy 1928): *Ridley 5091* (lecto BM000551337; isolecto MEL2085479, MEL2121641, SING0067862, UC267519), Singapore, Chan Chu Kang, 1891. See note 1.

Talauma kutcinensis A.Agostini (1926) 191. — Type: *Beccari PB 2102* (holo FI007529), [Malaysia,] Sarawak, 'Kutcin' [Kuching], July 1866. See note 3.

Notes — 1. Ridley cited two syntypes (*Ridley 3656* and *5091*) in his protologue of *Talauma singapurensis*. Subsequently, Dandy (1928) provided a type statement 'Ridley 5091 (type in Herb. Brit. Mus.; Herb. Berlin)' that constitutes the first effective lectotypification of this name. Therefore, the BM specimen of *Ridley 5091* (Fig. 6a) is the lectotype of *Talauma singapurensis*. A superfluous lectotypification was performed by Nootboom (1987), who designated the SING duplicate of *Ridley 5091* as lectotype instead. Nootboom (2012) erroneously regarded the BM specimen as a holotype.

2. When Keng (1978) transferred *Talauma candollei* Blume (Blume 1823) to *Magnolia*, he made a new combination '*Magnolia decandolli*' that was intended to be a replacement name in order to avoid generating a later homonym of *Magnolia candollei* Link (Link 1831). However, *Magnolia candollei* and '*Magnolia decandolli*' are to be considered orthographic variants (commemorating Augustin Pyramus de Candolle) and thus homonyms. An even earlier homonym exists, i.e., *Magnolia decandollei* Savi (Savi 1819), which makes Keng's name illegitimate and also Nootboom's combination which is based on Keng's name.

3. Agostini (1926) cited a single gathering (*Beccari PB 2102*) collected in 1866 in her protologue of *Talauma kutcinensis*. Agostini spelt the specific epithet as '*kutcinensis*' whereas Nootboom (1987, 1988) spelt the specific epithet as '*kuteinensis*'. 'Kutcin' is probably an orthographical variant of Kuching, an administrative division in Sarawak, whereas 'Kutei' is probably an orthographic variant of Kutai, a historical region in East

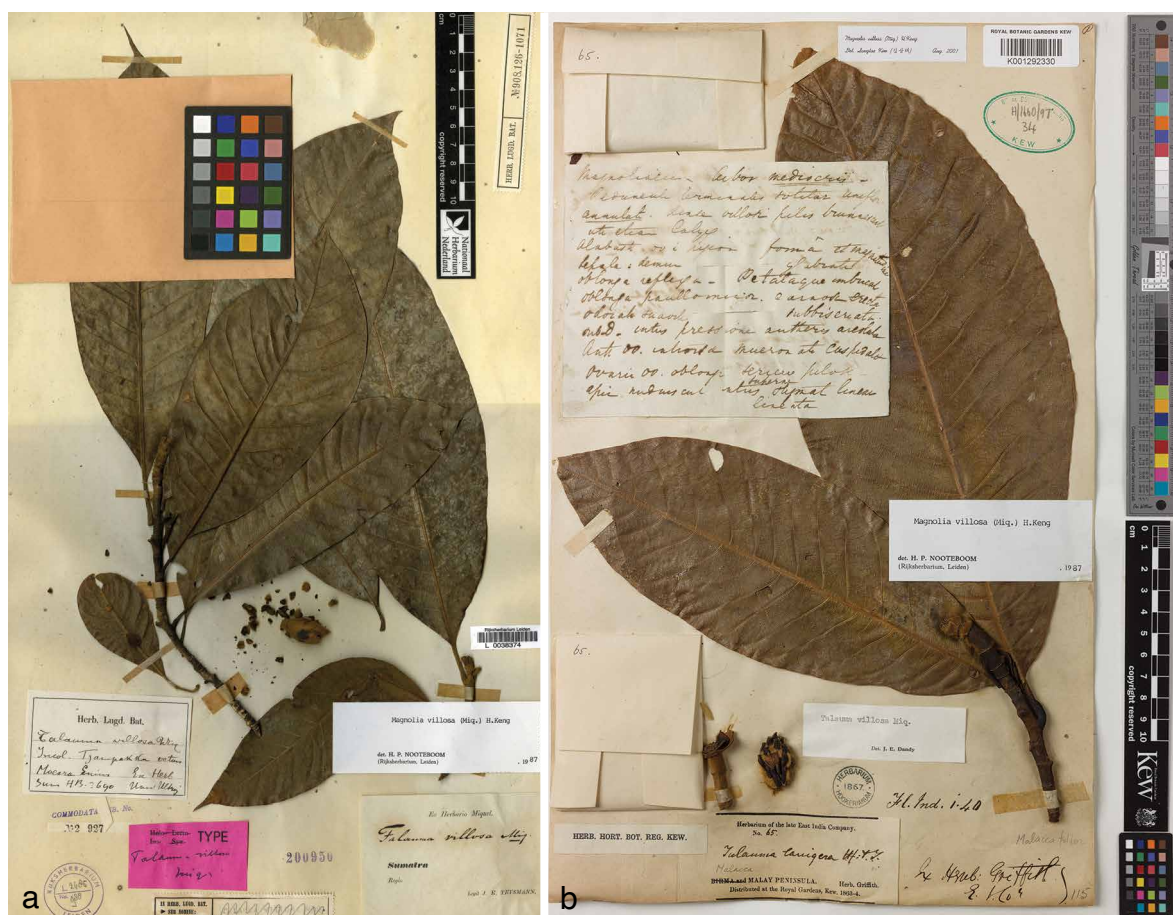


Fig. 7 a. Lectotype of *Talauma villosa* Miq. (= *Magnolia villosa* (Miq.) H.Keng), Teijsmann HB 3690 (L0038374); b. holotype of *Talauma lanigera* Hook.f. & Thomson (= *Magnolia villosa* (Miq.) H.Keng), Griffith s.n. (Kew distribution no. 65) (K001292330).

Kalimantan. Because Beccari travelled largely within Kuching in 1866 (Van Steenis-Kruseman 1950), the original spelling of the specific epithet '*kutcinensis*' should be used. Agostini (1926) mentioned that she consulted the Webb's Herbarium in FI, where we located a sole specimen of *Beccari PB 2102*. Thus, the FI-B specimen (Fig. 6b) is the holotype of *Talauma kutcinensis*.

Magnolia villosa (Miq.) H.Keng — Fig. 7

Magnolia villosa (Miq.) H.Keng (1978) 129. — *Talauma villosa* Miq. (1861) 366. — *Talauma rabaniana* Hook.f. & Thomson var. *villosa* (Miq.) P.Parm. (1896) 271. — *Liranthella villosa* (Miq.) Sima & S.G.Lu (2012) 61. — Lectotype (designated by Nootboom 1987): *Teijsmann HB 3690* (lecto L0038374; isolecto BO 1291531, U0003783), [Indonesia,] Sumatra, Moeara Enim. See note 1. *Talauma lanigera* Hook.f. & Thomson (1872) 40. — *Magnolia lanigera* (Hook.f. & Thomson) H.J.Chowdhery & P.Daniel (1981) 64. — Type: *Griffith s.n.* (Kew distribution no. 65) (holo K001292330), [Malaysia,] Malacca. See note 2.

Notes — 1. Miquel mentioned "Sumatra orient. in prov. Palembang, prope Muara-enim (T.)" in his protologue of *Talauma villosa*. It is clearly indicated in the footnotes that 'T.' refers to Teijsmann. However, there is neither indication of a particular herbarium in which Teijsmann's specimen was deposited nor evidence that only a single specimen is used for Miquel's description. The type statement "Type: *Teijsmann HB3690* (L; iso BO)" provided in Nootboom (1987) constitutes an effective lectotypification; thus, the L specimen (Fig. 7a) is the lectotype of *Talauma villosa*. Nootboom (2012) erroneously stated that the holotype is deposited in L.

2. Hooker & Thomson (1872) merely cited "Eastern Peninsula, *Griffith*" in the protologue of *Talauma lanigera*. We located only a single specimen in K (K001292330) that was collected by Griffith, labelled as *Talauma lanigera*, and which has morphological features corresponding to the protologue (e.g., presence of immature, densely woolly carpels and absence of ripe fruits). Thus, K001292330 (Fig. 7b) is the holotype of *Talauma lanigera*. Although Nootboom (1987, 2012) indicated "Type: *Griffith 65*", the '65' actually refers to the Kew distribution number rather than Griffith's collection number. Nootboom (2012) correctly stated that the holotype is deposited in K.

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REFERENCES

- Agostini A. 1926. Alcune nuove Magnoliacee malesi e papuane. *Atti della Reale Accademia dei Fisiocritici Siena*, ser. 10, 1: 183–195.
- Blume CL. 1823. *Verhandelingen van het Bataviaasch Genootschap van Kunsten en Wetenschappen* 9. Ter Lands Drukkerij, Batavia.
- Blume CL. 1825. *Bijdragen tot de flora van Nederlandsch Indië*. Ter Lands Drukkerij, Batavia.
- Blume CL. 1830. *Flora Javae nec non insularum adjacentium*. Frank, Brussels.
- Chen J, Eiadthong W. 2020. New species and new records of *Artabotrys* (Annonaceae) from Peninsular Thailand. *PhytoKeys* 151: 67–81.
- Chowdhery HJ, Daniel P. 1981. New combinations in *Magnolia* L. *Indian Journal of Forestry* 4: 64.
- Dandy JE. 1927. The genera of Magnoliaceae. *Bulletin of Miscellaneous Information*, Kew 1927: 257–264.
- Dandy JE. 1928. *Malayan Magnoliaceae*. *Bulletin of Miscellaneous Information*, Kew 1928: 183–193.

- Frodin DG, Govaerts RHA. 1996. World checklist and bibliography of Magnoliaceae. Royal Botanic Gardens, Kew.
- Hooker JD, Thomson T. 1872. *The flora of British India* 1. Reeve & Co., London.
- Keng H. 1978. The delimitation of the genus *Magnolia* (Magnoliaceae). *Gardens' Bulletin Singapore* 31: 127–131.
- King G. 1889. Materials for a flora of the Malayan Peninsula. *Journal of the Asiatic Society of Bengal, Part II, Natural History* 58 (4): 359–408.
- King G. 1892. Materials for a flora of the Malayan Peninsula, no. 4. *Journal of the Asiatic Society of Bengal, Part II, Natural History* 61 (1): 1–130.
- Korthals PW. 1850. *Bijdrage tot de kennis der Indische Magnoliaceae*. *Nederlandsch Kruidkundig Archief* 2 (3): 93–98.
- Link JHF. 1831. *Handbuch zur Erkennung der Nutzbarsten und am häufigsten vorkommenden Gewächse* 2. In der Haude und Spenerischen Buchhandlung, Berlin.
- Linnaeus C. 1759. *Systema Naturae* 2. Laurentii Salvii, Stockholm.
- Miquel FAW. 1861. *Flora van Nederlandsch Indië, Eerste Bijvoegsel*. Van der Post, Amsterdam.
- Miquel FAW. 1868. *Ranunculaceae, Magnoliaceae, Dilleniaceae et Menispermaceae Archipelagi indici*. *Annales Musei Botanici Lugduno-Batavi* 4: 65–88.
- Nootboom HP. 1987. Notes on Magnoliaceae II, revision of *Magnolia* sections Maingola (Malesian species), *Aromadendron*, and *Blumiana*. *Blumea* 32: 343–382.
- Nootboom HP. 1988. Magnoliaceae. In: De Wilde WJJO (ed), *Flora Malesiana*, ser. 1, 10 (3): 561–605. Kluwer Academic Publishers, Dordrecht.
- Nootboom HP. 2012. Magnoliaceae. In: Kiew R, Chung RCK, Saw LG, et al. (eds), *Flora of Peninsular Malaysia Series II: Seed Plants* 3: 219–247. Forest Research Institute Malaysia, Kepong.
- Parmentier PE. 1896. *Histoire des Magnoliacées*. *Bulletin Scientifique de la France et de la Belgique* 27: 159–337.
- Pierre JBL. 1880. *Flore Forestière de la Cochinchine* 1. Octave Doin, Paris.
- Ridley HN. 1912. *Decades Kewenses. Plantarum novarum in herbario horti regii conservatorum*. *Bulletin of Miscellaneous Information*, Kew 1912: 380–391.
- Ridley HN. 1914. *Decades Kewenses. Plantarum novarum in herbario horti regii conservatorum*. *Bulletin of Miscellaneous Information*, Kew 1914: 323–332.
- Savi G. 1819. Sulla *Magnolia grandiflora* e sulla *Magnolia acuminata*. *Biblioteca Italiana Ossia Giornale di Letteratura Scienze ed Arti* 16: 217–224.
- Sima Y-K, Lu S-G. 2009. Magnoliaceae. In: Shui Y-M, Sima Y-K, Wen J, et al. (eds), *Vouchered flora of Southeast Yunnan*: 16–67. Yunnan Science and Technology Press, Kunming.
- Sima Y-K, Lu S-G. 2012. A new system for the family Magnoliaceae. In: Xia N-H, Zeng Q-W, Xu F-X, et al. (eds), *Proceedings of the second international symposium on the family Magnoliaceae*: 55–71. Huazhong University of Science & Technology Press, Wuhan.
- Sinclair J. 1955. A revision of the Malayan Annonaceae. *Gardens' Bulletin Singapore* 14: 149–516.
- Staffeu FA, Mennega EA. 1998. *Taxonomic literature: a selective guide to botanical publications and collections with dates, commentaries and types*. Supplement 5, Da-Di. Koeltz Scientific Books, Königstein.
- Thiers B. 2020. *Index Herbariorum: a global directory of public herbaria and associated staff*. New York Botanical Garden's Virtual Herbarium. Available from: <http://sweetgum.nybg.org/science/ih/> [accessed 1 May 2020].
- Turland NJ, Wiersema JH, Barrie FR, et al. (eds). 2018. *International Code of Nomenclature for algae, fungi, and plants (Shenzhen Code)*. *Regnum Vegetabile* 159.
- Turner IM. 2009. *Artabotrys* (Annonaceae) in Borneo: new species and new synonyms. *Folia Malaysiana* 10 (1): 59–88.
- Turner IM. 2011. A catalogue of the Annonaceae of Borneo. *Phytotaxa* 36: 1–120.
- Turner IM. 2012. Annonaceae of Borneo: a review of the climbing species. *Gardens' Bulletin Singapore* 64: 371–479.
- Turner IM. 2016. Notes on the Annonaceae of the Malay Peninsula. *Gardens' Bulletin Singapore* 68: 65–69.
- Turner IM. 2018. Annonaceae of the Asia-Pacific region: names, types and distributions. *Gardens' Bulletin Singapore* 70: 409–744.
- Van Steenis-Kruseman MJ. 1950. *Malaysian plant collectors and collections: being a cyclopaedia of botanical exploration in Malaysia and a guide to the concerned literature up to the year 1950*. In: Van Steenis CGGJ (ed), *Flora Malesiana*, ser. 1, 1: 3–639. Noordhoff-Kolff N.V., Jakarta (also available via <http://www.nationaalherbarium.nl/FMCollectors/>) [accessed 1 May 2020].