



Further lectotypifications and nomenclatural notes on Rhamnaceae from northern Australia

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Abstract: The nomenclature and typification of seven species names of Rhamnaceae is discussed and lectotypes are chosen for *Rhamnus napalensis* (Wall.) M.A.Lawson, *Schistocarpaea johnsonii* F.Muell. and *Ventilago pubiflora* C.T.White, and the synonym *Rhamnus javanica* Miq. The lectotype of *Colubrina asiatica* (L.) Brongn. is corrected. A table is presented of the publication details for types and lectotypes of all taxa of Australian Rhamnaceae, excluding the tribe Pomaderreae, and the status of the genus *Dallachya* F.Muell. is discussed. The following species are illustrated: *Rhamnella vitiensis* (Benth.) A.C.Sm. and *Rhamnus napalensis*, *Sageretia hamosa* (Wall.) Brongn., *Schistocarpaea johnsonii*, *Ventilago ecorollata* F.Muell. and *V. pubiflora*.

Keywords: Nomenclature, typification, Rhamnaceae, Rhamneae, Ventilagineae, northern Australia

Introduction

With over 250 species, Australia is home to about one quarter of the world's species of Rhamnaceae. Most of these belong to one tribe, Pomaderreae Reissek ex Endl. (Kellermann *et al.* 2005; Kellermann 2007), but 14 genera with 28 species are from a variety of other tribes or are currently *incertae sedis*, according to the most recent family classification (Richardson *et al.* 2000b). A detailed overview of the tribes and genera can be found in Medan & Schirarend (2004).

During the preparation of the *Flora of Australia* treatment of Rhamnaceae, it became evident that lectotypes still needed to be chosen for the names of several non-Pomaderreae taxa. While most accepted names and synonyms have recently been typified, as listed in Table 1, a further four names are lectotypified in this paper. The taxa discussed here belong to the tribes Rhamneae and Ventilagineae; two species are from genera that are *incertae sedis*, i.e. not placed into a tribe by Richardson *et al.* (2000b).

McNeill (2014) clarified when lectotypification is necessary and his advice is followed in this paper. In some instances, this just confirms common practice, i.e. that the type is the specimen found in the institution where a botanist worked. In other cases, a variety of potential type specimens are available. Synonyms are only listed in this paper if they have been used in Australia (APC 2020; APNI 2020). All types have been examined, unless indicated by “*n.v.*”; those that were seen online via JSTOR Global Plants and other websites are indicated by “photo seen”.

Nomenclature

Rhamnaceae trib. Rhamneae Horan.

Char. Ess. Fam. 138 (1847). Hook.f. in Benth. & Hook.f., *Gen. Pl.* 1: 373 (1862), emend. J.E.Richardson, *Kew Bull.* 55: 333 (2000). — **Type:** *Rhamnus* L.

The tribe Rhamneae is distributed throughout most of the world, except the Arctic and Antarctic regions. It contains 17 genera, of which three genera and four species are present in Australia: *Rhamnus* L., *Rhamnella* Miq. and *Sageretia* Brongn. (Tab. 1).

The typification of the three species native to Australia is treated in this paper; they all occur in eastern Queensland and are illustrated in Fig. 1. The introduced *Rhamnus alaternus* L. is widely naturalised in temperate regions of the Australian mainland and Tasmania (Walsh & Udovicic 1999).

Rhamnella vitiensis (Benth.) A.C.Sm.

Bull. Torrey Bot. Club 70: 544 (1943). — *Rhamnus*(?) *vitiensis* Benth., *Fl. Austral.* 1: 413 (1863). — *Dallachya vitiensis* (Benth.) F.Muell., *Fragm.* 9: 140 (1875). — **Lectotype:** Cape York, 12 Nov. 1849, J. MacGillivray “Voyage of Rattlesnake Bot. 511” (K000356672, ex herb. Hooker; photo seen), *fide* Kellermann & K.R.Thiele, *J. Adelaide Bot. Gard.* 22: 33 (2008). **Residual syntype:** Cape York, 14 Nov. 1849, J. MacGillivray “Voyage of Rattlesnake Bot. 511” (K000356671, ex herb. Hooker; photo seen). *Colubrina vitiensis* Seem., *Syn. Pl. Vit.* 4 (1862), *nom. nud.* & *inval.*



Fig. 1. The species of the tribe *Rhamneae* in Australia. **A–C** *Sageretia hamosa*: **A** habit $\times 0.3$; **B** flower $\times 13$; **C** fruit $\times 4$. **D–F** *Rhamnus napalensis*: **D** habit $\times 0.6$; **E** flower $\times 20$; **F** fruit $\times 4$. **G–I** *Rhamnella vitiensis*: **G** habit $\times 0.6$; **H** flower $\times 13$; **I** fruit $\times 4$. — **A–B** E. Volck 1415 & S.J. Dansie (CANB226564), **C** B. Hyland 15088 (CANB462077), **D–F** T. Hartley 14115 & B. Hyland (CANB250802), **G–H** A. Thozet 255 (MEL2103509), **I** I. Telford 9396 & G. Butler (CBG8301615). Illustration by Anita Barley.

The most recently published phylogenies of the family Rhamnaceae are still inconclusive regarding the placement of this species, i.e. whether it should be recognised in the monotypic genus *Dallachya* F.Muell. or included in *Rhamnella* Miq. Hauenschild *et al.* (2016) and Hauenschild *et al.* (2018a) analysed the whole family and place *R. vitiensis* (Pacific, New Guinea and eastern Australia) in a clade with species of *Rhamnella* (China, Japan, Korea) and *Berchemiella* Nakai (China, Japan), but there was no statistical support for the inclusion of *Dallachya* into *Rhamnella*, as advocated by Smith (1943), or for its retention as a separate genus. Islam & Guralnick (2015) also recovered that clade, but since they only included one species of *Berchemiella* and *Rhamnella* each, their results are also not conclusive.

Kellermann & Thiele (2008) accepted *Dallachya* as a separate genus for Australia, following the only current worldwide treatment of Rhamnaceae by Medan & Schirarend (2004). This was based on morphological evidence, such as the lack of endosperm in *Dallachya*, compared to *Rhamnella*. In addition, wood anatomical characters seem to separate *R. vitiensis* from *Rhamnella* (Schirarend 1991); Islam & Guralnick (2015) also listed a number of characters that are different between *R. vitiensis* (the type of *Dallachya*) and *R. franguloides* (Maximov.) Weberb. (the type of *Rhamnella*) in their analysis of the tribe Rhamneae.

The consensus of the major Australian state and territory herbaria, as represented by the APC (2020), was to retain the species in *Rhamnella* as *R. vitiensis*. In light of preliminary phylogenetic data analysing the whole family (Tingshuang Yi & Qin Tian, pers. comm.), this seems to have been the right decision.

Smith (1985: 699) stated that “the type is *MacGillivray* (K HOLOTYPE, 2 sheets), collected Nov. 12 and 14, 1849”, but since this citation refers to gatherings made on two different dates it does not constitute inadvertent typification of the name (Art. 9.10; Turland *et al.* 2018). The lectotype was first correctly designated by Kellermann & Thiele (2008: 33), who unambiguously chose one of these sheets, although they omitted the collection number in their publication. The collection number is clearly indicated on the specimens as “Voyage of Rattlesnake Bot. 511”. Despite this, the second specimen is a syntype, rather than an isolectotype.

Rhamnus napalensis (Wall.) M.A.Lawson

in Hook.f., *Fl. Brit. India* 1: 640 (1875), as “*nipalensis*”. — *Ceanothus napalensis* Wall. in W. Roxburgh, *Fl. Ind.* 2: 375 (1824), as “*napalensis*”. — *Colubrina napalensis* G.Don, *Gen. Hist.* 2: 36 (1832), as “*nipaulensis*”. — **Type citation**: “I have found this on various hills in the valley of Nipal, flowering in May, in fruit in June. In the Hon. Company’s botanic gardens it blossoms and produces fruit during the same months”. — **Lectotype (here designated)**: Napalia, 1821, *N. Wallich 4263a* (K000618096, East India Company Herb.; photo seen). **Isolectotypes**:

BM000793347, K000723153, M0211824 (photos seen). **Residual syntype**: “Ex Napalia introd., Hort. Bot. Calc.”, 1823 (K000618097, East India Company Herb.; photo seen). **Excluded specimen**: Hort. Calc. [Botanic Gardens, Calcutta, India], cult., 1831, *N. Wallich 4263b* (K000723154; photo seen).

Rhamnus javanica Miq., *Fl. Ned. Ind.* 1(1): 646 (1855). — **Type citation**: “in Herb. Horsf.”, “Java, door Dr. Th. Horsfield ontdekt.” — **Lectotype (here designated)**: “Rham. 6”, Java, *T. Horsfield 444* (K000723161, Herb. Horsfield, purchased 1859; photo seen). **Isolectotypes**: “Rh. 6”, *T. Horsfield s.n.* (K000723162, Herb. Javanicum; photo seen); Java, *Horsfield s.n.* (L0013767, fragment; photo seen). **Possible syntypes**: Java, Mt. Prahu, *T. Horsfield s.n.* (BM ×2 *n.v.*, *fide* J.G. West, pers. comm.).

Wallich (1828–1849) lists two collections of *Ceanothus napalensis*, as he states in the protologue (Roxburgh *et al.* 1824): no. 4263a was collected in the field in Nepal; no. 4263b was prepared from plants in cultivation at the Calcutta Botanic Gardens. Duplicates of these collections can be found in several herbaria, but the main set of Wallich’s herbarium is at K. The specimen from Wallich’s East India Company Herbarium (EICH) is selected as lectotype. Two cultivated specimen are at K, the one in EICH was collected in 1823 and is a syntype, the other specimen was collected in 1831, after the publication of the taxon.

Miquel (1855) described *Rhamnus javanica* from material from Thomas Horsfield’s herbarium. A specimen from K annotated as coming from Horsfield’s own collection is selected as lectotype of the name. Two specimens from BM are listed as possible syntypes, as the location details are slightly different to the lecto- and isolectotypes.

Common orthographic variants are “*nepalensis*” (e.g. King 1877), “*nipalensis*”, “*nipaulensis*” and “*napalensis*” (see above). The Latin name for Nepal is “Napalia” and that has also been used by Wallich in his other publications, e.g. in the title of *Tentamen florae Napalensis illustratae* (Wallich 1824–1826) and extensively in the descriptions of Wallich (1830–1832). Wallich also coined 10 species names with the epithet “*napalensis*” (e.g. *Gouania napalensis* Wall., *Passiflora napalensis* Wall.; see IPNI 2020), the spelling “*napalensis*” in the protologue of *R. napalensis* seems to have been an error.

Sageretia hamosa (Wall.) Brongn.

Mém. fam. Rhamnées 53 (1826). — *Ziziphus hamosa* Wall. in W. Roxburgh, *Fl. Ind.* 2: 369 (1824). — *Berchemia hamosa* (Wall.) Wall., *Numer. List* n. 4253 (1831). — **Lectotype**: Napalia, 1821, *N. Wallich 4253a* (K001038526, East India Company Herb.; photo seen), *fide* B.M. Wadhwa, *Fl. Ceyl.* 10: 381 (1996), as “Type” (Art. 9.10). **Isolectotypes**: K000729256, P01818874 (photos seen); CAL *n.v.*, *fide* B.M. Wadhwa, *Fl. Ceyl.* 10: 381 (1996). **Excluded specimens**: Hort. Calc. [Botanic Gardens, Calcutta,



Fig. 2. Two species of the tribe Ventilagineae (A–F) and one species *incertae sedis* (G–I). **A–C** *Ventilago pubiflora*: **A** flowering branch $\times 0.6$; **B** flower $\times 7.5$; **C** fruit $\times 2$. **D–F** *V. ecorollata*: **D** flowering branch $\times 0.6$; **E** flower $\times 7.5$; **F** fruit $\times 2$. **G–I** *Schistocarpaea johnsonii*: **G** branch $\times 0.6$; **H** flower $\times 7.5$; **I** fruit $\times 2$. — A, B A.R. Bean 6752 (MEL1619038), C N. Gibson 144 (BRI-AQ0349247), D L.S. Smith 3820 (BRI-AQ0012251), E F. Mueller (MEL2105102), F G. Sankowsky & N. Sankowsky 1266 (BRI-AQ0508619), G, H V.K. Moriarty 1439 (BRI-AQ0109757), I P.I. Forster PIF10718, G. Sankowsky & M.C. Tucker (BRI-AQ0549556). Illustration by Anita Barley.

India], 1831, *N. Wallich 4253b* (K001038527, K000729255; photos seen); India, *N. Wallich 4253* (PH00007727, ex Herb. Schweinitz; photo seen).

Wadhwa (1996) inadvertently lectotypified the name with a specimen from “K-W”, i.e. the Wallich herbarium (EICH). His use of the term “type” is to be corrected to “lectotype” (Art. 9.10; Turland *et al.* 2018). Isolectotypes can be found in the general collection at K and in several other herbaria.

While many of the new names in Wallich (1828–1849) are not validly published (Mabberley 1980), this is not the case for *Berchemia hamosa*, as Wallich clearly indicates “sub Zizipha”, meaning that the species has previously been described in the genus *Ziziphus*, i.e. the basonym is *Z. hamosa*.

The Wallich specimens no. 4253b, collected at the Calcutta botanic gardens in 1831 (i.e. some years after the publication of *Ziziphus hamosa*), are types of *Sageretia wallichii* Bhand. & Bhans.

Rhamnaceae trib. Ventilagineae Hook.f.

in Benth. & Hook.f., *Gen. Pl.* 1: 372 (1862). — **Type:** *Ventilago* Gaertn.

This tribe occurs in the Old World tropics and consists of two closely related genera, *Ventilago* Gaertn. and *Smythea* Seem. (the latter recently revised by Cahen & Utteridge 2018). The genus *Ventilago* is present in Australia with three species of vines or small trees (Tab. 1).

The nomenclature of two species is discussed below, the third taxon, *Ventilago ecorollata* F.Muell. was lectotypified in Kellermann & Thiele (2008). *Ventilago ecorollata* and *V. pubiflora* C.T.White are illustrated in Fig. 2A–F, line drawings of the more common *V. viminalis* can be found in Maiden (1903) and Latz (1995).

Ventilago pubiflora C.T.White

Proc. Roy. Soc. Queensland 50: 71 (1939). — **Type citation:** “Burnett District. – Biggenden, C.T. White, No. 7333 (type: advanced flowers and young fruits), 11 October, 1930 (vine growing over trees, common in second growth rain-forest, on the Biggenden–Childers road)”. — **Lectotype (designated here):** Biggenden–Childers road, Qld, 11 Oct. 1930, *C.T. White 7333* (BRI-AQ317634, on 3 sheets; photos seen). **Isolectotypes:** K000681982 (photo seen), MEL713788.

White (1939) clearly stated that his collection *C.T. White 7333* is the type of the species. There are several specimens of this collection available at BRI, K and MEL. The BRI specimen has always been treated as, and is annotated as the “holotype”. However, following McNeill (2014), lectotypification is necessary, as only the gathering, but not the actual specimen or herbarium was indicated by White. The lectotype,

BRI-AQ317634, is a multi-sheet type and mounted on three herbarium sheets (Art. 8.3; Turland *et al.* 2018).

Ventilago viminalis Hook.

in T.L. Mitchell, *J. Exped. Trop. Australia* 369 (1848).

— **Type citation:** “Tree 20 feet high, growing on high sandy ridges”; Mitchell states that the plant was collected between camps 76 and 77, more than 20 miles [32 km] west of Mount Bindango. **Lectotype:** “Sub-Tropical New Holland / Tree 20 feet high. High sandy ridges. / same as nr° 447 et 476” [near the Maranoa River, south of Mitchell, Qld], 24 Oct. 1846, *T. Mitchell 370* (K000681981, ex Herb. Hooker; mounted with K000681980 and Hooker’s descriptive slip), *fide* J.Kellermann & K.R.Thiele, *J. Adelaide Bot. Gard.* 22: 35 (2008). **Residual syntypes:** “Sub-Tropical New Holland”, 1846, *T. Mitchell 447* (K000681980, ex Herb. Hooker; mounted with K000681981); “Sub-Tropical New Holland / Tree 20 feet high, growing on high sandy ridges.”, 1846, *T. Mitchell 447* (NSW505161); “Sub-Tropical New Holland”, 1846, *T. Mitchell s.n.* (K000681979, ex Herb. Bentham; with handwritten Latin description of flower).

Kellermann & Thiele (2008) designated a lectotype for the name, but did not indicate the herbarium barcode number. They quoted the label information incorrectly as “Subtropical Australia” and did not list any other type specimens.

The lectotype has Hooker’s description attached to it, on which he comments on the collections: “447 et 476 same as n. 370”, i.e. he prepared his description from all three collections. The type sheet contains two of these, the lectotype *Mitchell 370*, a small specimen displaying the typical winged fruits, as well as the syntype *Mitchell 447*, a larger flowering branch. A duplicate of the latter specimen can be found at NSW. The lectotype and the NSW specimen have labels with specific information on tree height and habitat that is mentioned in the protologue. There is another syntype at K, a flowering branch also collected by Thomas Mitchell during the same expedition, but without a collecting number. The specimen with the collecting number 476, which is mentioned in Hooker’s note, could not be found, but it is possible that this is the unnumbered syntype at K (K000681979).

Interestingly, *Ventilago viminalis* is one of the only species of Australian Rhamnaceae that is naturalised overseas; it is found in northern Africa (Jafri 1977; Alzerbi *et al.* 2020).

Genera incertae sedis

Several genera of Rhamnaceae are not assigned to tribes due to a lack of molecular evidence (Richardson *et al.* 2000a, b). More recent phylogenies resolved some relationships of these genera, but the backbone of the trees, i.e. the relationships of these genera to other tribes

Table 1. Typification of genera and species of Australian Rhamnaceae, excluding the tribe Pomaderreae. If the typification is discussed or amended in other publications, this is indicated (with “see”). Types of genera are listed in accordance with Farr & Zijlstra (1996–); genera that were monotypic at the time of publication and, as such, automatically typified are also indicated.

Taxon	Typifying publication
tribe COLLETIEAE	
<i>Discaria</i> Hook.	Pfeiffer (1871–1875); see Kellermann & Udovicic (2020)
<i>Discaria nitida</i> Tortosa	Kellermann & Udovicic (2020)
<i>Discaria pubescens</i> (Brongn.) Druce	Kellermann & Udovicic (2020)
tribe GOUANIEAE	
<i>Gouania</i> Jacq.	Pfeiffer (1871–1875)
<i>Gouania australiana</i> F.Muell.	Kellermann & Thiele (2008)
<i>Gouania exilis</i> K.R.Thiele	Thiele & West (1995)
tribe PALIUREAE	
<i>Ziziphus</i> Mill.	Britton & Wilson (1924)
<i>Ziziphus mauritiana</i> Lam.	Johnston (1972); see Kellermann (2020a)
<i>Ziziphus oenopolia</i> (L.) Mill.	Trimen (1887) & Johnston (1972); see Kellermann (2020a)
<i>Ziziphus quadrilocularis</i> F.Muell.	Kellermann (2020a)
<i>Ziziphus timoriensis</i> DC.	Kellermann (2020a)
<i>Hovenia</i> Thunb.	Monotypy
<i>Hovenia dulcis</i> Thunb.	Sen Gupta & Safui (1984); see Kellermann (2020a)
tribe PHYLLICEAE	
<i>Noltea</i> Rchb.	Monotypy
<i>Noltea africana</i> (L.) Endl.	Wijnands (1983)
tribe RHAMNEAE	
<i>Rhamnella</i> Miq.	Monotypy
<i>Rhamnella vitiensis</i> (Benth.) A.C.Sm.	Kellermann & Thiele (2008); see this paper
<i>Rhamnus</i> L.	Britton & Brown (1913)
<i>Rhamnus alaternus</i> L.	Jafri (1977)
<i>Rhamnus napalensis</i> (Wall.) M.A.Lawson	This paper
<i>Sageretia</i> Brongn.	Pfeiffer (1871–1875)
<i>Sageretia hamosa</i> (Wall.) Brongn.	Wadhwa (1996); see this paper
tribe VENTILAGINEAE	
<i>Ventilago</i> Gaertn.	Monotypy
<i>Ventilago ecorollata</i> (F.Muell.) F.Muell.	Kellermann & Thiele (2008)
<i>Ventilago pubiflora</i> C.T.White	This paper
<i>Ventilago viminalis</i> Hook.	Kellermann & Thiele (2008); see this paper
genera incertae sedis	
<i>Colubrina</i> Rich. ex Brongn.	Typ. cons.; Voss (1983)
<i>Colubrina asiatica</i>	Trimen (1887) & Johnston (1972); see this paper
<i>Schistocarpaea</i> F.Muell.	Monotypy
<i>Schistocarpaea johnsonii</i> F.Muell.	This paper
genera incertae sedis — ALPHITONIA GROUP	
<i>Alphitonia</i> Reissek ex Endl.	Monotypy
<i>Alphitonia excelsa</i> (A.Cunn ex Fenzl) Reissek ex Benth.	Bean (2010) & Kellermann (2020b)
<i>Alphitonia oblata</i> A.R.Bean	Bean (2010); see Hauenschild <i>et al.</i> (2018b)
<i>Alphitonia petriei</i> Braid & C.T.White	Braid (1925) & Kellermann (2020b)
<i>Alphitonia pomaderroides</i> (Fenzl) A.R.Bean	Bean (2006) & Kellermann (2020b)
<i>Alphitonia whitei</i> Braid	Braid (1925) & Bean (2010); see Kellermann (2020b)
<i>Emmenosperma</i> F.Muell.	Monotypy
<i>Emmenosperma alphitonoides</i> F.Muell.	Kellermann & Thiele (2008); see Hauenschild <i>et al.</i> (2018b)
<i>Emmenosperma cunninghamii</i> Benth.	Kellermann (2020b)
<i>Emmenosperma pantherianum</i> Baill.	Bean (2013); see Hauenschild <i>et al.</i> (2018b)
<i>Granitites</i> Rye	Monotypy
<i>Granitites intangendus</i> (F.Muell.) Rye	Rye (1996); see Hauenschild <i>et al.</i> (2018b)

and genera, was generally not well supported (Onstein *et al.* 2015; Hauenschield *et al.* 2016, 2018a).

The nomenclature of two genera, *Colubrina* Rich. ex Brongn. and *Schistocarpaea* F.Muell., is treated below; the four genera of the *Alphitonia* Group (see Tab. 1) are discussed in Kellermann (2020b). *Schistocarpaea johnsonii* is shown in Fig. 2G–I, *Colubrina asiatica* was illustrated in Rye (1997).

Colubrina asiatica (L.) Brongn.

Mém. fam. Rhamnées 62 (1826). — *Ceanothus asiaticus* L., *Sp. Pl.* 196 (1753). — **Type citation:** “*Fl. zeyl* 98 * Habitat in Zeylona h”¹. **Lectotype:** Ceylon, *Herb. Hermann* 2.11 no. 98 (BM000621540; photo seen), *fide* Trimen, *J. Linn. Soc., Bot.* 24: 138 (1887), *et* M.C.Johnst., *Brittonia* 23: 47 (1971). **Residual syntypes:** *Herb. Hermann* 2.33 no. 98 (BM000621626, photo seen); *Herb. Hermann* 2.78 no. 98 (BM000621768, photo seen).

Ceanothus capsularis G.Forst., *Fl. Ins. Austr.* 18 (1786). — *Pomaderris capsularis* (G.Forst.) G.Don ex Loud., *Hort. Brit.* 84 (1830). — *Trymalium capsulare* G.Don, *Sweet's Hort. Brit. ed. 3*, 137 (1839). — *Pomaderris capsularis* Montrouz., *Mém. Acad. Roy. Sci. Lyon, Sect. Sci.* 10: 193 (1860), *nom. illeg.* — **Holotype:** Tahiti, *G. Forster s.n.* (BM000838461, photo seen), *fide* M.C.Johnston, *Brittonia* 23: 47 (1971).

As discussed in Kellermann (2020a), the publication by Trimen (1887) was overlooked by Jarvis (2007, 2016) when listing lectotypes from the Hermann Herbarium. Jarvis stated that the lectotype was first designated by Fawcett & Rendle (1926), however Trimen (1887) already clearly associated Hermann Herbarium no. 98 with the name *Ceanothus asiaticus* and listed it as the type. There are three specimens of that collection present in vol. 2 of the herbarium, on pages 11, 33 and 78. Johnston (1971) limited the lectotype to the specimen on p. 11, in a second-step lectotypification (Art. 9.17; Turland *et al.* 2018).

No other specimen of *Ceanothus capsularis* could be found, i.e. the listing of the BM specimen as “holotype” by Johnston (1971) is here accepted.

Within *C. asiatica* there are currently two recognised varieties (POWO 2020). Plants in Australia can be referred to *Colubrina asiatica* var. *asiatica*.

Schistocarpaea johnsonii F.Muell.

Vict. Naturalist 7: 183 (1891), as “*johnsoni*”. — **Type citation:** “On Mount Bartle-Frere; Stephen Johnson”. **Lectotype (here designated):** Mount Bartle-Frere, [Jan.] 1891, *S. Johnson s.n.* (MEL713013). **Isolectotypes:** MEL2290283; K000729229.

There are two specimens of this taxon at the National Herbarium of Victoria (MEL), where Mueller worked,

and one at K. The MEL specimen with the most flowers is selected here as the lectotype. It is annotated as “holotype” by K.R. Thiele, but since there is more than one specimen available, lectotypification is warranted (McNeill 2014). The label of the other specimen (MEL2290283) also mentions the month of collection in addition to the year: January 1891. The Kew duplicate has exactly the same blue “Phytologic Museum of Melbourne” label as the lectotype.

The speed of publication is quite remarkable: Johnson collected the specimens in Jan. 1891 and Mueller published the description of a new genus and species in March of the same year.

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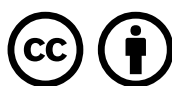
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¹ Linnaeus indicates good quality illustrations with an asterisk (*); the symbol h denotes shrubs.

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