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## Lectotypifications and nomenclatural notes on Rhamnaceae from northern Australia

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### Abstract

The status, nomenclature and typification of seven names from the genera *Alphitonia* Reissek ex Endl., *Emmenosperma* F.Muell., *Gouania* Jacq. and *Ventilago* Gaertn. are reviewed for northern Australia. The monotypic genus *Dallachya* is accepted for Australia and not subsumed in *Rhamnella* Miq. Lectotypes are designated for *Dallachya vitiensis* (Benth.) F.Muell., *Emmenosperma alphitonioides* F.Muell., *Gouania australiana* F.Muell., *Ventilago ecorollata* (F.Muell.) F.Muell. and *Ventilago viminalis* Hook.

### Introduction

Rhamnaceae is among the twenty largest plant families in Australia. There are approximately 250 species in Australia, among them a significant number of rare and threatened taxa. Most species belong to the endemic tribe Pomaderreae (Kellermann *et al.* 2005), with a southern temperate centre of diversity. However, about 10 % of species belong to, or are related to, genera that range more widely outside Australia in tropical and sub-tropical regions of Oceania, south-east Asia, Africa and the New World. In Australia these species occur mostly in northern and north-eastern Australia, in the genera *Alphitonia* Reissek ex Endl., *Colubrina* Rich. ex Brongn., *Dallachya* F.Muell., *Emmenosperma* F.Muell., *Gouania* Jacq., *Sageretia* Brongn., *Schistocarpea* F.Muell., *Ventilago* Gaertn. and *Ziziphus* Mill. (Kellermann 2004). Three additional genera, *Hovenia* Thunb., *Noltea* Rchb. and *Rhamnus* L., are represented by introduced and naturalised species.

This paper is preliminary to preparation of the *Flora of Australia* treatment of Rhamnaceae (Thiele *et al.* in prep.), and clarifies the status, nomenclature and typification of seven names from the genera *Alphitonia*, *Dallachya*, *Emmenosperma*, *Gouania*, *Ventilago* and *Ziziphus*.

### Taxonomy

#### *Alphitonia philippinensis* Braid

Bull. Misc. Inform. Kew 1925: 183 (1925). — **Type citation:** ‘Malay Archipelago. Philippines: [...] Dumaguete, Elmer 9432\* and 10335\*’. **Syntypes:** Philippines, Island of Negros: Province of Negros Oriental,

Dumaguete, Cuernos Mts., Mar. 1908, A.D.E. Elmer 9432 (K, photo AD, CANB & MEL); same locality, June 1908, A.D.E. Elmer 10335 (K; photo AD, CANB & MEL).

The Malesian, Australian and Pacific genus *Alphitonia* is taxonomically difficult, and in need of a comprehensive revision throughout its range. All Australian material previously referred to *A. philippinensis* is *A. incana* (Roxb.) Teijsm. & Binn. ex Kurz., and it is possible that the two taxa are conspecific.

#### *Dallachya vitiensis* (Benth.) F. Muell.

Fragm. 9: 140 (1875). — *Rhamnus*(?) *vitiensis* Benth., Fl. Austral. 1: 413 (1863). — *Rhamnella vitiensis* (Benth.) A.C. Smith, Bull. Torrey Bot. Club 70: 544 (1943). — *Colubrina vitiensis* Seem. Syn. Pl. Vit. 4 (1862), nom. nud. & inval. — **Type citation:** ‘Cape York, McGillivray’. **Lectotype (here designated):** Cape York, Qld, 12 Nov. 1849, J. MacGillivray s.n. (K 356672 n.v., photo MEL, ex herb. Hooker). **Residual syntype:** Cape York, Qld, 14 Nov. 1849, J. MacGillivray s.n. (K 356671 n.v., photo MEL, ex herb. Hooker).

The monotypic genus *Dallachya* F.Muell. (Fragm. 9: 140, 1875) was synonymised with *Rhamnella* Miq. by Smith (1943), who could see no differences between the two genera. *Rhamnella* is an eastern Asian genus of approx. 10 species from the Himalaya region, central China, Japan and Korea, while *Dallachya* is monotypic and occurs in the Pacific, New Guinea and eastern Australia. Medan & Schirarend (2004) re-established *Dallachya* based on the lack of endosperm in *D. vitiensis*, an important character used to separate genera or groups of genera in Rhamnaceae (D. Medan, pers. comm., Apr. 2002). In the absence of an explicit

phylogeny, this is provisionally accepted for the *Flora of Australia* treatment.

The type of the single species, *Dallachya vitiensis*, was collected in 1849 during the voyage of H.M.S. Rattlesnake by John MacGillivray at Cape York. There are two sheets at K, collected two days apart. The specimen that bears more flowers has been selected as lectotype of the species.

***Emmenosperma alphonoides* F.Muell.**

Fragm. 3: 63 (1862), as '*alphitonioides*'. — *Alphitonia emmenosperma* F.Muell., Fragn. 3: 63 (1862), nom. inval. pro. syn. — **Type citation:** 'Ad annem Piri Creek; Dr. Ludw. Leichhardt. Ad flumen Clarence River; J.Wilcox. Ad montes Illawarrae; Sir W.Macarthur; A.Ralston'. **Lectotype (here designated):** Clarence R., N.S.W., Sep., s.anno, *J.S.Wilcox s.n.* (MEL 713019, photo CANB; isolecto: NSW). **Residual syntypes:** Brush or Piri ['Piri Creek'], N.S.W., Jan. 1843, *L.Leichhardt s.n.* (MEL 713021). Southern parts of N.S.W., *W.Macarthur s.n.* (MEL 713020). Illawarra, N.S.W., *W.Macarthur s.n.* & Brisbane R., [Qld.] 1854, *W.Macarthur 195* (K). Sydney woods, Illawarra, N.S.W. & Brisbane R., [Qld.] *W.Macarthur 195* & Clarence R., Illawarra, N.S.W., *W.Macarthur s.n.* (K). Dogwood, Illawarra, N.S.W., *A.Ralston s.n.* (MEL 713022).

Mueller quoted four collections in the protologue of *E. alphonoides*. A flowering collection by J.S. Wilcox, of which there are duplicates at MEL and NSW is selected as lectotype. The remaining sheets at MEL are all fruiting material. Two sheets at K contain several flowering branches with two labels on each sheet; unfortunately it is not possible to unambiguously assign the labels to the branches.

***Gouania australiana* F.Muell.**

Fragm. 4: 144 (Nov. 1864). — **Type citation:** 'Ad ripas silvaticas in vicinia sinus Rockingham Bay. Dallachy'. **Lectotype (here designated):** Rockingham Bay, Saltwater Ck., Qld, 30 June 1864, *J.Dallachy s.n.* (MEL 713015, photo CANB). **Residual syntypes:** Rockingham Bay, Qld, 19 May 1864, *J.Dallachy 41* & 21 June 1863, *J.Dallachy 125* (MEL 713016, MEL 713017, MEL 713018; photos at CANB). Rockingham Bay, Qld, [*J.Dallachy s.n.*, attributed to *F.Mueller*] (K).

*Gouania hillii* F.Muell., Fragn. 8: 163 (1872). — **Type citation:** 'Ad flumen Daintree River; Walt. Hill'. **Holotype:** Daintree R., Qld, *W.Hill 99* (MEL 713014, photo CANB).

Thiele & West (1995) last reviewed the species of *Gouania* in Australia, citing one Dallachy specimen at MEL as holotype of *Gouania australiana*. However there are four syntype-sheets present at this herbarium. A flowering specimen with unambiguous collection details is chosen as lectotype. Two collections from 19 May 1864 and 21 June 1863 are mounted on three herbarium sheets. The collections have been mixed up and it is not possible to assign the branches on the sheets to the correct dates. They are all in bud or very early flower, as is indicated on the labels ('not in flower' and 'not full in flower'), and are accepted as residual syntypes. Ferdinand von Mueller never collected at

Rockingham Bay; as such the specimen at K must have been forwarded by him to that herbarium from material he presumably received from Dallachy.

***Ventilago ecorollata* (F.Muell.) F.Muell.**

S. Sci. Rec. 3: 176 (1883). — *Berchemia ecorollata* F.Muell., Fragn. 9: 141 (1875). — *Berchemia corollata* F.Muell., Syst. Cens. Austral. Pl. 60 (1882), orthographic variant. — **Type citation:** 'In silvis pone sinum marinum Rockingham's Bay; Dallachy'. **Lectotype (here designated):** Rockingham Bay, Qld, s.dat., *J.Dallachy s.n.* (MEL 1008561, photo CANB). **Residual syntypes:** Rockingham Bay, Qld, 10 Aug. 1870, *J.Dallachy s.n.* (MEL 1008558). Rockingham Bay, Qld, *J.Dallachy s.n.* (MEL 1008560; K ex MEL, received 1875; K ex MEL, received 1883, with an envelope of fruits collected by Persieh). Rockingham Bay, Qld, [*J.Dallachy s.n.*] (BM ex MEL, annotated by M.C.Johnston, 1969). **Possible syntypes:** Sea View Ra. [SW of Rockingham Bay], Qld, 1 Oct. 1869, *J.Dallachy s.n.* (MEL 1008559). Rockingham Bay, Qld, s.dat., s.coll. (BM ex MEL).

Mueller, in publishing *Ventilago ecorollata*, did not explicitly refer to his prior name *Berchemia ecorollata* in the protologue, but stated '[T]his plant from flowering specimens only was first placed in the genus *Berchemia*; but from the fruit, now obtained, it is proved to be a genuine *Ventilago*'. In our opinion, this is enough to accept this as a new combination, in which case the correct author citation becomes *V. ecorollata* (F.Muell.) F.Muell.

No sheets at MEL are annotated *B. ecorollata*. The fruit came from a Persieh specimen collected at Endeavour River in 1882 (*W.A.Persieh 560*, MEL 713012). Two Persieh specimens were erroneously labelled as syntypes at MEL (MEL 713012, MEL 1008557), based on their citation in the publication of *Ventilago ecorollata*.

The lectotype at MEL is a specimen with ample flowers collected by Dallachy. The remaining Dallachy collections cited by Mueller in 1875 are listed as residual syntypes. One sheet at K, which was received in 1875 (the year of publication), is annotated *Berchemia ecorollata*. A sheet at BM (annotated by M.C. Johnston) is also labelled as *Berchemia* in Mueller's hand, but it does not give any collector's information. The fact that it is annotated as *B. ecorollata*, however, indicates that it is authentic material and was sent by Mueller to London when he published that name. A second sheet at K is labelled *V. ecorollata* by Mueller and also contains a packet of seeds collected by Persieh; it was received in 1883, the publication year of the new combination. The flowering branch on this sheet is a residual syntype, but not the packet of seeds.

John Dallachy lived and collected in Queensland until his death on 4 June 1871. As all the collections of the species by Dallachy were made before publication of the species in 1875 and came from, or close to, Rockingham Bay, they have to be treated as possible type specimens. A sheet at BM from Rockingham Bay is labelled in Mueller's hand with the same species

name but does not bear any collectors information and is treated as possible syntype.

***Ventilago racemosa* F.Muell.**

Hooker's *J. Bot. Kew Gard. Misc.* 9: 165 (1857), nom. nud.

Mueller mentioned this species name without a description in a report on the plants he collected near the Gulf of Carpentaria in 1856, when he travelled as botanist with A.C. Gregory's North Australian Exploring Expedition (1855–1857). One specimen of *V. viminalis* (Gulf of Carpentaria, s.dat., *F.Mueller. s.n.*; MEL 2105145) was most likely collected during the expedition, but Mueller did not annotate the specimen and we do not know if his name *V. racemosa* was based on it.

***Ventilago viminalis* Hook.**

in T.Mitch., *J. Exped. Trop. Australia* 369 (1848). — **Lectotype (here designated):** Subtropical Australia [near the Maranoa R., S of Mitchell], Qld, 24 Oct. 1846, *T.Mitchell* 370 (K).

W.J. Hooker examined and described the botanical collections of Thomas Mitchell's expedition to tropical Australia. This species was published by Hooker in Mitchell (1848) in a footnote of the journal entry for 24 Oct. 1846. He did not list any examined specimens, but from Mitchell's description of the day it is clear that it was collected along the Maranoa River. In the evening of that day, the expedition camped near Mt Colby. The specimen at K was collected on 24 Oct. and bears Mitchell's collection number.

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**References**

- Kellermann, J. (2004). Robert Brown's contribution to Rhamnaceae systematics. *Telopea* 10: 515–524.
- Kellermann, J., Udovicic, F. & Ladiges, P.Y. (2005). Phylogenetic analysis and generic limits of the tribe Pomaderreae (Rhamnaceae) using internal transcribed spacer DNA sequences. *Taxon* 53: 619–631.
- Medan, D. & Schirarend, C. (2004). Rhamnaceae. In: Kubitzki, K. (ed.), *The Families and Genera of Vascular Plants* 6: 320–338. (Springer: Berlin & Heidelberg).
- Mitchell, T.L. (1848). *Journal of an expedition into the interior of tropical Australia*. (Longman, Brown, Green and Longmans: London).
- Smith, A.C. (1943). Studies on Pacific island plants — III. New and noteworthy flowering plants from Fiji. *Bulletin of the Torrey Botanical Club* 70: 533–549.
- Thiele, K.R., Udovicic, F., Walsh, N.G. & Kellermann, J. (in prep.). Rhamnaceae. *Flora of Australia* 24. (CSIRO: Melbourne; ABRS: Canberra).
- Thiele, K.R. & West, J.G. (1995). *Gouania exilis* (Rhamnaceae), a new species from northern Australia and Papua New Guinea, with notes on the identity of *Gouania hillii* F.Muell. *Austrobaileya* 4: 411–416.